



ISPA
INSTITUTO UNIVERSITÁRIO
CIÊNCIAS PSICOLÓGICAS, SOCIAIS E DA VIDA

BEHAVIOURAL AND PSYCHOLOGICAL SELF-PERCEIVED IMPACT OF USING THE
INTERNET TO MEET SEXUAL PARTNERS AMONG MSM

Nuno Miguel Nodin Manteigas

Dissertação orientada por:

Professora Isabel M.P. Leal (ISPA Instituto Universitário de Ciências Psicológicas, Sociais e da Vida)

Professor Alex Carballo-Diéguez (HIV Center for Clinical and Behavioral Studies – Columbia University and New York State Psychiatric Institute)

Tese submetida como requisito parcial para obtenção do grau de

Doutoramento em Psicologia
Área de especialidade Psicologia Clínica

2014

Tese apresentada para cumprimento dos requisitos necessários à obtenção do grau de Doutor em Psicologia na área de especialização de Psicologia Clínica realizada sob a orientação da Prof.^a Doutora Isabel Maria Pereira Leal e do Prof. Doutor Alex Carballo-Diéguez, apresentada no ISPA – Instituto Universitário, no ano de 2014.

O presente trabalho foi financiado pelo Programa Operacional Ciência e Inovação [POCI-2010] da Fundação Para a Ciência e Tecnologia, Portugal [SFRH / BD / 17396 / 2004].



Ciência.Inovação 2010 Programa Operacional Ciência e Inovação 2010
MINISTÉRIO DA CIÊNCIA, INOVAÇÃO E ENSINO SUPERIOR

PD + F PROGRAMAS DE
DOUTORAMENTO
FCT

*To my parents, with much love
Para os meus pais, com muito amor*



Soft Machine, Catarina Patrício, 2014

Acknowledgements

Even during periods of lonely work, this dissertation was the result of an enriching collaborative process and was made possible by the support and encouragement of numerous people and institutions. I would like to thank the following people and offer my sincere apologies to those whom I have left out:

Fundação para a Ciência e Tecnologia, for funding this research

Isabel Leal, for the amazing support she has given throughout the years, for being my mentor and inspiration and for her friendship; it has been a great journey

Alex Carballo-Diéguez, for welcoming me into his dynamic academic world, for his patience, positivity and continued support; it has been an honour and a pleasure to work with him

Gary Dowsett, for allowing me to spend three fantastic months at the Australian Research Centre in Sex, Health and Society at La Trobe University in Melbourne; his attentive mentorship influenced me greatly and helped shape the theoretical core of this dissertation

Ana Ventuneac, for teaching me a few tricks in the art of research, for her precious assistance in data analysis and for making my time at the HIV Center so richly rewarding

Susie Hoffman, for her professional guidance on the craft of writing scientific articles and for her valuable feedback on some of the studies included here

Daniel Saloman, for generously proof-reading and providing helpful suggestions throughout the writing of this dissertation

Leonel Jorge Sousa Duarte, for his invaluable support during an important phase of my doctoral process

Catarina Patrício, for the artwork commissioned to mark this important step in my life and for sharing the dissertation writing pains, as well as other pains over the last few years

All the participants who took part in the studies, without whom none of this research would have been possible

Bob Remien, Cláudia Villalobos, Cristina Salsinha, Família Porto, Hiro Yoshikawa, Ivan Balan, João Maroco, Lucia Maroco, Mark Davis, Michael Hurley, Pamela Valera, Rosário Torres da Costa and my dear colleagues at the HIV Center and at ARCSHS, for their inspiration and support of various sorts

My wonderful friends, for always believing that I would eventually succeed in completing this dissertation, even when I doubted it myself

My family, for always being there. I love you.

Palavras-chave:

Percepção do self; Internet; homens que têm sexo com homens; tecnologia

Key words:

Self-perception; Internet; men who have sex with men; technology

PsycINFO Classification Categories and Codes:

2700 Communication Systems

2750 Mass Media Communications

2900 Social Processes & Social Issues

2980 Sexual Behavior & Sexual Orientation

3000 Social Psychology

3040 Social Perception & Cognition

RESUMO

Esta investigação debruça-se sobre a população de homens que têm sexo com homens (HSH) que utilizam sítios na Internet para encontros amorosos e sexuais. Teve como objectivo compreender qual o impacto dessa experiência sobre o comportamento, percepção do self e percepção dos outros e qual a natureza desse impacto. Recorreu-se a uma metodologia de carácter misto para o efeito.

Para a fase qualitativa foram entrevistados 36 HSH sobre a sua utilização da Internet, encontros com parceiros sexuais contactados online (PO) e sexo seguro. Depois de transcritas, as entrevistas foram analisadas tematicamente para os estudos apresentados.

Para a fase quantitativa desenvolveu-se um questionário e uma escala destinados a compreender em detalhe a questão sob investigação, baseados nas temáticas identificadas durante a fase qualitativa. Os dados foram recolhidos online. Um total de 317 HSH que cumpriram com os critérios de seleção foram utilizados para o primeiro estudo quantitativo e 313 para o segundo.

Cada uma das fases da investigação levaram à produção de dois estudos.

O primeiro estudo qualitativo (**Estudo Exploratório**) analisou os conceitos e práticas de sexo seguro de um grupo de HSH com experiência de conhecer PO. Neste estudo verificou-se que, para a maioria dos participantes, as estratégias de prevenção utilizadas com PO ou com aqueles contactados offline eram os mesmos, assim não confirmando a nossa hipótese inicial sobre a influência da Internet sobre comportamentos.

O segundo estudo qualitativo (**Estudo 1**) explorou as percepções de alterações no self associadas à experiência de encontrar PO. Os resultados sugeriram a existência de tais alterações tanto ao nível do self quanto das percepções de outros, de formas positivas (e.g. exploração de potencial individual desconhecido; aquisição de competências de comunicação sexual), negativas (e.g. sentimentos de desconfiança em relação aos outros) e neutras.

O primeiro estudo quantitativo (**Estudo 2**) descreveu o desenvolvimento de uma escala de avaliação das percepções e preferências relativas a conhecer PO, a *Sexual Use of the Internet Scale* (SUIS), recorrendo aos temas identificados no Estudo 1. A análise factorial exploratória identificou seis factores estatística e tematicamente coerentes: “Impacto positivo da Internet”, “Autoexposição sexual online”, “Vantagens de conhecer homens online”, “Preferência por conhecer homens online”, “Desconfiança de homens online”, e “Impacto negativo da Internet”.

Por último, o segundo estudo quantitativo (**Estudo 3**) averiguou se certos aspectos da experiência de conhecer PO e características dos utilizadores de sites de encontros se associavam a percepções de impacto dessa experiência sobre o self, tal como avaliados pela SUIS. As ANOVAs realizadas sugerem que homens que conhecem PO há menos tempo, homens mais novos e homens solteiros apresentam maior percepção desse impacto. O número de PO, a frequência de conhecer PO e a orientação sexual não apresentaram resultados significativos.

Os resultados são discutidos no contexto de preocupações e debates antigos sobre o impacto de tecnologias sobre os seres humanos e sobre a sociedade. Os nossos estudos não suportam o lado tecnofóbico nem o tecnofílico deste debate, mas contribuem para uma visão mais detalhada desta área de investigação. A nossa investigação contribui para o aumento do conhecimento relativo a processos de alteração identitária associados à utilização de plataformas virtuais de encontros de carácter social e sexual entre HSH e também de forma mais alargada.

ABSTRACT

This research focuses on men who have sex with men (MSM) and use dating and sexual networking websites. Its aims are to understand if and how using these websites affects the men's behaviour, self-perceptions and perceptions of others. A mixed methods approach was used to investigate this topic. The research was organised into a qualitative and a quantitative phase, each leading to the production of two studies.

For the qualitative phase, 36 MSM were interviewed about their internet use, meeting sexual partners online, and safe sex. Transcribed interviews were thematically analysed for both studies presented.

For the quantitative phase, a survey and a scale aimed at further understanding the research topic were developed based on themes identified during the qualitative phase. Data was collected online. In total, 317 MSM who met selection criteria were retained for the first and 313 for the second quantitative study.

The first qualitative study (**Exploratory Study**) analyses the safer sex concepts and practices of a group of MSM who meet sexual partners online. This study reports that for most participants, the prevention strategies used with partners met for sex online were the same as those used with partners met for sex offline, thus failing to confirm our initial hypothesis of internet-mediated behaviour change.

The second qualitative study (**Study 1**) explores these men's perceptions of self-change associated with their online sexual experience (OSE). The results suggest that OSE does impact on these men's perceptions of themselves and of others in positive (e.g. exploration of unknown personal potential; development of better sexual communication skills), negative (e.g. increased suspiciousness of others) and neutral ways.

The first quantitative study (**Study 2**) describes the development of a scale aimed at investigating men's perceptions and preferences of meeting sexual partners online - the Sexual Use of the Internet Scale (SUIS) - which was informed by the findings of Study 1. The exploratory factor analysis identifies six thematically interconnected and statistically coherent factors: "positive impact of the internet", "sexual self-exposure online", "advantages of meeting men online", "preference for meeting men online", "mistrust of men online", and "negative impact of the Internet".

Finally, the second quantitative study (**Study 3**) aims to ascertain whether specific aspects of the online sexual networking experience and site-user characteristics affect perceived impact upon the self, by using the SUIS. The ANOVA analyses carried out indicate that men with less experience of meeting others online, younger men and single men have significantly higher levels of perceived self-change associated with using the internet to meet sexual partners. The number of online partners, frequency of meeting partners online and sexual orientation has no significant impact on self-perception.

The results are discussed in the context of centuries-old debates and concerns about the impact of technology on humans and society. Our findings provide no support for the technophile or the technophobic sides of this debate, but contribute to a more nuanced reading of this field of inquiry. Our research adds to the knowledge of ongoing processes of identity and self change associated with using online social and sexual networking platforms amongst both MSM and more at large.

Table of contents

Introduction	1
Dissertation structure	5
Literature review	7
1. Of technology and its impact	9
1.1. History	11
1.1.1. Early and mid 20 th Century	13
1.1.2. Late 20 th and early 21 st Centuries	14
1.2. The debate.....	17
1.3. Cultural views of technology	20
2. The dawn of the Internet.....	21
2.1. Is the Internet changing us?.....	23
2.1.1. Cognitive change.....	24
2.1.2. Social change.....	26
2.1.3. Identity change	30
3. The impact of online dating and sexual networking	33
3.1. Online dating – An overview	34
3.2. Change associated with online dating	37
3.3. Online sexual networking and its impact	40
4. MSM and the Internet.....	42
5. Relevance of the topic.....	46
Methods	49
1. Qualitative phase (Exploratory Study and Study 1).....	51
1.1. Participant recruitment	51
1.2. Procedures	52
1.3. Measures	52
1.4. Analysis	53
2. Quantitative Phase (Studies 2 and 3)	54
2.1. Procedures and participant recruitment.....	54
2.2. Measures.....	54
2.3. Study Sample	55
3. Ethics approval.....	55
Studies	57
1. Exploratory Study: HIV knowledge and related sexual practices among Portuguese men who have sex with men	59
Abstract	60
Introduction.....	61
Methods.....	62
Results	64
Discussion	70
References	74
2. Study 1: Sexual use of the Internet: Perceived impact on MSM's views of self and others	79
Abstract	80
Introduction.....	81
Methods.....	83
Results	85
Discussion	92
References	97
3. Study 2: Validation of a scale assessing perceptions, processes and preferences of using the Internet to meet sexual partners among men who have sex with men.....	103
Abstract	104

Introduction.....	105
Method	107
Results	108
Discussion	109
Table 1 – Sensitivity analysis of the scale	112
Table 2 – Factorial structure of the scale, after extraction of the factors by using principle component analysis with Varimax rotation, retaining 6 factors.....	114
Table 3 – Thematic Analysis of Final Factors	117
References	118
4. Study 3: Meeting sexual partners online: A study of MSM's perceptions of self-change using the Sexual Use of the Internet Scale (SUIS)	123
Abstract	124
Introduction.....	125
Materials and Methods.....	127
Results	129
Discussion	130
References	134
Discussion and conclusions	139
Limitations of the research	149
Conclusions and future directions.....	150
References	153
Appendices	175
Appendix 1 – Screen shot of recruitment profile and recruitment text	177
Appendix 2 – Screening questionnaire (qualitative phase)	179
Appendix 3 – Interview guide (English translation)	181
Appendix 4 – Demographic questionnaire (qualitative phase)	185
Appendix 5 – Online Survey	187
Appendix 6 – Parallel Article 1: The sex life of personal ads: A literature review	199
Appendix 7 – Parallel Article 2: The internet, our cyborg mind.....	213
Appendix 8 – Parallel Article 3: “Through the machine it is easier” – definitions and reactions to the concept of cibersex	219
Appendix 9 – Parallel Article 4: The Internet profiles of men who have sex with men within bareback websites.....	229
Appendix 10 – Abstract: The laws of online attraction – The good the bad and the ugly.	247
Appendix 11 – SPSS Outputs: Study 2 EFA (available in the CD version only)	249
Appendix 12 – SPSS Outputs: Study 3 ANOVAs (available in the CD version only).....	251

Introduction

The Internet has had a profound impact in the ways people live, work and socialise, including how they connect and relate to each other emotionally and sexually. Some of the features of the Internet that may be facilitating this are the facts that it is easily accessible, affordable and potentially anonymous (Cooper, Putnam, Planchon & Boies, 1999).

The coming into being of new ways to select, interact with and get to know mates made possible by the Internet has created new contexts and experiences that might have facilitated processes of self-reflexion and of potential change for those who use it. A growing body of scientific research and analysis suggests that the ubiquitous and ever-growing use of the Internet is changing relevant aspects of our cognition, identity and social interactions (e.g. Goren, 2003; Litowitz, 2012; Thompson, 2013; Turkle, 2011; Tylim, 2012). This body of research, in turn, cannot be detached from larger discussions about the impact that technology has had on people and society, which can be traced as far back as Ancient Greece (Plato & Jowett, 1990).

Also inseparable from this discussion are the reactions that new and particularly revolutionary technologies cause in individuals and society, typically alternating between enthusiasm with mass adherence (e.g. television; mobile phones) and concerns associated with the alienation that these instruments might induce, demonstrated by the dystopian scenarios often conveyed by science fiction.

Gay men and other men who have sex with men (MSM)¹ embraced the Internet from a very early stage as a means of easy and uncomplicated access to sexual partners and remain eager users of cyberspace for that purpose (Bolding, Davis, Hart, Sherr & Elford, 2005; Frankland et al., 2008; Mettey, Crosby, DiClemente & Holtgrave, 2003; Pitts, Smith, Mitchell & Patel, 2007). I propose to explore specific aspects of how that reality is experienced by these men in the context of the centuries-long discussion about technologically induced change.

¹ MSM, gay men and other equivalent expressions will be used throughout this dissertation interchangeably according to the context of what is being discussed or the source reference cited

My research was initially inspired by the growing body of evidence about the possible connections between using the Internet to meet sexual partners, or online sexual networking, and sexual risk behaviours (Adam, Murphy & de Wit, 2011; Fernández-Dávila & Zaragoza Lorca, 2011; Klausner, Wolf, Fisher-Ponce & Katz, 2000; Liao, Millett & Marks, 2006; McFarlane, Bull & Rietmeijer, 2000; McKirnan, Houston & Tolou-Shams, 2007). To investigate whether a similar connection existed amongst Portuguese MSM I collaborated in the conduct of an initial exploratory study, based on one about MSM in New York City who used the Internet to seek sexual partners for sex without condoms (Carballo-Diéguez, Ventuneac, Bauermeister, Dowsett, Dolezal, et al., 2009; Nodin, Valera, Ventuneac, Maynard & Carballo-Diéguez, 2011). However, this exploratory study revealed that no such connection was evident in our sample of Portuguese men who used the Internet to seek sexual partners (Nodin, Leal & Carballo-Diéguez, in press). The research was then repositioned by focusing on the psychological aspect of Internet-mediated change. More specifically, we became interested in investigating whether using the Internet to meet sexual partners has had an influence on MSM's perception of themselves and on their perceptions of others, which became the core topic of the research I will be presenting and discussing. Despite a growing body of sociological research about this area of Internet-related phenomena (e.g. Barraket & Henry-Waring, 2008; Davis, Hart, Bolding, Sherr & Elford, 2006; Quiroz, 2013), only a limited number of studies have addressed it from a psychological perspective.

This topic of research is pertinent from a clinical perspective, as increasingly individuals use the Internet to seek emotional and sexual partnerships and these experiences are becoming embedded in processes of identity exploration, as they open up spaces for discovery of oneself that would be harder if not impossible to explore elsewhere (Turkle, 1995). Therefore, and importantly for Clinical Psychology, the Internet and the experiences it allows raise questions about the extent to which using technological tools fundamentally changes the experience of the self and the ways in which we interact with others, both on- and offline.

With this as a background, my research questions were: Has online sexual networking influenced MSM's perception of themselves and of others? If there is such an influence, what is the nature of these changes? And, finally, which specific aspects of the online sexual networking experience and site-user characteristics are associated with perceived impact upon the self? To answer these questions I collaborated in the conduct of three additional studies (**Studies 1-3**) that along with the **Exploratory Study** mentioned above make up the empirical core of this dissertation. Study 1, *Sexual use of the Internet: Perceived impact on MSM's views of self and others* (Nodin, Carballo-Diéguez & Leal, 2013), was a qualitative study to investigate the first and second research questions by exploring a group of MSM's

narratives about if and how they perceived online sexual networking to have affected different aspects of themselves or their perceptions of others.

The findings of this study were then used to develop an online survey, which included a scale to assess various aspects of men's experiences of using the Internet to meet sexual partners: the Sexual Use of the Internet Scale (SUIS). In Study 2, *Validation of a scale assessing perceptions, processes and preferences of using the Internet to meet sexual partners among MSM* (Nodin, Leal & Carballo-Diéguez, submitted a), the factor analysis of the SUIS was presented and its psychometric qualities were evaluated. This showed that the SUIS includes two sub-scales specifically about the perceived impact of online sexual networking, namely *Positive impact of the Internet* and *Negative impact of the Internet*. The SUIS was then applied to address the third research question, presented in Study 3, *Meeting sexual Partners online: A study of MSM's Perceptions of Self-change using the Sexual Use of the Internet Scale (SUIS)* (Nodin, Leal & Carballo-Diéguez, submitted b).

Dissertation structure

The first part of this dissertation covers the literature review. In it, I start by reviewing the history and perspectives regarding the impact of technology on society and individuals, to contextualise the analysis. From there, I move on to cyberspace, defining the concept and briefly presenting the history of the Internet, and then discuss some of the psychological implications of the online experience. This is followed by an examination of the theories and research about the extent to which the Internet might be affecting people in regard to their cognition, sociability and identity. I then review the concept and practices associated with online dating and online sexual networking, as well as the research into how they might affect those who use them. The literature review still includes an overview of the reasons for choosing MSM as the target study group and ends with a discussion of the reasons why this research is relevant.

The methods section then describes in detail the different processes, methods and instruments that were used in the qualitative phase of the research and in its quantitative phase. The four studies that support my thesis are then presented. Finally, I discuss the findings from all the studies and make conclusions based on the findings and research process, including the limitations, and make suggestions of further research.

Additional materials such as the research instruments used are included as appendices, as are the studies and papers produced during the research process. Despite not being a part of this dissertation these studies and papers were valuable elements that helped shape it; they are referenced and discussed throughout the text where appropriate.

Literature review

1. Of technology and its impact

*“Technology wasn’t created by us humans.
Rather the other way around” (Lyotard, 1991, p.12)*

The word technology comes from the Greek *technē*, meaning art or skill, and *logos*, meaning word or speech (Buchanan, 2010). There is no consensus about how to define technology (Arthur, 2009; Nusselder, 2009). The *Encyclopaedia Britannica* defines it as “the application of scientific knowledge to the practical aims of human life or, as it is sometimes phrased, to the change and manipulation of the human environment” (Buchanan, 2010) whereas *Wikipedia* offers a more elaborate definition: “making, modification, usage, and knowledge of tools, machines, techniques, crafts, systems, and methods of organization, in order to solve a problem, improve a pre-existing solution to a problem, achieve a goal, handle an applied input/output relation or perform a specific function”, complementing it with yet another, broader but more concise definition: “the entities, both material and immaterial, created by the application of mental and physical effort in order to achieve some value” (“Technology”, n.d.). Mitcham (1994), an authority on the topic of technology, simply defines it as “the making and using of artefacts” (p.1). There is considerable debate about animal’s use of tools and about the ways by which theirs compare with humans’ (e.g. Boesch, 2003; Penn, Holyoak & Povinelli, 2008; Stout & Chaminade, 2007) with recent findings underlying the continuities more than the differences (Gowlett, 2009).

The history of technology encompasses human evolution (Buchanan, 2010). In fact, it is impossible to conceive of humanity without the technological landscape in which humans have developed and which has been an essential part of their history. Technologies as basic as the wheel or as sophisticated as nuclear power stations; as niche as a diamond laser-cutter or as pervasive as the pen; as devoid of a physical existence as a piece of software or as solid as a skyscraper; as life-saving as a pace-maker or as irrelevant as a *tamagotshi*; all have their part to play and impact on the existence of millions of people around the globe. Even groups that reject modern technologies, like the Amish in the USA, live in highly

technological environments made of a diverse range of artefacts, agricultural instruments and techniques, etc. (e.g. Wetmore, 2007). Arthur (2009) described technology as “this thing that fades to the background of our world but also creates that world” (p.10), thus emphasising its ubiquitous presence that has become something second-nature, often unquestioned and taken for granted.

Mitcham (1994) described the use of the term technology as applying to four categories: *artefacts* (e.g. bricks, telephones, guns); *activity* used for making and using those artefacts (e.g. invention, creation, manufacture); *knowledge* that allows the production of artefacts (e.g. theories, models, laws); and finally *volition* (e.g. aims, desires, intentions). In turn Carr (2010) described four categories of technological achievement: extending physical strength, dexterity or resilience (e.g. the plough, the fighter jet); extending the range of sensitivity of the senses (e.g. the telephone, the magnifying glass, the stethoscope); reshaping nature to serve humans’ needs or desires (e.g. the birth control, the dam); and extending or supporting mental abilities, including the memory, the ability to calculate and to measure (e.g. the clock, the map, the sextant, the Internet).

Postman (1992) pointed out that taxonomies of historical eras are often based on the technological achievements that marked them. He lists, among others, the Stone Age, the Bronze Age and the Steel Age; the Industrial revolution and the Post-industrial revolution; the Eotechnic, the Palaeolithic and the Neolithic eras. He then proposed his own technology-based classification of cultures, but not eras: Tool-using cultures, Technocracies and Technopolies. Tool-using cultures are described as those for which “technology is not seen as autonomous, and is subject to the jurisdiction of some binding social or religious system” (p.24); Technocracies are those in which “tools play a central role in the thought-world of the culture” (p.28), i.e., they become dominant in society to the point of “attacking” and attempting to replace traditions, social mores, politics and religion; and, finally, Technopolies are totalitarian technocracies which redefine the very meaning of things like art, family, religion, history or privacy, rendering them “invisible and therefore irrelevant” (p.48) and subject to the agenda of technological development. Postman was indeed a leading voice in late 20th Century techno-scepticism, criticising the way that technology has gained a primary and, in his view, undesirable role in modern societies. We will return to some of his views in light of the debate around the possible impact of technology on humanity.

Some authors have, however, taken a less critical tone, and claimed that technology has developed alongside Humankind in a symbiotic relationship, through which both have gained and grown (Heim, 1991) or, in the words of Clark (2003) “[w]e exist, as the thinking things we are, only thanks to a baffling dance of brains, bodies, and cultural and technological scaffolding” (Clark, 2003, p.11).

Other authors have gone further, and suggested an agency to technology, considering it to evolve independently of human intention (Arthur, 2009; Kelly, 2010). Kelly (2010) proposed that technology should be included in the general classification of living creatures as an extension of the human branch, arguing that artefacts follow a certain “Darwinian” pattern of evolution. For him, technology, like galaxies and biological organisms, follows a trend of increasing and accelerating complexity over time. According to his views, technology is a sort of semi-autonomous “brain child” of humans that we should “parent” to help it evolve in adequate ways. McLuhan (1964) had previously contributed a similar viewpoint by claiming that humans are the sex organs of machines, therefore acting as mere agents in their reproduction until they gain the ability to reproduce themselves.

As some of these ideas illustrate, the relationship between technology and humans has been a topic of interest for philosophers and researchers for a long time. Their reflections form relevant background to my research, which explores the tight links between the tools people use, in this case online dating and sexual networking websites, and the humans that use them. In the next section I will review some of the ways these links have been conceptualised throughout Western history, particularly regarding the potential impact of technologies on humans, with a focus on contemporary discourses and analyses. This will be followed by a closer exploration of the debate between those who are enthusiasts of this impact and those who, like Postman (1992), believe it should be a matter of concern.

1.1. History

“Any sufficiently advanced technology is indistinguishable from magic.” (Clarke, 1961, p.36)

In a passage of Plato’s *Phaedrus*, the advantages of writing as an aid to memory and wisdom are discussed against its possible negative outcomes (Plato & Jowett, 1990), an oft-cited first reference to the concerns surrounding the impact of a new technology (Carr, 2011; Postman, 1992; Thompson, 2013). In that passage, it is argued that writing is good for reminding but not for not remembering and is said to cloud the distinction between information and “real wisdom”, with adverse consequences for society.

Another technological innovation created over a 1000 years later would come to be considered one of the most influential technologies of all times, alongside writing itself (McLuhan, 1962). The Guttenberg press had a profound impact, initially in Europe and later in the rest of the world, by allowing the speedy production of books that until then required hand copying and were available only to the elite (Buchanan, 2010). The cultural, social and religious ramifications and impact of the invention of the printing press, spreading onto the advent of the Protestant Reformation, the Renaissance, and the scientific revolution, were

analysed in detail by Eisenstein in *The printing press as an agent of change* (1979). McLuhan (1962) also considered the printing press to have allowed the onset of a new era for humankind (the *Gutenberg Galaxy*) by enhancing and speeding up cultural and cognitive changes that had been developing at a slower pace since the invention of the alphabet. However, despite the general enthusiasm with which the invention of the printing press was received, its potential impact was not necessarily anticipated at the time. In fact, “[t]here is considerable irony about the enthusiastic reception accorded to printing by the Church. Heralded on all sides as a ‘peaceful art,’ Gutenberg’s invention probably contributed more to destroying Christian concord and inflaming religious warfare than the so-called arts of war ever did” (Eisenstein, 1979, p.155).

In 1627, Francis Bacon’s novel *New Atlantis* put forward the idea of a utopian society ruled by science and technology, allowing the control of nature to improve society and the life of its members (Bacon, 1627/1990). Later, the 19th Century witnessed the unfolding of the Industrial Revolution, made possible by the mechanisation of production and its technological advancements, which was seen as the coming into being of the realities envisioned by Bacon and others. However, industrialisation and mass production had a deep impact on the lives of many and changed urban, as well as rural landscapes, not necessarily for the better. The Luddite movement (1811–1817) was possibly one of the most notorious reactions against this process. Originated in Nottingham, England, but quickly spreading to other locations, it was led by a group of artisans who destroyed the textile machines that they felt were displacing them from their work (“Luddite”, 2010). The movement was eventually repressed by force, but the name ‘Luddite’ remains synonymous with anti-technological views to this day. In fact, a Neo-Luddite movement was established at the end of the 20th Century, serving as an umbrella designation for a wide range of ideologies advocating the abandonment of new technologies such as the Internet or mobile telephones, and a return to simpler living (Jones, 2006).

The new realities, both technological and social, generated by the Industrial Revolution were prone to reflection by leading 19th Century intellectuals about the possible effects of technology upon humans. Karl Marx wrote several notebooks about technology (Wendling, 2009) and in the first volume of *Capital: Critique of political economy* he discussed how machines used for production alienated workers (Marx, Engels, Moore & Marx, 1952). However, Marx’s views on technology were complex and some scholars have highlighted that he was by no means a Luddite: rather than being against technology he was against a system that used machines to exploit instead of benefiting humankind (Cotter, 2013; Dyer-Witford, 1999).

A contemporary but different reflexion on the impact of machines on people came from Nietzsche, as a consequence of his having to use a typewriter due to his progressive

loss of sight. The philosopher reflected on this process in his work *Our writing instruments contribute to our thoughts* (1882) and indeed Kittler (2006) has argued that after starting to use the typewriter, Nietzsche's writing "changed from arguments to aphorisms, from thoughts to puns, from rhetoric to telegram style" (p.203).

1.1.1. Early and mid 20th Century

"The medium is the message" (McLuhan, 1967)

Heavily influenced by Nietzsche's oeuvre, Martin Heidegger is considered to be one of the leading 20th Century thinkers about technology. Ontological in his approach, Heidegger's main concern was the extent to which the essence of man was being contaminated by technology. For this author, the technological viewpoint considered nature, including humans, as resources to be exploited, reducing beings to non-beings, therefore ultimately reorganising our perception of reality (Heidegger, 1977).

Heidegger was not alone in his critique, and has been linked with thinkers from the Frankfurt School, including Adorno, Horkheimer and Marcuse. For them, the progressive domination of nature equated an instrumental and exploitative view of man by man, therefore becoming a source of social organization and control (Kellner, 1997). According to Marcuse, "[i]n the course of the technological process a new rationality and new standards of individuality have spread over society, different from and even opposed to those which initiated the march of technology" (Marcuse & Kellner, 1998, p.41). Marcuse further suggested that the forces of rationalisation and technocracy ("the technological truth") have subdued individuality and free will, to the point where even dissident voices are framed within those same forces without awareness thereof or the possibility of autonomy or escape (Marcuse & Kellner, 1998).

In spite of not having written extensively on the issue of technology, Freud, in *Civilization and its discontents*, also briefly assessed what technologies such as railway or the telephone have brought to the modern world, and concluded that the negative consequences he discerned (separation from loved ones, a longer life full of suffering) might not justify their existence (Freud & Dickson, 1985). Others within the early psychoanalytical movement, like Tausk (1933), tried to understand the ways by which machines often became relevant elements in the delusions of schizophrenics. He believed that these delusions translated a need to rationalise internal feelings of strangeness and transformation (Tylim, 2012).

A key figure in technology and media discourses in the 20th Century, Marshall McLuhan, analysed the historical evolution of technologies and concluded that each new

revolutionary technology brings about changes in society that are progressively faster with each new technology (from writing to movable print to electronic media) (McLuhan, 1962). One of the core ideas of his book *The Gutenberg Galaxy* is that communication technology affects dimensions such as perception and cognition and consequently has a societal impact (McLuhan, 1962). This idea was distilled in his famous principle ‘the medium is the message’, which can be interpreted as suggesting that the format of any communication technology (e.g. television, printed books or the telephone) is more relevant and has a more critical impact upon society than its content (e.g. news, entertainment or advertisement) (McLuhan, 1964). McLuhan later reformulated and further refined this idea in his book *The medium is the message*, in which he inventoried the effects of the medium (the *message* it provides) over the senses and posited that each medium has different effects over the human organs of sense (McLuhan, 1967). Carr’s reading of McLuhan is that “[a]s our window onto the world, and onto ourselves, a popular medium molds what we see and how we see it – and eventually, if we use it enough, it changes who we are, as individuals and as a society” (Carr, 2010, p.2).

Although his influence faded after his death in 1980, McLuhan was rediscovered later as his ideas regained relevance in light of contemporary media analyses and have been used at length for that purpose, even if not without criticism (Debray, 1996; Horrocks, 2000).

1.1.2. Late 20th and early 21st Centuries

“To wear a device as powerful as the Apple Watch makes you ever so slightly posthuman”
(Grossman & Vella, 2014, p.32)

Baudrillard (1983) criticised the overall replacement of the symbolic with the immediacy delivered by communication and information technologies. He qualified this immediacy as *obscene*, emerging “when all becomes transparence and immediate visibility, when everything is exposed to the harsh and inexorable light of information and communication” (Baudrillard, 1983, p.130). Therefore, for Baudrillard this “obscene” is not of the same nature as that traditionally associated with pornography, often hidden from sight, “on the contrary, it is the obscenity of the visible, of the all-too-visible, of the more-visible-than-visible. It is the obscenity of what no longer has any secret, of what dissolves completely in information and communication” (p.131).

Virilio is another influential theorist who wrote extensively about the effects of technology, and particularly of media, on society. One of the ways he did this was by analysing the effects of the live television coverage of the first Gulf War (1990–91), with his interests later expanding to include how new communication technologies cause radical

changes in the ways we experience the world by deeply altering the nature of distance and hence causing the “disappearance of the horizon” (Virilio, 1997, p.40). He also discussed the effects of these technologies on our memory and ways of thinking, postulating that they bring about the loss of the “possibility of some kind of interpretation, which will be coupled with a sharp loss of memory, or rather, with the flourishing of a paradoxical immediate memory linked to the all-powerful nature of the image” (Virilio, 1997, pp.25–26).

Virilio coined the term ‘dromology’, the science or logic of speed, and claimed that acceleration is central to the transformation of the modern world (Virilio, 1986). He believed that speed has a transformative potential, and the speedier the event, the more it will allow the possibility of something new, different and potentially catastrophic to happen. For instance, he discussed how technologies carry with them the possibility of the accident: “with the invention of the ship, the train, the aeroplane, the nuclear power station, we simultaneously invented the shipwreck, the derailment, the plane crash and Chernobyl” (Virilio, 1995, p.3). According to Virilio, the speedier the technology the more intense the effect: “When we speculate about the dangers of accidents on the information superhighways, the issue is not the information but the absolute speed of its processing by computer technology” (p.4).

Other perspectives have analysed the ways in which technologies are connected in closer ways to humans, therefore changing our very nature. One of these perspectives considers artefacts and indeed all objects within human reach as extensions of people (Nodin, 2009). One of the first thinkers to suggest this was John Locke in 1689 in his discussion over property rights. He proposed that by mixing objects with labour these objects gain the same rights as those of the body of the labourer (Locke & Laslett, 1988). Later, Freud through his own conceptual lens made analogous suggestions about the appropriation of external elements into the realm of the mind, and therefore of the human (Freud & Dickson, 1985).

Another thought-provoking way in which the close connections between humans and artefacts have been conceptualised has been through the metaphor of the cyborg, particularly as envisioned by Haraway in her *Cyborg Manifesto*, in which she defined the cyborg as a “cybernetic organism, a hybrid of machine and organism, a creature of social reality as well as a creature of fiction” (Haraway, 1991, p.149), and the scholarly literature that it inspired (Bell, 2007). The word *cyborg* was originally coined by Clynes and Kline (1960) in relation to the possible use of self-regulating technological systems to help humans survive in space. However, the cyborg is perhaps better known in its science fiction materializations of an amalgamated man–machine creature portrayed in films like *The Terminator* (Daly, Gibson, Hurd & Cameron, 1984) or *Robocop* (Schmidt & Verhoeven, 1987).

Haraway's project was, in essence, feminist. She saw the cyborg as a way to move past binary views of gender and away from seminal discourses, such as those of Christianity or Psychoanalysis, that conceive women as inferior to men. For Haraway, with the cyborg "[t]he dichotomies between mind and body, animal and human, organism and machine, public and private, nature and culture, men and women, primitive and civilized are all in question ideologically" (Haraway, 1991, p.163).

Haraway's strong image and metaphor of the machine–human hybrid and her questioning of boundaries is in line with a different way of thinking about the relationship between humans and technology, not only from a purely physical point of view, but also from a psychological one. Echoing Haraway, Stone wrote that "many of the usual analytical categories have become unreliable for making the usual distinctions between the biological and the technological, the natural and artificial, the human and mechanical, to which we have become accustomed" (Stone, 1991, p.101).

Many other authors have since formulated similar ideas. For Turkle, the self is "multiple, fluid, and constituted in interaction with machine connections" (Turkle, 1995, p.15). In Carr's words "[t]he tight bonds we form with our tools go both ways. Even as our technologies become extensions of ourselves, we become extensions of our technologies" (Carr, 2010, p.209), and Tylim discusses the "techno-body", one that "cannot anymore be described as purely organic, and its organization attains a technological status" (Tylim, 2012, p.474). All of these perspectives may ultimately be linked to one of the main interests of post-modernity – that of identity and its fractured boundaries, particularly in relation with gender, sexuality and technology (Angerer, 1999; Heim, 1991; van Doorn, 2011).

From a cognitive perspective, others have suggested that humans may actively be using technologies as external resources of the mind. For instance Mitchell suggested that we rely on the "machine intelligence" (Mitchell, 2003, p.35) embedded in mobile phones, cars, domestic appliances, operating systems, and software. The branch of cognitive science that studies this premise is called Distributed Cognition (Salomon, 1993), but similar ideas have also been explored under designations such as Active Externalism (Clark & Chalmers, 1998) and Collective Intelligence (Lévy, 1997). According to Clark and Chalmers "[i]f, as we confront some task, a part of the world functions as a process which, were it done in the head, we would have no hesitation in recognizing as part of the cognitive process, then part of the world is (so we claim) part of the cognitive process" (Clark & Chalmers, 1998, p.8).

What many of these theories have in common is that they claim that we are already cyborgs of sorts, incorporating artefacts and features of the external world into our bodies and minds. This approach moves the discussion from a view that regards humans as being passively affected by technology to one in which we have a truly dynamic merger between flesh, thought and machine.

1.2. The debate

*“Modern technology is like a Great Dane in a small apartment.
It may be friendly, but you still want to make sure there’s nothing breakable within reach.”*
(Pool, 2003, p.15)

The tensions between acknowledging the positive impact of technology and the concerns about its negative consequences, as illustrated by the various discourses and analyses reviewed, have possibly been present since humans started to think reflectively about created artefacts. For instance, while machines were often seen during the Modern Age as the solution to many of humankind’s problems, at the same time fear of alienation has also been present as demonstrated by the positions of Heidegger or Marcuse and by the extreme reactions of the Luddites. But even early proponents of the technologically-induced alienation argument like Marx were ambivalent about technology and capable of identifying some of its possible benefits for humankind.

Positioning himself clearly in the debate, Postman (1992) argued that the world is full of “one-eyed prophets who will see only what new technologies can do and are incapable of imagining what they can *undo*. We might call such people technophiles”, continuing by saying that, on the other hand, others “are inclined to speak only of burdens (...) and are silent about the opportunities that new technologies make possible. The Technophiles must speak for themselves, and do so all over the place. My defence is that a dissenting voice is sometimes needed to moderate the din made by the enthusiastic multitudes” (Postman, 1992, p.5). Therefore, despite his techno-scepticism, Postman recognises that there isn’t only one side to the discussion (“Every technology is both a burden and a blessing; not either-or, but this-and-that”, p.5) but chooses to give voice to the side that he considers to be less visible.

However, by reviewing the history of the discourses about technology’s impact on society, there seems to be a clearer techno-sceptic, if not full blown technophobic trend that accompanies the whole discussion about the effects of technology in society, from Plato to Virilio.

A lively technophile stream certainly exists in today’s world, much motivated by the progress achieved in communication technologies, including mobile telephony, increased Internet availability and connection speeds as well as social media. This side of the debate has its own visionaries, such as Steve Jobs, Bill Gates and the founders of companies like Google and Facebook (Isaacson, 2011; Schmidt & Cohen, 2013). Even if these individuals and groups have not always profoundly reflected on the current and future possibilities raised

by the same technologies they are responsible for (Grossman, 2010), some voices from within the technophile faction have raised concerns over the social and individual impact of these innovations (Lanier, 2010; Turkle, 2011).

Lanier (2010), for instance, who was involved in the initial development of virtual reality interfaces, defended humanity and subjectivity in the context of new technologies. He argued that technologies such as the Internet and diverse pieces of software, with their rigid designs, standardise people's experiences and ultimately existences. Therefore he posited that "[t]he digital hive is growing at the expense of individuality" (Lanier, 2010, p.26), and discussed how this is a consequence of the ideas of a few which have a great impact upon many: "It takes only a tiny group of engineers to create technology that can shape the entire future of human experience with incredible speed" (Lanier, 2010, p.5).

Sides have also been taken in discussions about the future of humanity in light of technologic progress. On one side we find the cyborg vision of Haraway (1991), one that embraces a post-humanist condition in which machine is conceived as integrative with humanity, a source of pleasure and an object of desire. In Haraway's words, "[t]he machine is not an it to be animated, worshipped, and dominated. The machine is us, our processes, an aspect of our embodiment." (Haraway, 1991, p.180). Alongside Haraway, others, like Kurtzweill (2005) and Stock (2003), are apologists for post-humanism, although they move beyond the metaphor and effectively advocate technologically-mediated change to humans. Kurtzweill (2006) predicts the near future of humankind and believes we will be able to accomplish "the virtual elimination of disease, dramatic expansion of human potential, and radical life extension" (p.40) as well as "wireless communication from one brain to another" (p.41), among other phenomena, facilitated by advancements and the convergence of genetics, nanotechnology and robotics technologies, over the next few decades.

Clark (2003) makes an argument for considering biotechnological alterations to humans as an ultimate expression of humanity itself, postulating that "[w]hat makes us distinctively human is our capacity to continually restructure and rebuild our own mental circuitry, courtesy of an empowering web of culture, education, technology, and artefacts" (p.10).

On the other side of this discussion we find the grim post-humanity envisioned by authors such as Heidegger (1977) with his view of beings transformed into non-beings due to "contamination" by technology, or Fukuyama (2002) who dreads the coming into existence of new entities that are no longer recognisable as human, products of processes such as bioengineering or cloning. For Fukuyama, this post-human existence will arrive as biotechnologies continue to evolve in the context of a lack of an ethically sound framework and regulatory bodies, already a reality in industrialised societies, with disastrous consequences (Fukuyama, 2002). Winner (2002), another fierce critic of the post-humanists,

is concerned about their proposals and research “placing homo sapiens on the list of endangered species list” (p.35). He also criticises the post-humanists’ interest in improving traits of intelligence, strength, beauty, physical health and longevity, which contrasts with their lack of sensitivity towards the social dimensions of humans.

Additionally Lyotard discussed the future of humankind in light of the predicted death of the sun (in approximately 4.5 billion years) and therefore of Earth and all life on it (Lyotard, 1991). This led him to question the possibility of human thought carrying on without a body and of the technological endeavours that might allow this to happen. Lyotard argued against the idea that a machine could carry human thought in this scenario, as machines “think” in a binary fashion that is unlike the more flexible and intuitive ways that humans do. He also considered that thought is embedded in suffering, which means that any machines for carrying human thought would need to “suffer from the burden of memory” (p.20), as well as to experience the “irremediable difference of gender” (p.22). These, he contends, are basic conditions of humanity, which, however, are not in the best favour of techno-science that considers them counter-productive and therefore redundant.

As Sim (2001) points out, Lyotard’s anti-inhuman position expresses concerns with a world progressively driven by the forces of science and technological development, which value mechanisation and efficiency of production at the expense of the difference that defines human beings who will ultimately be rendered superfluous in this process. The inhuman has indeed already “infiltrated our daily existence to quite a remarkable degree – in the sense of the supersession of the human by the technological” (Sim, 2001, p.6) and “[w]e may decide it is more appropriate to fear, resist, welcome, actively encourage or perhaps just simply tolerate the inhuman; but one thing is certain – we cannot avoid it” (p.7). Tylin (2012) also aligns with this view and affirms: “the twenty-first century may be remembered as the century of the World War against machines that threaten to dethrone humanism” (p.472).

There is however middle ground to this debate. For instance, for some “[e]lectronics is neither the arrival of apocalypse nor the dispensation of grace. Technology is technology; it is a means for communication and transportation over space, and nothing more” (Carey, 1992, p.139). Or, as Buchanan suggested, “just as it was naive for the 19th-century optimists to imagine that technology could bring paradise on Earth, it seems equally simplistic for the 20th-century pessimists to make technology itself a scapegoat for man’s shortcomings” (Buchanan, 2010).

A seminal paper by Pinch and Bijker (1984) set the conceptual structure for reading technology as a social construction, and therefore devoid of any sort of determinism. For these authors, in order to understand technology one needs to understand the meanings that “relevant social groups” place on specific artifacts (Pinch & Bijker, 1984, p.414). Therefore

and importantly, the model they proposed, the Social Construction of Technology (or SCOT), posits that it is not technology that determines human behavior, but vice versa.

This social constructivist view of technology is not without its critics, namely Nusselder (2009) who points that putting social actors at the centre of technological progress falls into the same deterministic trap that it tries to counter, while it simultaneously disregards the unconscious and unintentional aspects of technological production and usage.

1.3. Cultural views of technology

“Dystopian fiction doesn't make people fear technology – technology makes people fear technology” (Maloney, 2014)

No discussion of the historical and theoretical views of the relationship between technology and society would be complete without a reference to the discourses of the machine within culture, particularly in literature and cinema. For a long time science fiction has provided narratives encompassing sophisticated technologies that, more than improbable tales of an imaginary future, often reflect concerns about the present (Booker, 2001; Maloney, 2014).

At least since the 19th Century that literature has produced works that reflect the uneasiness caused by the manipulation of humanity through science or technology, of which some well known titles are Mary Shelley's *Frankenstein* (1818/1994), Aldous Huxley's *Brave new world* (1932/1946), George Orwell's *1984* (1949), or Antony Burgess's *A clockwork orange* (1963). In spite of being quite diverse in their styles, storylines and in the worlds they portray, all of these books tell dystopian tales about the use of tools to control human behaviour and even life itself, with potential negative consequences, echoing concerns surrounding technological progress.

Futuristic cinema also includes abundant dystopian storylines, such as those found in *Metropolis* (Pommer & Lang, 1927), *2001: A space odyssey* (Stanley Kubrik, 1968) or *I, Robot* (Mark, Davis, Dow, Godfrey & Proyas, 2004), in which sentient computers and machines either control or are used to control and dominate humans, vividly reflecting anxieties about technology and its potential to command our lives. Others, like *The Matrix* (Silver, Wachowski & Wachowski, 1999) and *eXistenZ* (Cronenberg, Hámori, Lantos & Cronenberg, 1999) question the boundaries of what is real in the context of immersive virtual reality technologies. For instance, in *eXistenZ*, players of a game console that links directly to the nervous system enter a realistic gaming experience, eventually losing the ability to judge whether they're inside or outside the game. In *Until the end of the world* (Felsberg & Wenders, 1991), people become addicted to a device that allows them to see their dreams

on a screen, progressively becoming disconnected from one another in order to become increasingly self-absorbed and spend time in that activity. All of these stories can be read as reflecting the fears of alienation that various modern technologies may have on individuals and society (Turkle, 1996; Tylim, 2012).

Finally, *Her* (Ellison, Jonze, Landay & Jonze, 2013) pictures a near-future scenario in which intelligent operating systems become people's best friends and lovers. Its story of lonely people finding company and comfort in their devices not only links with the topic of alienation and isolation mentioned above, but also addresses the question asked by Turkle when discussing relational artefacts, such as pet robots: "in a world in which machines present themselves as emotional, what is left for us?" (Turkle, 2004, p.27). In other words, what remains human when machines can mimic emotion to the point of eluding our own emotions, a question poignantly asked in *Artificial intelligence* (Kennedy, Spielberg, Curtis & Spielberg, 2001) in which the 'artificial' love of a humanoid robot-boy for his human mother leads him on a quest for her that transcends humanity's very existence? Furthermore, what does this need for attachment with smart and 'sensitive' objects tell of our very human nature? Science fiction may not deliver answers, but it will ask questions about human identity and sociability in a progressively more technological world.

2. The dawn of the Internet

"We will adjust to cyberspace far more easily than cyberspace will adjust to us."
(Novak, 1991, p.239)

The Internet as we know it today is the product of the confluence of diverse historical contexts and technical achievements (Castells, 1996; Dery, 1996; Seel, 2012) that are beyond the scope of this analysis. I will, however, provide a very brief overview of its history as it provides relevant context to this study, before focusing on the domains of experience it has opened up and on its potential psychological impact on humans.

Initially developed in 1969 by the Department of Defence of the USA, with the Cold War and the technical competition with the Soviets in the background, the Internet was conceived as a fail-proof communication system in case of a nuclear war (Castells, 1996). The ARPANET, as it was then called, was devised as a network of computers that communicated with each other via telephone lines by breaking down information into smaller packages that were then sent by multiple routes to be reassembled at the point of destination, the same principle that still governs it today. Since its very early stages, this network was also linked with universities and research centres, initially in the United States, but later also in Europe. Its potential for sharing ideas and facilitating communication led to a

growing adoption and usage within academia, soon making this its main use (Rheingold, 2000).

Worried about security breaches, the US military decided to abandon the network it had created, leaving it to its predominantly civilian uses, and developed its own independent communication network in the early 1980s (Castells, 1996; Seel, 2012). By the early 1990s, after exponential growth in use from organisations, individuals and businesses, the Internet was a massive network of connections between computers organised in the form of the World Wide Web (“a hypertext-based system that enables users around the globe to point and click from one multimedia site to another”, Dery, 1996, p.6). Today the Internet is used by over 2.5 billion people (ITU, 2013) for the most varied reasons, from research to entertainment, from work to social interchange.

It is also a medium of media, progressively engulfing previous technologies like the telephone, the television or the video recorder, as prophesied by McLuhan years before it had even been developed: “The next medium, whatever it is – it may be the extension of consciousness – will include television as its content, not as its environment, and will transform television into an art form. A computer as a research and communication instrument could enhance retrieval, obsolesce mass library organization, retrieve the individual's encyclopedic function and flip into a private line to speedily tailored data of a saleable kind” (McLuhan, 1962, in Horrocks, 2000, p.52-53). In many ways, the Internet can be considered to be the ultimate artefact or, using Daniel Bell's terminology, an intellectual technology (Bell, 1973).

According to Rheingold, the Internet is “the latest phase in a long sequence of mental changes brought about by the invention and widespread use of symbolic tools” (Rheingold, 2000, p.150). Others have used the metaphor of a collective skin to describe the Internet, associated with the fantasy of taking part in an immaterial and collective body (Romano, 2000) or as a “return to a symbiotic relationship with an Other in which the deluge of semblances seems to abolish the dimension of the Real” (Zizek, 2004, p.803).

The virtual dimension of the online experience is captured in the word *cyberspace*, a term originally coined in science fiction (Gibson, 1984), which has been described as a “globally networked, computer-sustained, computer-accessed, and computer generated, multidimensional, artificial, or ‘virtual’ reality. In this reality, to which every computer is a window, seen or heard objects are neither physical nor, necessarily, representations of physical objects but are, rather, in form, character and action, made up of data, of pure information” (Benedikt, 1991, p.122–3). If this is a very accurate but matter-of-fact definition, a better-fitting one has been proposed by Barlow (cit. by Elmer-DeWitt, 1995) as the place where you are when you are on the phone. By removing the visual element (of the computer or smartphone screen) from the equation, this description underlines cyberspace ontology as

the experience of being beyond space, neither here nor there; yet somewhere real even if not palpable. Similarly, Clark (2003) described people on a city street around him talking on the phone and texting as not being “entirely where they seem to be” (p.9). Therefore, by framing online (including telephone) communication in this way, these authors render the very use of “space” in cyberspace problematic.

As Nusselder (2009) put it, “we should avoid considering cyberspace as an objective fact or objective information. It is a product of human imagination, in which we use known metaphors for a new domain of information and communication” (p.17). This is not in itself a new idea and it has been formulated in different ways. Heim (1991), for instance, defined cyberspace as “a metaphysical laboratory, a tool for examining our very sense of reality” (p.59), and for Novak (1991), very simply, “[c]yberspace is a habitat for the imagination” (p.225).

In addition, several authors have stressed the psychological and emotional reality of communicating with others on the Internet, arguing how online experiences are often lived as real by its users, including but not only romantic interactions and game playing (Ben-Ze’ev, 2004; Turkle, 1995). In the context of this debate, the virtual is conceived as an extension of reality, not as its opposite (van Doorn, 2011). While discussing online relationships, Ben-Ze’ev (2004) contrasted the ontological sense of the real, meaning the factual experience of an event, with its epistemological sense, which refers to the vividness of the event. For Ben-Ze’ev, the Internet offers a low ontological but a high epistemological level of experience, enhanced by the fact that the fantasies developed online involve real interactions with real others.

2.1. Is the Internet changing us?

“Technology is not a demon” (Alapack, Blichfeldt & Elden, 2005, p.60)

The number of hours that many people spend in front of the computer or browsing smart phones has raised questions and concerns regarding the extent to which this pervasive experience is changing our lives and ourselves (Carr, 2010; Goren, 2003; Litowitz, 2012; Thompson, 2013; Turkle, 2011; Tylin, 2012). In Goren’s formulation, the “revolutionary rapidity inherent in many forms of communication today has collapsed the temporal and psychological space between internal and external, between an individual’s perceptual and cognitive processing and the expectations for immediate interpersonal communication” (Goren, 2003, p.501).

In this section I present and discuss some of the theories and research that have

been developed over the course of the last two decades about Internet-induced change. I start by reviewing material related to Internet-induced cognitive, social and identity change, before moving on to the specific impact of online dating and sexual networking on individuals' behaviour and psychosocial functioning.

It is relevant to acknowledge that some of the theoretical literature as well as a smaller portion of the research examined are frequently influenced by their authors' own attitudes towards technology in general and towards the Internet in particular. Good examples of this are Carr (2010) and Thompson (2013) both using many of the same illustrations, historical examples and references to defend opposite sides of the debate concerning Internet-mediated cognitive change.

2.1.1. Cognitive change

*"There is little doubt that the Internet is changing our brain. Everything changes our brain."
(Lehrer, 2010)*

A growing body of research discusses how Internet use might affect basic cognitive functions. Claims that online search engines have diminished our ability to think or use memory (Carr, 2010) have been accompanied by lines of research that seem to suggest that people do tend to rely on external resources (like Google) when they cannot recall specific information (Sparrow, Liu and Wegner, 2011; Varshney, 2012). These results seem to be coherent with the principles of Active Externalism (Clark & Chalmers, 1998; Michaelian & Sutton, 2013), suggesting that people are increasingly accessing information online the same way they used their own mental resources before the wider availability of the Internet. Diverse authors agree with this perspective, for instance, when claiming that: "[g]iven the physical limits on the memory capacity of the human brain, the internet seems truly to be becoming a working extension of the human mind" (Lilford & Chilton, 2011, p.343) or that "skulls and skin do not bound mental systems, and through computer networking these systems can now extend indefinitely" (Mitchel, 2003, p.36). Email, instant messaging and blogs, for instance, not only allow people to contact others more efficiently than ever, but they also create a permanent record of conversations, images and information that can be easily accessed when necessary, operating as artificial external memories.

However, the enthusiasm that some authors have expressed for the possibilities offered by cyberspace to human cognition contrast with the views of others. These suggest that the Internet is leading to a superficial learning that is not rooted in a deeper understanding of scientific knowledge (Carr, 2010). This is considered to be worrisome particularly in highly specialised fields such as medicine (Olson, 2013). Carr (2010) asserts

that the Internet “provides a convenient and compelling supplement to personal memory, but when we start using the web as a substitute for personal memory, bypassing the inner processes of consolidation, we risk emptying our minds of their riches” (p.192). This author is also concerned with the impact of Internet use on attention, which he considers to be one of the potential causes of modern-day decaying memory (“The sharper the attention, the sharper the memory”, p.193).

Carr has been criticised for his use of anecdotal and inconclusive scientific evidence in his arguments (Lehrer, 2010). However, recent research corroborates some of his views. For example, a study conducted by Alloway and Alloway (2012) has shown that more intense use of social media sites affects how attention is allocated, exhibited as an exploratory-type of engagement with those sites. This means that participants in the study seemed to dedicate similar levels of attention to incoming streams of information and therefore were less likely to ignore distractor stimuli. However, they also found some positive effects of using those sites on specific dimensions of memory. Specifically, they found that “checking friend’s status updates in Facebook was the best predictor of both verbal and visuo-spatial working memory”, that “[t]elling a friend to watch a video in YouTube was the best predictor of verbal working memory scores”, and also that “watching videos online best predicted visuo-spatial working memory” (p.1752).

Other studies have shown that using social media affects negatively student’s educational achievements, with time spent online using those sites predicting low academic outcomes (Junco, 2012; Kirschner & Karpinski, 2010; Paul, Baker & Cochran, 2012). However, while some of these studies have highlighted the students’ lack of willingness or interest in using such sites for the purpose of academic improvement (Paul, Baker & Cochran, 2012), others have reported that different behaviours on social media sites have different effects on academic achievement (Junco, 2012). Thus, time spent online socialising (e.g. posting status updates or chatting) negatively predicted academic scores, while collecting and sharing information (e.g. sharing and checking on friends’ status updates) was positively predictive of those scores (Junco, 2012).

A positive cognitive effect of information sharing with friends online was confirmed by another study, which also further illuminated the nuanced influence of online behaviour on cognition, by suggesting that using some social media websites (Facebook) was found to be related with positive cognitive outcomes, while using others (Youtube) was not (Alloway, Horton, Alloway & Dawson, 2013). The authors suggest that “better performance in some of these cognitive tests could be the result of a ‘training’ effect, due to shared cognitive mechanisms that underpin these [online] tasks” (p.15).

Finally, some studies have also found perceived excesses in exposure to information online to be associated with a negative impact on well-being. For example, a cross-cultural

study (USA, Ireland and South Korea) demonstrated that trouble in controlling social media connection habits was associated with a negative impact on important life activities, stress and affect (LaRose, Connolly, Lee, Li & Hales, 2014). Other research has indicated that higher levels of perceived Internet-based information overload predict negative health indicators (Misra & Stokols, 2012).

Taken together, these studies seem to indicate that there are indeed consequences, even if not always of the negative kind, to the demands that a progressively networked world places on people's cognitive abilities. They also suggest that the relationship between the Internet and those who use it is far from simple or one-sided. As Lehrer (2010) has put it in his criticism of Carr's admonitions, "[t]he online world has merely exposed the feebleness of human attention, which is so weak that even the most minor temptations are all but impossible to resist."

In contrast to Carr's ideas of an Internet-induced superficial memory, fragmented knowledge and broken attention span (Carr, 2010), others argue that using cyberspace allows unprecedented levels of intellectual output and innovation. Rheingold (2003), for instance, analysed the collaborative processes that take place online, using examples like Wikipedia or open-source programming, to discuss the creative potential that online connectivity often facilitates. For Thompson, however, online collaboration and creative thinking leading to "crowd wisdom" (Thompson, 2013, p.155), such as on Wikipedia, is only possible when a number of conditions are present: a focused problem to solve and a collective of active contributors, including a core of leaders, as well as micro-contributors who add diversity, forming a "symbiotic whole" (p.161). He also adds that to be "smart", an online group needs to incorporate a mass of individuals who have little contact amongst themselves.

As suggested above, a portion of the discussions about cognitive change revolve around the collaborative potential of human-to-human interaction. The interactive nature of the Internet has, in some accounts, profoundly changed the way people engage and communicate with each other (Seel, 2012) and has therefore changed the very nature of human relationships.

2.1.2. Social change

"On the Internet, nobody knows you're a dog" (Steiner, 1993)

The Internet is ultimately a powerful tool that allows people to do what they are best programmed to do, which is to communicate with others (Elmer-DeWitt, 1995), except more efficiently than by traditional ways. However, some claim that it has also altered the nature of

relationships and the way we communicate. For instance, Broadbent (2012) discussed the way that digital communication technologies have fragmented “place-based ties (...) in favour of interest-based connections created remotely, independent of physical proximity” (p.128) thus allowing an expansion of social landscapes.

Authors like Rheingold (2003) and Thompson (2013), as discussed above, have extensively argued that the Internet allows for levels of collaboration that are unprecedented in human history. Rheingold (2003) put forward the concept of *smart mobs*, “people who are able to act in concert even if they don’t know each other” and who “cooperate in ways never before possible because they carry devices that possess both communication and computational capabilities” (p.xii), and emphasises the positive aspects of these new forms of collaboration. However, this field of discussion and research is also torn by diverging views about the potential impact of the Internet on social interactions. For instance, Turkle, capsizing her previous optimism about the effects of new technologies and mediated identities online, (Turkle, 1995) published on the negative impact of extensive use of social networking sites such as Facebook and of texting on human interactions (Turkle, 2011). The ongoing discussion between sides of the argument led Pollet, Roberts and Dunbar (2011) to conclude that “the research in this area can be split into two camps, which have been described as “cyberpessimists” and “cyberoptimists”” (p.253).

An influential article by Kraut et al. (1998) presented the results from a longitudinal study about the social and psychological impact of the Internet. It found that greater use of the Internet was associated with declines in social involvement and with increased loneliness and depression. The authors called this phenomenon *the Internet paradox* and posited that “the Internet can be both highly entertaining and useful, but if it causes too much disengagement from real life, it can also be harmful”, concluding that “[u]ntil the technology evolves to be more beneficial, people should moderate how much they use the Internet and monitor the uses to which they put it” (p.1030). These results seemed to confirm earlier predictions, according to which “[a]s the virtual social space of the various networks increases, so will the real social spaces of America decay and implode” (Hughes, 1995, p.70).

However, in a later follow-up study, Kraut et al. found that the negative effects in their previous research had dissipated (Kraut et al., 2002). Dimensions such as local and distant social circles, face-to-face communication, community involvement, trust in people and positive affect scored high, while the stress levels score was the only remaining negative effect of Internet use. Some of these positive effects were stronger for extroverts, suggesting that the Internet effect is not univocal, and interacts with other factors.

Valkenburg and Peter (2009) offered some explanations for earlier findings, including those of Kraut et al. (1998), which identified lower sociability amongst Internet users. One of

these explanations was that many people were still not online in the mid-1990s when these studies were carried out. This would have limited the opportunities for online engagement with offline friends. Furthermore, the online tools for social interaction that existed at the time were mostly geared towards communication between strangers (e.g. multi-user dungeons [MUDs] and public chat rooms) (Valkenburg & Peter, 2009). In fact, Kraut et al.'s second study (Kraut et al., 2002) coincided with the coming into being of the so-called Web 2.0, an expression popularised in the early years of the millennium (O'Reilly, 2005) which does not particularly define a technologically enhanced web, but rather a specific way to use the Internet as a platform to facilitate social interaction and collaboration. This means that resources like Facebook, YouTube or Wikipedia became the centre of the Internet-user experience, allowing for simple, ubiquitous access and exposure to and from wide audiences. Seel describes the Web 2.0 as an evolution of the web from "a static one-to-many environment to an interactive many-to-many collaborative online universe" (Seel, 2012, p.94), with particular emphasis on social networking. Grossman (2006) qualified this shift as a "revolution", but also warned against the pitfall of romanticising it, as the Internet "harnesses the stupidity of crowds as well as its wisdom" (p.29).

The increasing attention that social media websites have captured in recent years, with millions of people using them on a daily basis (Pew Research, 2014) has led to lines of research into the extent to which they have affected social interactions offline. For instance, studies have shown that adolescents use social media to strengthen their offline relationships (Ellison, Steinfield & Lampe, 2011), their sense of connectedness with others (Valkenburg & Peter, 2009) and their social competence (Valkenburg & Peter, 2008).

Although only limited research has been conducted with adults to date, contrasting results to that found with adolescents have been reported. For instance, Pollet, Roberts and Dunbar (2011) found that, for adults, the number of online friends and time spent interacting with them over the web was unrelated to the number of offline friends, even when accounting for different levels of proximity with specific groups of friends (support group, sympathy group, outer layer). They also found that contact maintained via social networking websites and instant messaging did not increase levels of emotional closeness with friends in any of those groups. According to the authors these results, which differ to those of younger people, can be attributed to age-specific characteristics, with adolescents having a stronger need for emotional proximity with their friends than adults. They also attribute them to the fact that time is not elastic, and therefore time spent in online social activities cannot be used for offline socialising.

An analysis by Chen (2013), suggests that frequent uses of Internet and social media are related to a larger number of strong ties in core discussion networks, even if apparently at the expense of weak ties. However, these results do not support concerns about the

negative impact of the Internet and social media like those suggested by Turkle (2011). In fact, Chen argued that “[t]he Internet is a bundle of versatile technologies that can help people develop both strong and weak ties. However, the extent to which such potential can be realized is more about how people use the Internet than what the Internet can technically afford” (Chen, 2013, p.416).

Some studies have focused on comparing the specifics of communication online with equivalent offline situations, with an emphasis on the disinhibition effect that the Internet seems to facilitate (Joinson, 2007; Suler, 2005), defined as “any behavior that is characterized by an apparent reduction in concerns for self-presentation and the judgement of others” (Joinson, 1998, p.44, cit. by Joinson, 2007). In the words of a participant from Hardey’s analysis of online dating, “[t]hat’s what is seductive about the Net. Before you know it you are confessing all sorts of things!” (Hardey, 2004, p.213). Accordingly, Alapack, Blichfeldt and Elden (2005) wrote that on the Internet there is nothing that “stops you from revealing your innermost desires and wildest imaginings” (p.55).

This disinhibition effect translates into behaviours such as higher levels of self-exposure in communication online (e.g. Bareket-Bojmel & Shahar, 2011), flaming (hostile and insulting interaction between Internet users; e.g. Hutchens, Cicchirillo & Hmielowski, 2014) or engaging in online sexual activities (Carvalho & Gomes, 2003; Nodin, Leal & Carballo-Diéguez, 2008). Research reviewed by Joinson (2007) seems to suggest that anonymity of online interactions as well as lack of visual cues in computer-mediated communication (CMC) largely accounts for the disinhibition effect, with face-to-face video interactions rendering levels of self-exposure similar to those that occur in offline interactions.

The Social Identity Model of Deindividuation Effects (SIDE) was developed to explain some of those behaviours in light of how being anonymous or identifiable impacts on group behaviour offline as well as online (Postmes, Spears & Lea, 1999; Spears, Lea, Postmes & Wolbert, 2011). According to the SIDE, anonymous groups in which there is a sense of group membership allow for a stronger social influence of group norms on the individual. This contrasts with previous paradigms, particularly the deindividuation theory, according to which crowd-belonging leads to low self-awareness and consequently to non-normative behaviour, both offline (Festinger, Pepitone & Newcomb, 1952; Prentice-Dunn & Rogers, 1982; Zimbardo, 1969) and in computer-mediated communication (Kiesler, Siegel & McGuire, 1984).

Joinson (2010) has further suggested that aside from anonymity other factors come into place when explaining the disinhibition effect, particularly in light of increased surveillance of the Internet, which compromises true anonymity online. Therefore, he posited that trust in specific gatekeepers (e.g. websites), a perception of reduced costs of self-

exposure and control granted by asynchronous and visually anonymous communication (e.g. email, blogs) may facilitate disinhibition in CMC.

From this literature, it seems fair to concur with Bargh and McKenna (2004), who concluded that the Internet “has unique, even transformational qualities as a communication channel, including relative anonymity and the ability to easily link with others who have similar interests, values, and beliefs” (p.586), while at the same time acknowledging that communication technologies and their possible social effects change very quickly, which calls for ongoing research in this field.

2.1.3. Identity change

“I link, therefore I am.” (Mitchell, 2003, p.62)

Internet-related identity change is another area that has received research attention since the very early stages of the development of online networks and platforms. Tomas (1991) described cyberspace as a “powerful, collective, mnemonic technology that promises to have an important, if not revolutionary, impact on the future compositions of human identities and cultures” (pp.31-32), Rheingold (2000) noted that “the latest computer-mediated communications media seem to dissolve boundaries of identity” (p.151) and Mitchell stated that “it isn’t simply that our sensors and effectors command more territory, that our webs of interconnectivity are larger and more dynamic, or that our cell phones and pagers are always with us; we are experiencing a fundamental shift in subjectivity” (Mitchell, 2003, p.62). More recently Carr asserted that “[w]hen we outsource our memory to a machine, we also outsource a very important part of our intellect and even our identity” (Carr, 2010, p.195).

Identity can be defined as the “person’s essential, continuous self”, or “the internal, subjective concept of oneself as an individual” (Reber, 1995, p.334). Although there is some overlap between the concept of identity and that of the self, it is generally understood that whereas the self refers to a “compelling sense of one’s unique existence” (Reber, 1995, p.699), identity is the part of self-concept that presents itself to others (Zhao, Grasmuck & Martin, 2008). Proponents of Symbolic Interactionism contributed to this view, by positing that identity formation is an ongoing process based on the imagined perspective of others (Blumer, 1969; Mead & Morris, 1934). Goffman (1959), a leading author in this area, developed a theatrical metaphor to explain social interactions, suggesting that people are constantly performing their identities in regard to the context in which they are.

Within classical psychological theory it was considered that emotional maturity implied attaining a solid and stable identity that would be formed at the end of adolescence

(Bornstein, Lerner & Kagan, 2010). However, in line with Symbolic Interactionism, many authors on identity formation have considered it to be a flexible entity. For instance, Nach and Lejeune (2010) posited that “identity is never fixed; people will keep on moving in and out of the role-performance arena to fit their environment” (p. 627). Similarly Giddens (1991) believed that in late modernity the self is developed in an ongoing reflexive process fed by the engagement in relationships and activities that reinforce it.

Some of these as well as other views on identity formation have been applied to understanding the ways in which people present themselves online and how these affect their offline identities. For instance, Turkle (2004) applied the Eriksonian concept of *psychosocial moratorium* (Erikson, 1964) to the contemporary experience of identity exploration online. *Psychosocial moratorium* in Erikson’s theory is part of the identity formation process, typical of adolescence, during which individuals can try out relationships and emotions in a relatively safe way. According to Turkle (2004), this moratorium is no longer limited to adolescence and has become an ongoing ever-present process for those who play with their identity by assuming different personas online, for instance, in online gaming platforms (e.g. MUDs) or virtual worlds (e.g. Second Life), as well as in chat rooms when interacting with other users. This play may have consequences, as it can facilitate a self-reflexive process, ultimately helping people answer the question: “What does my behavior in cyberspace tell me about what I want, who I am, what I may not be getting in the rest of my life?” (p.22). Therefore, Turkle saw new communication technologies as ripe with growth and self-discovery potential through the creation and use of online personas that often don’t strictly coincide with offline identities.

This idea, that the Internet allows a new sort of disembodied existence, detached from physical limitations and characterized by exploration and fragmentation, albeit with the potential for psychological impact, was typical of early reflections around online identities. For instance, Heim (1991) pictured cyberspace as an ecstatic extension of the self, an escape from the confinement of physical existence into an infinite realm of platonic intellect, and Dery (1996) considered that the experience of being in cyberspace links “with transcendentalist fantasies of breaking free from limits of any sorts, metaphysical as well as physical” (p.8).

However, as van Doorn (2011) argued, this vision of the Internet as “an illusory datascape that radically differs from the reality of physical existence” (p.532) has been questioned since the 1990s and shown to be inaccurate, even if ideas of disembodiment continue to populate current accounts of online experiences (e.g. Tylim, 2012). Zizek (1996), ahead of his time, agreed and believed that “the New Age vision of the new computerized sexuality in which bodies mix in the ethereal virtual space, delivered of their material weight” is in fact “an ideological fantasy, since it unites the impossible: sexuality (linked to the real

body) with the “mind” decoupled from the body as if (...) we can reinvent a space where one can fully indulge in bodily pleasures by getting rid of our actual bodies” (p.2). Indeed in research into the criteria used by MSM to select sexual partners online corroborated the idea that bodies do matter in cyberspace, and found that they are present for instance as the locus of desire, as a fantasized ideal or in the need to interact with online personas that have a (real) face attached to them (Nodin, Carballo-Diéguez & Leal, 2009). Others have reported similar findings (Adams-Thies, 2012; Campbell, 2004; Couch & Liamputtong, 2008; Fletcher & Light, 2007; Mowlabocus, 2010).

In addition, van Doorn (2011) claimed that technologies like the Internet, which are used as vehicles for the performance of sexuality and gender, cannot be separated from the bodies and identities that perform them, thus arguing that communication technologies are important elements in ongoing online identity formation processes. Several other authors (Clark, 2003; Goren, 2003; Mitchell, 2003; Turkle, 2004) have also questioned whether the relations of close intimacy people develop with the objects they use to access the Internet and to communicate with others (mobile phones, computers, etc.) have an impact on their sense of self, as these objects are increasingly experienced as extensions of their users bodies and minds.

Rodogno (2012), while discussing the philosophical issue of re-identification (or the extent to which one’s identity remains constant from one moment to another, as well as from one context to the next), examined the usefulness of narrative theories in linking online and offline selves. He claimed that any contemporary account of the self will encompass its offline as well as its online dimensions, therefore unifying both in a single narrative and asserted that “abundant stored autobiographical narratives [like the ones found on Facebook] may have an impact on our ongoing identity-forming processes of self-reinterpretation” (Rodogno, 2012, p.326). By using a narrative approach to the development of the self not dissimilar to Giddens’s (1991), Rodogno joined his voice to those against the idea that disembodiment and anonymity online lead to the creation of multiple and irreconcilable identities.

Research into social media seems to support a unified approach to identity formation on- and offline. For instance, Zhao et al. (2008) found that on Facebook the self tends to reflect hoped-for identities that include socially desirable characteristics that users have been unable to attain in their offline selves (Zhao et al., 2008). Accordingly, “[i]dentity is not an individual characteristic; it is not an expression of something innate in a person, it is rather a social product, the outcome of a given social environment and hence performed differently in varying contexts” (Zhao et al., 2008, p.1831).

Other studies have researched the impact of using social media on self-esteem (Wilcox & Stephen, 2013; Gonzales & Hancock, 2011) and self-views (Gentile, Twenge, Freeman &

Campbell, 2012), generally concluding that there is an impact and that this impact is positive. However, other studies found that, in individuals with low self-esteem, the effect of using social media may actually be negative (Clerkin, Smith & Hames, 2013), and that positive feedback from friends on social media profiles enhanced adolescents' social self-esteem and well-being, whereas negative feedback had the reverse effect (Valkenburg, Peter & Schouten, 2006). These results provide a more nuanced view of identity change associated with use of social media by highlighting the interactive effect that diverse experiences online might have on this process.

Finally, Nach and Lejeune (2010) carried out a study on how individuals deal with challenges to their identity derived from new information technologies in the context of organisations, by applying the Identity Control and Coping theories. They reported that people constantly “define and redefine themselves in response to substantive shifts induced by information technology” (p.627) by using four strategies: acting on a situation, adjusting the self, cathartic practices, and distancing. These may in turn lead to four different, flexible and challenge-reactive, outcomes: reinforced identity, redefined identity, ambivalent identity, and anti-identity.

3. The impact of online dating and sexual networking

“I change my mind so much I need two boyfriends and a girlfriend.” (Pink, undated)

In this section I define and characterise online dating and sexual networking, as well as discuss the potential psychosocial implications and effects of these practices, a relatively new area of research. Because dating websites (e.g. OK Cupid, Match, Guardian Soulmates) tend to be marketed by their developers and used by their members differently from sexual networking sites (e.g. Adultfriendfinder, Manhunt), I will examine these two environments and their potential impact separately. It should be noted, however, that there is an overlap between the two, as romantic relationships and sex may result of using either (e.g. Davis et al., 2006, use the term “e-dating” which includes both practices), and often people concurrently create and use profiles in websites of both sorts (Couch and Liamputtong, 2008).

In recent years, the popularity of smart phones has led to the rise of dating and sexual networking applications (named “smartphone geosocial networking applications” by Rice et al., 2012, and their use designated “satellite dating” by Quiroz, 2013) that are used for the same purposes as equivalent dating and sexual networking websites but with the added features of mobility and location-based searches for potential partners (Blackwell, Birnholtz,

& Abbott, 2014; Grosskopf, LeVasseur & Glaser, 2014; Quiroz, 2013). Research on the potential psychosocial effects of these applications is still in its very early stages and is not reviewed since this Dissertation pertains strictly to the impact of using web-based dating and sexual networking resources.

3.1. Online dating – An overview

“Cyberspace is part of real space, and online relationships are real relationships”
(Ben-Ze’ev, 2004, p.2)

People have been using adverts, dating services and computers to meet others for relationships and sex for some time (Hardey, 2004; Lawson & Leck, 2006). However, as recently as 2000 it was claimed that “personal ads represent a minority, atypical, and slightly deviant mode of courtship” (Bartholome et al., 2000, p.311). The Internet has come to deeply change that perception, turning a niche into a mainstream practice (Nodin, 2007), to the point where approximately one-third of all relationships leading to marriage in the USA now start online (Cacioppo, Cacioppo, Gonzaga, Ogburn & VanderWeele, 2013). The popularity of online dating has led to inevitable shifts in public opinion regarding the practice (Noonan, 2007; Quiroz, 2013) and has generated a growing number of books, including fictionalised and non-fictionalised accounts of online dating (e.g. Slater, 2014; Webb, 2013), as well as those advising on the best way to use these websites to meet partners (e.g. Davis, 2013; Fein & Schneider, 2002; Hoffman, 2013).

Online dating has been defined as “a purposeful form of meeting new people through specifically designed internet sites” (Barraket & Henry-Waring, 2008, p.149) or as “a method of courting used by individuals who meet on the Internet and continue online correspondence in hopes of forming a supportive romantic relationship” (Lawson & Leck, 2006, p.189) and described as a “seamless movement between reading descriptions, writing responses and exchanging messages” (Hardey, 2002, p.572). It may be followed by telephone conversation(s) and face-to-face encounters (Couch & Liamputtong, 2008; Davis et al., 2006; Guadagno, Okdie & Kruse, 2012).

According to the model of seductive communication proposed by Mantovani (2001), which may be applied to online as well as to offline interactions, “the seductive process is built up by the actors in a new and creative way each time, starting from opportunities and limitations offered by the communication context”, which in the online setting means that participants have to negotiate “the meaning of the situation in which they are involved” (Mantovani, 2001, p.148).

According to Finkel, Eastwick, Karney, Reis and Sprecher (2012), online dating offers “opportunities to the relationship-seeker that are unprecedented in human history” (p.4), namely access to a much larger pool of potential partners than otherwise possible; the overcoming of distance and the possibility of meeting potential partners basically anywhere in the world; and the use of tools that match online daters with others based on data provided by many other users.

Several other authors have attempted to define the characteristics that make cyberspace an appealing space for seeking amorous activities. Some have emphasized its psychological allure, listing imagination, interactivity, availability and anonymity as the main factors that drive people online in pursuit of romantic partners (Ben-Ze’ev, 2004). Others have focused on the practical aspects of the context: the low or no cost of using online ads; the wide audience that these ads can reach; the possibility of posting pictures alongside detailed text about the person behind the ad; and the fact that they allow users to be anonymous if they wish (Strassberg & Holty, 2003).

Couch and Liamputtong (2008) found that the motives that led participants in their sample to use online dating websites were varied and included “seeking a soul mate, seeking sex, looking for fun, relaxation, to ease boredom, or because it seemed like an easy way to meet people” (p.271). Additional research has also found that people who use dating websites value the freedom of choice these allow, deriving from access to a large number of potential partners, while minimising the negative impact of rejection (Lawson & Leck, 2006).

The Internet has the potential to accommodate the diversity of partner-profile and relationship-arrangement possibilities sought by online daters and caters to many of these through a myriad of websites specialized in diverse niche dating markets (Hardey, 2002, 2004; Noonan, 2007). Many of these websites are based on the premise that common interests and other levels of compatibility are key factors for the success of a relationship. This idea goes back to the 1960s, when so called ‘scientific matching’ used computers to link information that relationship seekers provided on questionnaires about themselves (Hardey, 2002, 2004). Hardey (2004), however, believes that despite the fact that dating websites use increasingly sophisticated algorithms and software to match users, the majority of users will judge and decide themselves who might be suited as potential partners.

The Internet also provides the virtual space for adding as much or as little detail as desired when creating profiles on dating websites, with the possibility of including descriptions, tastes and features sought in a partner, as well as pictures and other personal information (Guadagno, Okdie & Kruse, 2012; Hardey, 2004; Lawson & Leck, 2006), even if sometimes resorting to codes that e-daters need to understand in order to fully comprehend the meanings of the other’s profile content (Nodin, 2007). The use of pictures in particular is generally a valued element for online relationship-seekers, with one study having found that

77.6% of all profile views on a dating website being of users who have at least one picture in their profile (Hitsch, Hortaçsu & Ariely, 2010). Similarly, Fletcher and Light (2007) described a dating website used by gay men as “dominated by the need to have some identifiable and visible person and identifiable sexuality to interact with; as is often the case, people want so see – and know – who they are dealing with” (p.427).

The pieces of information that dating profiles accommodate were defined as “pictorial signs of identity” by Davis et al. (2006, p.460), thus highlighting that they are identity proxies of a sort, even if imperfect ones, standing in for the website user. In turn, the presentation possibilities offered by online dating websites allow a careful selection of self-depiction in line with the Hyperpersonal model proposed by Walther (1996). Walther used Goffman’s theory of Self-presentation (1959) to argue that the reduced communication cues and the asynchronous nature of CMC allow people to optimise their self-presentation more than already happens offline (Walther, 1996). This in turn contributes to CMC in some instances surpassing face-to-face communication in levels of emotion and affection expressed and experienced, allowing for more intimate social interactions. Various studies of online dating have corroborated the postulates of this model (Anderson & Emmers-Sommer, 2006; Ellison, Hancock & Toma, 2012; Hian, Chuan, Trevor & Detenber, 2006; Jiang, Bazarova & Hancock, 2011). For instance, online daters have been shown to be more flexible in presenting information that may not be accurate at the time of the profile creation but which they believe they will be able to change in the future (e.g. weight, facial hair, professional situation), as opposed to those that are harder to change (e.g. age, height), thus taking advantage of the asynchronicity of this mode of communication (Ellison et al., 2012).

It is, however, interesting to contrast this idea of a “manicured” self that one can present online with the need for authenticity expressed by many people looking for relationships on the Internet (Couch & Liamputtong, 2008; Hardey, 2004). According to Ellison et al. (2012), “[g]iven the impossibility of translating an embodied self into a relatively brief and static self-description, some discrepancies between one’s online and offline presence may be expected – and even accepted – while others are definitely not” (p.46). This paradox has been characterised in some of the research about online dating as “deception” (Ellison, Heino & Gibbs, 2006; Guadagno, Okdie & Kruse, 2012; Toma & Hancock, 2012).

Research into online dating deception in a heterosexual context (Guadagno, Okdie & Kruse, 2012) found that men tended to lie more than women, but also that dishonesty in CMC varies according to communication mode (with email being associated with more deceit than face-to-face contact) and with the individual goals for the communication (online-only communication increasing the likelihood of deceit when compared with online communication with intention to meet face-to-face). Inaccurate dating profiles have also been shown to be

more intentional than self-deceptive, with users tending to be more inaccurate in their pictures when compared with their relationship information (Toma, Hancock & Ellison, 2008).

Conversely, online daters will also develop strategies to determine whether others are lying, such as using webcams or simply by following their instincts (Couch & Liamputtong, 2008). Furthermore, deceit can be progressively unveiled as e-daters get to know each other better and ultimately will be exposed upon a face-to-face meeting (Lawson & Leck, 2006; Whitty & Carr, 2003). In fact, the possibility of a face-to-face encounter has been described as tempering inaccurate self-presentations on online dating websites (Davis et al., 2006; Hardey, 2004; Quiroz, 2013).

In line with the concerns surrounding the possibility of e-daters' imprecise descriptions, Finkel et al. (2012) suggested that post-date rating systems would improve levels of honesty on dating websites, as inaccurate profiles would very quickly be reported by other users. However, the concept of deceit online has also been put into perspective and the act considered to "not necessarily signify deception on the part of the liar, but instead can signify a desire to reveal a deeper level of truth about the self" (Whitty & Gavin, 2001, p.630). In turn Ellison et al. (2012) have conceptualised profiles within online dating websites as "*a promise made to an imagined audience that future face-to-face interaction will take place with someone who does not differ fundamentally from the person represented by the profile*" (p.56, italics in original).

3.2. Change associated with online dating

"I am part of everyone I ever dated on OK Cupid." (Coleman, 2013)

Pervasive and extensive use of dating and sexual networking websites has also started discussions around how this might affect different psychosocial dimensions of those who use them. Research in this area is still limited, but growing. For instance, Barraket and Henry-Waring (2008) claimed that while the Internet reinforces traditional norms associated with intimacy, it can alter the nature of relationships by creating new rules and opportunities. Finkel et al. (2012) agree and discuss how online dating has fundamentally changed the process of initiating relationships, by allowing individuals to browse through profiles of others without their knowledge; by getting to know a wide range of facts about a potential partner even before meeting them; and also by being able to access a large number of potential partners at a time. These authors compared the methods used by some of the websites to the means traditionally used by matchmakers and claimed to have found commonalities, such as an emphasis on similarity and complementarity between potential candidates for a match. However, they also found that web-based dating systems' algorithms include factors

that were ignored by traditional methods.

Research has also suggested that the Internet allows the levelling out of gender-stereotypical patterns of interaction in heterosexual courtship, allowing women to be more assertive and men to be more expressive, with those effects however tending to be eliminated when relationships move out of cyberspace (Lawson & Leck, 2006).

Another line of research has tried to determine whether online dating has any effect on identity (Couch & Liamputtong, 2008; Davis et al., 2006; Heino, Ellison & Gibbs, 2010; Yurchisin, Watchravesringkan & Brown, 2005). One study used the concept of possible selves in trying to understand to what extent the creation of profiles in online dating sites and the feedback received from others might lead to identity change (Yurchisin et al., 2005). Possible selves are “images of the self that have not yet been realised” (Markus & Nurius, 1986, p.957, cit. by Yurchisin et al., 2005). The authors found that there were significant indicators that individuals do re-create their identities through the use of online dating services. This happens by presenting an image of themselves that is close to that which they would like to be (their possible selves) and through it explore identity possibilities that would otherwise not be explored in the offline world. Particularly relevant in this process is the feedback they receive from others, which is then actively incorporated into the online dater’s actual (or “now”) selves. A different study corroborated that the feedback from others, particularly the indicators of attention to personal profiles (number of hits and messages received) within an online dating environment, had a positive impact on e-daters’ self-perception, particularly of their desirability (Heino et al., 2010).

Heavily influenced by Goffman’s theory of Self-presentation (Goffman, 1959), Hardey (2004, 2002) analysed the ways in which the development of trust and the pursuit of authenticity are key elements to the successful development of relationships online. He suggested that “Internet dating appears to be an ideal medium for the presentation of biographical narratives, providing individuals with an avenue through which they can reflect on and create a discourse about who they are and what they want from a relationship” (p.210). His analysis has inspired further studies about the impact of online dating on identity both for gay (Davis et al., 2006) and heterosexual (Couch and Liamputtong, 2008) e-daters.

For Davis et al. (2006), “the Internet can be addressed in terms of engagement with self-construction, trust and security” (p. 459). They conceptualised this process by the analysis of “filtering”, or the practice of looking for and selecting partners online, which involves self-construction through the e-daters’ development of their own online profiles, as much as it includes their perceptions of other user’s sexual interests and desires. This translates into e-daters carefully selecting the information to be shown to others (e.g. their user names or pictures) in order to establish individuality and to create “a connection with someone who understands your background, personality or sexual taste” (p.468), but it also

means that much investment is put into capturing the attention of the other. This, in turn, leads to self-presentation becoming “a way of manufacturing the self in relation to the desires of the desired other” (p.468). Davis et al. consider this process to be affected by the meanings and constraints of the offline context, even if the Internet allows for a creative approach to the “conventions of sexual taste” (p.474).

Couch and Liamputtong (2008) picked up the concept of “filtering” suggested by Davis et al. (2006), and used it to analyse a group of Australian heterosexual e-daters’ practices. Couch and Liamputtong (2008) also found that the participants in their study “were concerned about how to present their own identity to attract their sexual partners” (p.277), even if not to the same extent as the participants of Davis et al’s (2006) study. In fact, they showed a greater concern regarding the physical appearance of the sexual partners they interacted with online. The variety of strategies that the heterosexual men and women used to interpret their potential daters’ identities led the authors to conclude that “online dating negotiates identity” (p.277). In their sample they also found that using online dating websites potentially increased the number of sexual partners as well as allowing the expansion of social networks.

Additional research has suggested an impact of dating on the ways individuals perceive others within dating services, particularly by a process of commodification of potential mates (Best & Delmege, 2012; Coupland, 1996; Heino et al., 2010), which may at least be partially associated with the wide choice offered, something that humans may not be prepared to deal with from an evolutionary perspective (Lenton, Fasolo & Todd, 2010). Best and Delmege (2012), for instance, studied the strategies that online daters used to filter through large numbers of potential dates within specialised websites, describing how, with experience, users often develop a shopping mentality of dating that allowed them to maximize their results.

Others have also approached the online dating experience in light of the marketplace metaphor (or ‘*relationshopping*’) and explored the ways in which e-daters themselves use this metaphor to make sense of their experience, both in regard to their own as well as to other’s presentation online, even if often actively resisting it and its underlying implications (Heino et al., 2010). Heino et al. based their approach on the relevance of metaphors, and therefore of language, to shape the way people conceive reality, thus effectively creating new meanings for existing experiences. They found that this process is also reinforced by the design of dating websites that resemble e-commerce pages and also by “enabling individuals to systematically select and deselect checkboxes regarding their [partner] preferences” (Heino et al., 2010, p.442). They also highlighted the risks of the marketplace metaphor, as it may lead to relationships that are heavily based on superficial pre-determined matched interests with disregard for deeper aspects of romantic connections. It may also lead to an

eternal pursuit of the “perfect” relationship in detriment of developing lasting and successful communication patterns in the relationships found. In other words, “the commodification of relationships and people (...) devalues the uniqueness of individual actors and encourages a more clinical approach to finding a mate” (p.444), a perspective that left the participants in the study themselves feeling uncomfortable.

3.3. Online sexual networking and its impact

*“Whenever a new medium or technology changes human social conduct
it is almost certain to change sexual interactions as well.”
(McFarlane & Kachur, 2003, p.223)*

Many researchers have also questioned the extent to which using the Internet may affect people who use it with the specific intent of finding sexual partners. As Dowsett, Williams, Ventuneac & Carballo-Diéguez (2008) put it in the context of discussing gay men’s sexual use of the Internet: “[s]ome see the internet as a better telephone, as merely a better way to communicate; but we ask: does this new form of communication change us, producing new cultural norms, new ways to be and do?” (p.122).

Davis et al. (2006) exposed two opposing arguments regarding the potential relationship between the Internet and sexuality. On one side, there are those who believe that “sex happened to the Internet” (Davis et al., 2006, p.474). According to this hypothesis, the Internet is just another technological outlet for sexuality that, like video recorders, cell phones and other media, has been used for sexual gratification. On the other side, one of the trends in looking at sexual behaviour in relation to the Internet attributes agency to the medium (“the Internet happened to sexual practice”; Davis et al., 2006, p.473), i.e., it assumes the Internet influences the behaviours that it facilitates and fuels the creation of new ones (Adam et al., 2011). For instance, some have suggested that the Internet may be inducing more sexual risk behaviours, such as sex without condoms and sex associated with drug use, particularly among MSM (Adam et al., 2011; Fernández-Dávila & Zaragoza Lorca, 2011; Liau et al., 2006; McKirnan, Houston & Tolou-Shams 2007). This line of research was inaugurated in 2000 when two separate studies found a relationship between sexually transmitted infections (STI) and sexual use of the Internet among MSM (Klausner et al., 2000; McFarlane et al., 2000).

Indeed, Remien et al. (2006) found that 61% of the MSM they surveyed perceived changes in their sexual behaviour since using the Internet. Fifty-one per cent indicated that they had more sexual partners, 41% that they had more oral sex, 30% had more anal sex, and 26% had more unprotected anal sex. Participants also associated using the Internet with

increased acceptance of their sexual orientation.

Another line of research has investigated the existence of sexual 'compulsivity' associated with Internet use (Cooper, Griffin-Shelley, Delmonico & Mathy, 2001; Corley & Hook, 2012; Meerkerk, Van Den Eijnden & Garretsen, 2006), also among MSM (Coleman et al., 2010; Daneback, Ross & Månsson, 2006; Parsons et al., 2008). One study identified a small portion of users of the Internet for sexual purposes for whom the medium seemed to have facilitated an excessive behaviour that would otherwise not have emerged (Cooper et al., 1999).

Both lines of research – Internet-facilitated sexual risk behaviour and sexual compulsivity – often suggest that the virtual context that mediates the behaviours may be responsible for its outcomes (Perry, Accordino & Hewes, 2007). However, even if a relationship between the Internet and problematic sexual behaviour seems apparent in some situations, that relationship has been under researchers' scrutiny for at least a decade and still remains unclear (Adam et al., 2011; Al-Tayyib, Rietmeijer, McFarlane & Kachur, 2009). Additionally, not all studies have found a link between using the Internet and risky behaviours (Coleman et al., 2010; Jenness et al., 2010; Menza, Kerani, Handsfield & Golden, 2011), including one among Portuguese MSM, in which the men interviewed denied behaving differently with online versus offline sexual partners in regard to safe sex (Nodin, Leal & Carballo-Diéguez, in press).

Brown, Maycock and Burns (2005) underlined the need to analyse Internet-induced sexual risks in the context of the relevant cognitive structures that accompany that practice. They asserted that "as with any other social or sexual space, the environment can influence but does not determine the behaviour. It is the assumptions, choices and actions taking place via the Internet that are of interest" (p.71).

In addition, the Internet may also be a relevant medium to facilitate the prevention of transmission of the Human Immunodeficiency Virus (HIV) (Rosser et al., 2012) and even to allow the safest sex of all: cybersex (Carvalho & Gomes, 2003), an activity that people engage in for various reasons, such as time constraints, the sharing of sexual fantasies and the possibility of meeting sexually compatible partners (Wysocki, 1998). However, for others "[c]ybersex is only safe because it is no-sex" (Alapack, Blichfeldt & Elden, 2005, p.60), emphasizing the lack of physical contact between partners which carries no risk of STI transmission. This has been supported in a study of Portuguese MSM (Nodin, Leal & Carballo-Diéguez, 2008) that found cybersex to be a common Internet-facilitated sexual practice, with participants recognising the advantages of the medium to enable communication between partners. However, many considered cybersex to be generally dissatisfying and to lack the warmth of physical interaction, often approaching it critically even while they continued to engage with the practice (Nodin, Leal & Carballo-Diéguez,

2008). Despite evidence of these conflicting experiences, or perhaps reflecting them, Tylim (2012) speculated that the “pleasure of virtual sex may surpass the pleasure of physicality” (p.476).

Kraus and Russell (2008) found that access to the Internet from ages 12 to 17 was associated with younger age of first oral sex experience for men and with younger age for first sexual intercourse for adults of both genders, even if such access was not associated with increased number of sexual partners. The authors attributed these results to exposure to sexually explicit materials online during adolescence, thus suggesting that the impact of the Internet on sexuality is not limited to finding sexual partners online and may affect various aspects of users’ sexuality.

Others have discussed how information and communication technologies are channels for different types of sexual expression as well as increasingly becoming a part of them (Hearn, 2008). For example, Hurley (2007) suggested that new-media technologies might be reshaping sex as part of everyday life. Cooper and colleagues emphasised the dynamics of this relationship by writing that since its early days “the Internet has been inexorably associated with sexuality in a synergistic dance, each fuelling and ultimately contributing to the transformation of the other” (Cooper et al., 2001, p. 268).

As with other discussions about the impact of using the Internet on various aspects of the human experience included above, also in relation to online dating and sexual networking, it is possible to identify dichotomous views and reactions. Here too we find an underlying tension between the exciting possibilities that the Internet has to offer e-daters and the real or perceived perils it might produce.

Before presenting the empirical studies that support my thesis, I will provide a brief overview of some aspects of MSMs experiences online to help contextualise the research in issues of technology and mating practices associated with cyberspace as well as those of sexual orientation and identity.

4. MSM and the Internet

*“To what extent is the internet overwritten by codes of heteronormativity
(and, we might add, homonormativity)?”
(Bell, 2006, p.399)*

It has been reported that MSM seem to have taken on the Internet as a preferred environment to seek romantic relationships and sexual encounters (Davis et al., 2006). Studies in various parts of the world have shown that most MSM have used the Internet to meet others for such reasons (Bolding et al., 2005; Frankland et al., 2008; Mettey et al.,

2003; Pitts et al., 2007). In fact, the enthusiasm with which MSM have taken to the Internet seems to suggest that there is a specific appeal for this medium among these men.

The diversity of contexts that MSM use for the purpose of finding sex and the creativity they apply to that pursuit has been documented (e.g. Dowsett, 1999; Leap, 1999; Villaamil & Jociles, 2011), suggesting that cyberspace could just be another one of these contexts. However, other factors may also explain this enthusiastic uptake. For example, if anonymity accounts for the popularity of the sexual use of the Internet for many people regardless of their sexual orientation (Carvalho & Gomes, 2003; Cooper, 1998; Strassberg & Holty, 2003), research has shown that particularly for MSM who do not identify as gay or who fear negative consequences from disclosing their sexual orientation, anonymity may be the main factor explaining their extensive use of online sexual networking (Brown, Maycock & Burns, 2005).

In discussing the ways by which individuals with minority sexual preferences are drawn online, Rosenmann and Safir (2006) suggested that it may be the very nature of offline sexual norms and rules that drive these individuals into the Internet, in what these authors call the *push factors* of Internet sexuality. Furthermore, they also attributed the allure of the Internet for these individuals to *pull factors* of the Internet, for example, the interaction with similar others who will positively condone their preferences and activities, leading to a sense of sexual empowerment.

McKenna and Bargh (1998) also theorised that individuals with marginalised identities, including non-heterosexuals, would be compelled to use the Internet to interact with people with similar experiences due to the anonymous (and therefore “safe”) nature of that medium. They also expected that the influence of such an affiliation would be particularly relevant, leading to those users’ online selves being merged onto their offline ones. These assumptions were confirmed (McKenna & Bargh, 1998; McKenna, Green & Smith, 2001), and one of the studies conducted concluded that because of the online groups the participants in the research had ‘come out’ “to their family and friends about this stigmatized aspect of themselves for the first time in their lives” (Bargh & McKenna, 2004, p.583). McKenna, Green and Smith (2001) posited that “as one expresses important sexual needs and interacts with others who share or understand those needs, changes are brought about in one’s identity. The result is a *demarginalization* of one’s sexual self – specifically, the acquisition of a positive sexual identity where before there were feelings of isolation and shame” (p.309, italics in original).

Although both Rosenmann and Safir’s (2006) and McKenna and Bargh’s (1998) analyses were not limited to MSM, the dynamics and processes of sexual use of the Internet these researchers have identified contribute to understanding the high popularity of the

Internet among this group, and they also help clarify the impact that online sexual networking can have on the development of a positive sexual identity.

Additionally, the Internet makes screening for others with similar sexual interests easy (Davis et al., 2006). Men may seek partners online, for instance, for sex without condoms (e.g. Blackwell, 2008; Carballo-Diéguez et al., 2009; Grov, 2006), for fetish sex (Mettey et al., 2003) or they may look for others who fit within specific sexual position preferences, such as that of being the receptive or the insertive partner in anal intercourse (Klein, 2008).

When using the Internet to meet others, MSM may need to present themselves as objects of desire, actively negotiating their presentation in accordance with what they perceive to be desirable, using more inventive strategies for that purpose than those generally used offline (Davis et al., 2006). Simultaneously, the options for providing information programmed into these websites are often given by pull-down menus or multiple-choice tick boxes with specific predetermined options that limit the possibilities for self-presentation (Carballo-Diéguez et al., 2006; Nodin, Valera, Ventuneac, et al., 2011). When completing their profiles within the limits offered by the websites, the men will be making choices and going through a reflexive process about their identity and behaviour. This process links to their sexual identity and behaviour, but also with ethnicity and aspects of gender, specifically those of masculinity and of what it means to be a man in the context of websites designed to facilitate sexual encounters between men (Dowsett et al., 2008).

Research that analysed personal ads and profiles posted on the Internet has indeed demonstrated gay men's concerns with gender and gender roles (Phua, 2002). Some of these findings resonate with earlier research using personal ads published in newspapers and magazines by gay men. For instance, studies had shown a tendency among gay men to emphasize their stereotypical masculine traits (Laner & Kamel, 1977), as well as to reject effeminate men (Davidson, 1991) in this context.

Thus, the creation and management of profiles in specialized websites potentially allows for processes of re-evaluation of various dimensions of identity in ways that are mediated by technology. Dowsett et al. (2008) believe that through this process and through shared projects of sexual exploration men "are producing a new sexual culture based on an ethics that has at its heart notions of reciprocity, intimacy and responsibility, and which outlines evolving rules for comportment" (p.135).

Another relevant aspect of the intersection of identity and behaviour for MSM is in relation to HIV and sexual risk behaviour. In light of the extent to which HIV infection has affected MSM, research has also focused on this population's use of online personal ads and profiles in regard to issues of health and sexual practices (Blackwell, 2008; Carballo-Diéguez et al., 2006; Davis et al., 2006; Downing, 2010; Nodin, Valera, Ventuneac et al., 2011; Phua, Hopper & Vazquez, 2002). This has become more relevant in light of the increase of

consensual unprotected anal sex among MSM (a.k.a. barebacking) (Carballo-Diéguez et al., 2009; Tewksbury, 2004, 2006).

A study showed that gay men were significantly more concerned with health than heterosexual men, and also that those who were explicit about seeking sexual activities were more likely to mention health issues in their online ads (Phua, Hopper & Vazquez, 2002). However, many MSM still fail to communicate an intention of having safer sex with partners online (Downing, 2010) or their HIV status (Ross, Rosser, Coleman & Mazin, 2006) while others actively look online for partners for sex without condoms (Blackwell, 2008; Tewksbury, 2006). One study reported that 26% of a sample of MSM engaged in barebacking with a partner met on the Internet in the three previous months, which in turn was associated with high sexual sensation seeking (Grosskopf, Harris, Wallace & Nanin, 2011).

A research about the online profiles of MSM on websites particularly for bareback sex showed that men's presentations in that context tended to be highly sexualized and explicit, anticipating the act (Nodin, Valera, Ventuneac, et al., 2011). For instance, men disclosing a positive HIV status tended to have more pictures of their heads and bodies as well as of their erect penises, possibly with the intention of showing that despite their HIV status they look attractive, healthy and sexually capable. In turn "bottom" men (those with a preference for being sexually receptive during anal intercourse) had more pictures of penetration, group sex and of their rears. The men using the websites studied, it was concluded, "actively use their online images and performances to put themselves in diverse categories, including those of sexual position and identity in order to appeal to potential sexual partners" (Nodin, Valera, Ventuneac, et al., 2011, p.1024). This occurs in the context of the highly sexualized environment of these websites, which reinforces a certain masculine ideal. The results of the study suggested that "many high-risk behaviours are anticipated by fantasy, which in turn translates into scenarios created by the men in articulation with the website's possibilities of how they would like situations to unroll and which practices they wish to enrol in" (p.1025).

The sexual use that MSM make of the Internet therefore seems to be the result of a multitude of circumstances and conditions, some facilitated by the technology and the contexts of its use (e.g. website design, anonymity), and others actively pursued by the men who use it, such as their wish to avoid discrimination and their self-objectification when positioning themselves in the online sexual marketplace. Simultaneously, discussions about HIV, identity and behaviour have become central elements of the research into MSM's use of the Internet to meet sexual partners (Carballo-Diéguez et al., 2006; Davis et al., 2006; Nodin, Valera, Ventuneac, et al., 2011; Phua et al., 2002; Tewksbury, 2004, 2006), particularly in light of increasing concerns around growing HIV infection rates in this population (ECDPC & WHO, 2013; Jaffe, Valdiserri & De Cock, 2007; Le Vu, et al., 2012) and the apparent failure of traditional approaches to prevention (Hart & Elford, 2010).

Despite not focusing on sexual risk or prevention per se, my thesis complements the body of knowledge about the intersection of technology, identity and desire, a key arena for understanding the dynamics of choice and behaviour among MSM in the contemporary world.

5. Relevance of the topic

Our studies aim to increase the amount of information about how the use of technology affects different aspects of human psychosocial functioning and behaviour. Specifically, they investigate the extent to which using dating and sexual networking websites affects gay men and other MSM's self-perception and the perception of others, exploring some aspects of that experience and contributing to the field by developing an innovative evaluation instrument.

Although it is an original corpus of research, it links to theoretical frameworks and research carried out by others. It finds its theoretical heritage in centuries-old discussions and reflections surrounding the effects of technology on individuals and society, going all the way to Plato, which are associated with growing concerns about alienation resulting from, but occasionally with enthusiasm for, the use of machines and other artefacts (e.g. Heidegger, 1977; Marcuse, 1964). From a modern perspective, my research engages with similar debates triggered by the advent of mass communication technologies (McLuhan, 1962, 1964, 1967; Postman, 1992; Virilio, 1986, 1995, 1997) and of the Internet as a powerful medium that allows information access and communication on unprecedented levels in the history of humankind (Carr, 2010; Lanier, 2010; Rheingold, 2003; Thompson, 2013; Turkle, 2011). Many of these fall on one side or the other of the technophilia–technoscepticism debate (Postman, 1992), with many of the contributions to the field postulating that the Internet has either a positive or a negative (and less frequently a neutral) effect on the people who use it. These ancient and current debates and the concerns that often trigger, or are derived from, them suggest that there continues to be a conceptually relevant space in academia and in society for questioning new technologies' influence on people and society. In the words of Fletcher and Light (2007), "as technologies are introduced into society, it is important to ask what kinds of bonds, attachments and obligations are in the making." (p.423). I believe that, modestly, our studies contribute to this lineage of reflection and debate.

In addition, recent research into the effects of the Internet on various dimensions of human behaviour and psychosocial functioning, such as cognition or sociability, have definitively shown that such effects do exist, although they are far from being simple (Ellison, Steinfield & Lampe, 2011; Kirschner, & Karpinski, 2010; LaRose et al., 2014; Misra &

Stokols, 2012; Paul et al., 2012; Pollet et al., 2011; Valkenburg & Peter, 2008, 2009). In fact, much of this research has demonstrated that the impact of Internet use on the minds of people who use it has nuances that researchers are only starting to explore and understand in more detail (e.g. Alloway et al., 2013; Junco, 2012). Our approach hopefully provides more meaning and information to a niche aspect of this larger pool of research, therefore informing a more layered knowledge of the impact of the Internet on individuals.

Of interest to this area of research, in particular in the context of General and Clinical Psychology, is the issue of identity and self-change. Identity and the self are, after all, central elements to the living experience of humans as sentient and social beings (Dainton, 2014). Traditionally considered to be fully formed and stable by adolescence, some authors have, however, questioned this assumption and proposed more dynamic ways of looking at how identity and the self might evolve throughout life and shift depending on context (Giddens, 1991; Goffman, 1957). Studies of online identities and the presentation of the self in cyberspace have also contributed to deconstructing the notion of a steady and unified identity (Turkle, 1995; 2004). However, this line of research is still in its infancy and is sometimes taken by the temptation of unproven speculation, such as the idea that identities float online detached from the bodies that create them (Dery, 1996; Heim, 1991; Tylim, 2012). Central as they are to psychological science, the interaction of concepts of identity and the self with cyberspace deserves more scholarly attention than has hitherto been afforded.

That some of these emerging lines of research have developed from analyses of dating and sexual networking websites and practices is not coincidental. After all, the cornerstone of these websites is the presentation of self in a way to attract potential mates, forcing users to fit a fully multi-dimensional person into the narrow (cyber)space provided, therefore appealing for a maximisation of communication, often by exposing and making use of several of the relevant threads that form an identity, including gender, sexuality, ethnicity and HIV status. This unique combination of potential and constraint added to the vast popularity of the practice make online dating and sexual networking a perfect laboratory for the study of identity and of self-presentation in the modern world.

Similarly, MSM's enthusiastic use of the Internet to meet sexual and amorous partners, aligned with the specific realities that these men face in relation to their identity and behaviour, make them a target group for analyses regarding the plasticity of the self when exposed to cyberspace. However, much of the research around MSM's identities online has focused on discourses of public health and sometimes of moral panic due to historically high rates of HIV infection in this group and the challenges of ongoing prevention of STI transmission in current times (McNamara, 2013). Therefore, although MSM's use of the Internet has been studied extensively in relation to sexual risk behaviours (Adam et al., 2011;

Benotsch, Kalichman & Cage, 2002; Fernández-Dávila & Zaragoza Lorca, 2011; Liao et al., 2006; McKirnan et al., 2007; Tikkanen & Ross, 2003) or sexual compulsivity (Coleman et al., 2010; Daneback et al., 2006; Parsons et al., 2008), other aspects of these men's use of the Internet for sexual purposes have been surprisingly understudied. Knowledge of problematic sexual behaviours is certainly still relevant to better address the ever-growing HIV epidemic amongst MSM in many countries. However, additional and more diverse understanding of MSM's identities and practices in connection with communication technologies are needed and, I argue, will be valuable contributions to the same greater public health purpose of HIV prevention. Furthermore, this understanding will also be valuable in the context of Gay and Lesbian Studies.

Of note, our research is among the few studies of Internet use and sexuality in Portugal, a field pioneered by Carvalheira and Gomes (2003) but still largely unexplored. I believe it contributes to the understanding of the contemporary realities of Portuguese MSM, namely the challenges that these men face in their pursuit, development and maintenance of sex and relationships in a networked world.

Finally, I agree with Bargh and McKenna (2004), who suggested "one potentially great benefit of the Internet for social psychological research and theorizing: by providing a contrasting alternative to the usual face-to-face interaction environment" (p.587). The Internet is a powerful lens to look at how people think, behave and interact, not always in ways that equate with what happens or is accessible offline. The idea that the Internet and the fast moving amalgamation of technologies that are part of it is creating new ways to be and do (Dowsett et al., 2008) is a fascinating one that will add to the understanding of what it means to be human and also, maybe, to be post-human (Fukuyama, 2005; Haraway, 1991; Kurtzweill, 2005) or inhuman (Lyotard, 1991).

For the reasons explored, I believe that the study of MSM's self-presentation and identity in connection with meeting sexual partners online is relevant and will contribute to the understanding of how new communication technologies are affecting individuals and how these changes are perceived and evaluated by those who experience them. In the words of Barraket and Henry-Waring (2008), "better developed theoretical and empirical understandings of the use of online technologies for the purpose of relationship formation are required if we are to understand the nature of intimacy in the global age" (p.163).

Methods

1. Qualitative phase (Exploratory Study and Study 1)

1.1. Participant recruitment

Participants were recruited both online and through traditional methods, such as word of mouth and advertisement through various media (email, television and community-based organisations). Online recruitment was via an Internet-based personal profile created on a popular website used by Portuguese MSM to find partners, sexual and other, using the website's profile template, which allows the inclusion of personal information, description of what one is looking for in others and pictures. In our recruitment profile we included basic information about the research, its purposes, target participants' demographics, and other information (Appendix 1). A picture of the letter Psi from the Greek alphabet was included in the profile in order to enhance its visibility, as many members only look for or read profiles with images, and to underline the scientific nature of the research.

Within the first month of the research, a few dozen members of this website read the profile and of those about 28 volunteered to participate in the research, of which 21 followed up and were interviewed. Potential participants were asked for their contact telephone number and called at an agreed time for screening to assess eligibility for inclusion via a short questionnaire (Appendix 2).

Following initial recruitment, eight research invitations to participate were sent out daily to randomly selected members of the website who were online during recruitment hours. Eight messages was the limit set by the website for non-paying members, which was the case for this study. In order to randomise these invitation messages, the number of profiles that were online during recruitment hours (available on the website) was divided by eight and a message was sent to every Xth profile, starting from the beginning of the list, except if that number was that of a previously contacted or interviewed member, in which case the next one on the list was contacted. A log was kept of these contacts for monitoring purposes.

Of the sample of MSM examined during this phase of the research ($n=36$), 58.3% were men who volunteered online; 13.9% were men invited using the web-based profile created for the study who accepted the invitation to participate; and 27.8% were recruited through other ways, such as word of mouth or general emailing. Recruitment took place from April to December 2006.

In order to be eligible to participate, volunteers had to be male, 18 years of age or older, of Portuguese nationality or be living in Portugal for at least one full year, and have had in-person sexual contact with a partner first met online. Although volunteers were asked if they lived in the Lisbon metropolitan area to facilitate face-to-face interviewing, some participants who did not live in Lisbon were also contacted and interviewed if they were in Lisbon at a time when interviewing was possible. Non-Lisbon residents accounted for 8.3% of the sample ($n=3$) and foreigners living in Portugal (minimum of four years in the final sample) accounted for 5.6% ($n=2$) of the sample. As the language used both in the profile and for screening of volunteers was Portuguese, non-fluent Portuguese speaking individuals were naturally filtered out during the recruitment process.

Participants ranged from 18 to 62 years of age ($\bar{x}=34.4$ years; $sd=9.1$). The large majority self-identified as white (91.4%) and gay (94.4%), with the remainder identifying as bisexual (5.6%). Thirteen participants (36.1%) indicated being in an ongoing relationship at the time of the interview; one participant indicated that his partner, at the time of the interview, was a female. Thirty-three participants (91.7%) had been tested for HIV, of whom two (5.6%) indicated being HIV positive.

1.2. Procedures

Volunteers were scheduled for face-to-face interviews at a private psychologists' office in central Lisbon. All interviews were conducted by NN who has broad psychological interviewing experience. Informed consent was obtained at the beginning of each interview. The interviews were audio-recorded with participants' permission. Interviews lasted from about 40 minutes to over two hours in length, with most lasting about an hour and a half. At the end of each interview, participants were asked to complete a written socio-demographic and epidemiological questionnaire.

The audio-recorded interviews were transcribed and cleaned of errors and identifying information before analysis.

1.3. Measures

A semi-structured interview guide, based on a guide developed for a similar study (Carballo-Diéguez et al., 2009), was developed specifically for the current study to ask participants about Internet use, sexual use of the Internet, personality and behaviour online,

preferred sites, creation of their online personal profile, contacting others on and offline for sex and relationships, and safer sex. These were included in the guide in order to cover a wide range of experiences and feelings about using the Internet for sexual purposes.

A draft version of the interview guideline used for the study was piloted on three native Portuguese-speaking volunteers (two Brazilian- and one Portuguese-born) recruited online and interviewed face-to-face in New York City in early 2006. The final interview guide was developed from this pilot by eliminating questions shown to be unclear and including others that could be relevant for the purposes of the research. The final version of the interview guide had a predefined but flexible structure, allowing the interviewer to follow the natural flow of information presented by the interviewee (Appendix 3).

A written questionnaire was also developed to collect information about socio-demographic characteristics and information on sexual behaviour, sexual orientation and HIV status (Appendix 4).

1.4. Analysis

The analysis followed the procedures described by Braun and Clarke (2006), using an inductive and semantic approach to the data informed by the research questions. Due to the diversity of the collected material, initial coding followed the structure of the Interview guide, allowing for a formal mapping of the material, later to be thematically analysed in accordance with the different research interests.

For the **Exploratory Study**, first level code “Safe sex” was used. It covered questions and answers on the definitions and practices of condom use and safe sex, including those associated with partners met online. The main questions asked during the interview about safe sex were used to create second level codes. Then, a thorough reading of the material under each code was undertaken to identify secondary themes. Results were organized according to relevant categories identified.

For **Study 1** we developed a basic functional code for an initial extraction of the dataset from the data corpus for the analysis carried out. This code covered all sections of transcripts that included participants’ experience, evaluation and reflections of how meeting other men through the Internet for sexual purposes could have influenced their perception of themselves or of other people.

A thorough reading and re-reading of the material generated initial codes and later informed the identification of themes by searching for patterns of meaning in the coded material, always in dialogue with the topic under analysis.

For both qualitative studies analytical bias was minimized by clear and consensual discussion and definition of codes by co-authors and by using transparent documentation (NVivo 8.0). Codes were also systematically verified for internal and external consistency,

checking for overlaps and coherence of coded material. Quotations were translated from the Portuguese originals, maintaining the meaning and nuances of the participants' testimonies, using equivalent idiomatic expressions when appropriate.

2. Quantitative Phase (Studies 2 and 3)

2.1. Procedures and participant recruitment

From the analysis of the themes that emerged during the qualitative phase of the study, a survey and a scale aimed at further understanding the research topic were developed (Appendix 5). These were programmed for an online format using SSI Web Survey software (Sawtooth, 2009), hosted on a website specifically created for the research, tested and then launched. The study and the link to the website where these instruments were hosted were advertised online via emailing, using ads on websites targeted at gay men, through Lesbian, Gay, Bisexual and Transgendered (LGBT) organisations and word of mouth. The website was online and open for participation from January to June 2009. Recruitment continued throughout this period.

2.2. Measures

The online survey included the following sections: introduction to the study, including research team contact details; informed consent; participant demographics; relationship status; HIV-related behaviours; sexual orientation and number of partners; Internet behaviour and sexuality; online profile; and the SUIIS. The SUIIS was developed as a 5-point Likert scale (Completely agree – Completely disagree) and included 65 items. These items were based on common topics that came up in the exploratory phase of the study, and some were adapted from ideas and phrases formulated by the men who were interviewed then. All related to various aspects of the experience of using the Internet to meet sexual partners, including ways in which that specific behaviour might affect users; influence perceptions of others; preferences for using the Internet versus other ways to meet partners and safe sex with partners met online.

The SUIIS, was validated using a sample of 317 participants who completed an online survey that included this scale as well as other instruments (Study 2: Nodin, Leal & Carballo-Diéguez, submitted a). The results were analysed using an exploratory factor analysis to explore its matrix of correlations with extraction of factors using a principal component analysis, followed by a Varimax rotation. The final version of the SUIIS included 42 items (from an initial 65) with a KMO of .859 and a factorial structure of six latent dimensions that altogether explained 51% of the variance of the scale. These dimensions were theoretically coherent and covered distinct but interconnected aspects of MSM's experiences online, namely: *Positive impact of the Internet*, *Sexual self-exposure online*, *Advantages of meeting*

men online, Preference for meeting men online, Mistrust of men online and Negative impact of the Internet.

2.3. Study Sample

A total of 1351 men participated in this study phase. Only completed questionnaires and those of men identifying as gay or bisexual were retained for analysis. The final sample included 317 participants. Studies 2 and 3 include detailed descriptions of this sample's characteristics.

Participants ranged from 18 to 62 years of age (\bar{x} = 30.8 years, sd =9.4). The majority lived in a big city (58.7%), followed by those who lived in a small town (23.7%), a village (15.1%) or a rural area (2.5%). Seventy-eight per cent identified as gay with the remainder identifying as bisexual; however, when asked about their sexual attraction on an adapted Kinsey scale (Kinsey, 1948), only 55.5% of the total sample reported being exclusively attracted to men. About half of the participants were in a relationship (49.5%), most of which were with another man (83.4%).

3. Ethics approval

This research was approved by an ethics evaluation conducted by the Scientific Committee of the Instituto Superior de Psicologia Aplicada, Lisbon, Portugal.

Studies

1. Exploratory Study: HIV knowledge and related sexual practices among Portuguese men who have sex with men

Nodin, N.; Leal, I.P.; Carballo-Diéguez, A. (*in press*). HIV knowledge and related sexual practices among Portuguese men who have sex with men. *Cadernos de Saúde Pública*.

Abstract

HIV prevention campaigns in Portugal have historically not targeted men who have sex with men (MSM). Therefore, we decided to investigate the concepts and practices of safer sex of Portuguese MSM. 36 MSM ($\bar{x}=34.4$, $sd=9.1$), 94.4% self-identifying as gay or bisexual, were recruited on and offline and interviewed. The interviews were later transcribed and thematically analysed for "Safe sex". Results show that, despite the low level of exposure to specific prevention messages, our participants were aware of HIV transmission risks and tended to protect themselves in most sexual practices. Oral sex and steady relationships, however, did not always include safer practices.

Introduction

In January 2010 the first public, large-scale multi-media campaign aiming to promote condom use among gay men in Portugal was launched in response to government policies to develop more effective HIV prevention strategies¹. Until then, and despite community-based efforts², most HIV-prevention messages targeted the general population. Some of these messages may actually have induced risk behaviors through vagueness of goals; lack of clear messaging; frequent use of fear as a prevention strategy and of language that could be misunderstood by the target audience³. It has also been suggested that the creators of these messages were unclear about their target audience and contexts in which unsafe sex occurs, resulting in ambiguous messages⁴. Historically, this may have led to the Portuguese having some of the most inaccurate information about HIV within Europe according to a 2003 survey, including almost one-third of respondents that believed that HIV could be transmitted through kissing, mosquito bites or by using public bathrooms⁵.

Data about the general population and about men who have sex with men (MSM) over the last decade shows an overall grim picture regarding HIV in Portugal within the larger European context. A projection study published in 2005 suggested that there was “an apparent change in the decreasing [HIV infection] tendency in the Homo/Bisexual category” (p.140) in this country⁶. Epidemiological data about HIV infection in Portugal indeed showed that since 2003 the number of new infections in that category increased, peaking in 2009, and only since then have been decreasing steadily⁷.

Around 2.3 million people were living with HIV in Europe at the end of 2006, of which around 50% had not been diagnosed. Portugal ranked second in number of people living with HIV after Estonia. Heterosexual intercourse had become the predominant mode of transmission in most countries, including Portugal⁸.

More recent reports show that the number of people living with HIV in Europe continues to increase and that HIV is concentrated in key populations at higher risk of infection such as MSM. This is particularly the case in Western Europe, where infection rates for MSM increased by 6% between 2006 and 2012⁷. There has also been a disproportional concentration of sexually transmitted infections (STI) among HIV positive MSM in the same region since 1996⁹.

Portugal no longer holds a high position in the European ranking for HIV prevalence in the general population⁷. This may be linked with fear of HIV infection and increased knowledge about viral transmission, even if condom use seems to be dependent on life and relationship contexts among heterosexuals¹⁰. The relevance of social networks has also been highlighted for this population, in that these may influence greater sexual experimentalism as well as condom use¹¹.

On a recent study with Portuguese MSM, only a minority of participants mentioned having been the target of prevention campaigns, leading the authors to suggest the need for functional and effective prevention strategies directed at this population¹². Despite limited targeting of safe sex messages this group was reported to have safer sexual behaviors and higher risk awareness compared with the heterosexual population¹³. However, only 28% reported always using a condom during anal intercourse in the previous year; 39% had never tested for HIV and 40% reported not using a condom when falling in love.

Unsafe sexual practices among MSM have been on the rise in several European countries^{14,15,16,17} but the contexts and associated factors of this reality remain largely understudied in Portugal. The Internet has become a popular way for MSM to meet sexual partners throughout the continent, which in turn has been associated with risk behaviors^{18,19,20}. A Portuguese study has suggested that using online sexual networking websites has influenced MSM's sense of selves and their sexuality in various ways, for instance by making them more accepting of their sexual orientation; by increasing their sexual experimentation; and by allowing them to be more sexually assertive²¹.

Growing awareness of the need to target MSM's needs for HIV prevention in the country has led to the development of community-based initiatives²² and research projects^{12,13,23}. However, there is still an astounding lack of qualitative and ethnographic studies about this reality in Portugal which may provide a finer understanding of MSM's HIV-related knowledge and behaviors, particularly of those who use technologies to interact and engage with new sexual partners. The current study aims to address some of the gaps in knowledge and to contribute to illuminate the needs of HIV prevention through the analyses of safe sex concepts and practices of a group of Portuguese MSM who use the Internet to meet sexual partners.

Methods

Participant recruitment

This study was approved by an ethics evaluation process conducted by the Scientific Committee of Instituto Universitário de Ciências Psicológicas, Sociais e da Vida, Lisbon, Portugal.

Participants were recruited online and through other methods, such as word of mouth. Online recruitment was via an Internet-based profile in a popular website used by Portuguese MSM to find partners, sexual and other. Individuals actively responded to the profile or were recruited by sending eight messages daily (the limit set to non-paying members of the website) inviting members who were online to participate in the research.

Volunteers were contacted by telephone and screened for eligibility: volunteers had to be male, aged 18 years or older, Portuguese or been living in Portugal for at least one full year, speak fluent Portuguese and have had at least one sexual contact with another man met online. Recruitment continued until no significantly new topics were coming up in the interviews.

Measures

A semi-structured interview guide was used to ask participants about their Internet use, meeting partners online for sex, and safe sex. The guide was specifically designed for this study, being based on that developed by Carballo-Diéguez et al²⁴, but amended after initial assessment of validity for Portuguese-speaking interviewees. For the assessment, three volunteers were interviewed using a translation and adaptation of the initial guide, thus informing changes, eliminating unclear questions and including relevant others that were missing.

Data collection

Participants were scheduled for face-to-face interviews, at the beginning of which informed consent was obtained. Interviews were audio-recorded with participants' permission. After the interview, participants were asked to complete a written questionnaire covering demographics, sexual health and behavior.

Data analysis

The audio-recorded interviews were transcribed, cleaned of identifying information and of transcription errors and coded for analysis. Our analysis followed the procedures described by Braun and Clarke²⁵. We used an inductive and semantic approach to the data informed by our research questions.

Initial coding paralleled the structure of the interview guide to capture the major themes covered by the interview. For this study, first level code "Safe sex" was used. It covered questions and answers on the definitions and practices of condom use and safe sex. The main questions asked during the interview about safe sex were used to create second level codes. Then, a thorough reading of the material under each code was undertaken to identify secondary themes. Analytical bias was minimized by clear and consensual previous discussion and definition of categories by co-authors and by using transparent documentation (NVivo 8.0).

Results were organized according to relevant categories identified: Definitions and practices of safe sex; Risk reduction; and Relationships and risk. Quotations were translated

from the Portuguese originals, maintaining the meaning and nuances of the participants' testimonies, using equivalent idiomatic expressions when appropriate.

Results

Thirty-six participants, 18–62 year of age (\bar{x} =34.4; sd =9.1), were recruited and interviewed. Most of the men volunteered online, five (13.9%) were actively invited via the web-based profile, and 10 (27.8%) via other means.

Most participants self-identified as white (91.4%), and gay (94.4%). The large majority had at least 11 years of education (97.2%), of which about half (51.4%) had completed a degree in higher education. Most were working (77.8%) and had never been married (83.3%). Thirteen (36.1%) indicated being in an on-going relationship, one of which with a woman. Thirty-three (91.7%) had tested for HIV, of which two (5.6%) were HIV-positive.

Most of the participants lived in the Lisbon metropolitan area; three were non-Lisbon residents; and two were non-Portuguese living in Portugal (minimum of 4 years). Average length of interviews was 1h30m.

Definition and practices of safe sex

The majority of participants correctly defined safe sex as use of condoms during anal intercourse. Several also included in their definitions use of condom during oral sex, although many argued that not using it in this activity is less risky as opposed to anal sex or admitted to being unsure about its risk.

Safe sex for me is, for gay men, to put on a condom from the moment when there is an erection. [n34, age 31 years, single]

From what I've read [safe sex] is everything that has to do with the contact between the anal mucosa and the other person's penis because even before the ejaculation there are those secretions that may cause infection. Contact between mouth and penis may also imply risks, although they are minor because the saliva destroys the virus... But if the person has a wound and there is contact, it [infection] may happen. [n31, age 41, single]

All of the participants said they used condoms with their non-steady partners for anal intercourse. During oral sex, however, most said they didn't use them, despite their knowledge of the risks involved.

My application of safe sex has been never to have anal sex without a condom. (...) I know that through oral sex you can also get AIDS and other illnesses, but in oral sex I never use a condom. [n20, age 27, single]

A few of the interviewees mentioned the possibility of HIV infection through kissing, revealing accurate knowledge about the physiology of disease transmission along with a high level of infection anxiety.

Although we know that chances of transmission of certain diseases through kissing or through contact with secretions [is low], it cannot be neglected, because some persons have cavities or wounds in their gums with blood. Of course the chance is low, but it happens. [n50, age 43, single]

Risk reduction

Participants did not limit their safe sex strategies to using condoms for anal intercourse. A variety of risk reduction practices were identified during the interviews. We grouped these into three sub-categories: oral sex; evaluation of the partner; and other risk reduction strategies.

Oral sex

Following the awareness shown by many of the interviewees about oral sex related infection risk, and despite their reluctance to use condoms in that practice, many said they used other ways to minimize their risk of infection through *fellatio*. The most common was avoiding ejaculation in the mouth or swallowing semen.

Through my experience I started to notice that if the person to whom I was performing oral sex was dripping semen, that he was about to come... [So] when that happened I would spit out or stuff, or I would just stop doing oral [sex]. [n28, age 22, single]

[N]ot swallowing sperm during oral sex. That is what safe sex is for me. [n55, age 18, in a relationship]

A few of the interviewees also limited the practice of oral sex as a way to reduce their risk.

For me to practice oral sex, it will have to be within a relationship in which I know the person is well; and to let someone do it on me I also have to know that person quite well. [n16, age 29, single]

Evaluation of the partner

Several of the participants mentioned that they would evaluate their potential sex partners in order to assess their risk by having sex with them. Although they focused on different aspects of the partner and situation, the most common was an assessment of the appearance of the potential partner.

For me the hygiene [of the guy] is also very important and I associate that a little as well to the issue of safe sex [n9, age 35, single]

If the person appears with infected pimples or with many skin spots, and so on and so forth, I stop. I stop everything! [n19, age 45, single]

There was this guy with whom I spoke through [the website] that had this really nice pics and I went to meet him (...) I could tell that he was the same guy from the pictures, but he looked really bad and I got the feeling that he had AIDS. [n20, age 27, single]

Another method used to assess a potential sex partner's risk was to screen the information available in their online profiles.

I look at a profile, because I'm very careful about health issues, and if the person says [in his profile] "sex, sex, sex", I just avoid that guy [because] if he is someone so interested in sex, then the probability of him having a disease is very high. [n16, age 29, single]

If someone says [in his profile] that he is not interested [in safe sex], I will not contact him; if he says "needs discussion"... I really don't know what that means, but I don't want to be in a position in which a person will want to penetrate me or have an orgasm in my mouth without protection. [n17, age 62, in a relationship]

Other men extended this screening to the interaction established online before an encounter.

Usually people start by saying in their profiles if they like safe sex or not. Those who do not like it, when I chat with them through IM [instant messaging], I will say: "I saw in your profile that you don't like safe sex. I'm pro safe sex; if we meet, how's it going to be?" [n42, age 30, in a relationship]

Discussing safe sex or condom use prior to a face-to-face encounter was not common. However, safe sex was a standard procedure and expected to happen by default in the sexual encounters of these men.

I always have safe sex; for me it's taken for granted. It is not actually something that is discussed. When [we] start to have sex I will go get condoms. [n6, age 29, single]

I never had to converse or discuss if we will have safe sex or not. I mean everyone with whom I've been assumes that sex is supposed to be safe. [n38, age 45, in a relationship]

When asked, the men said that the safe sex considerations and procedures they followed with their partners met online were the same as those with partners whom they met offline.

In the casual [sexual] relationships I had, regardless of the fact that they came from the Internet or not, I will obviously use a condom, so I don't distinguish things that way, it has to do with the other person and myself, not with the relationship and not with where I met him. [n33, age 33, single]

Other risk reduction strategies

Another risk reduction strategy used was reducing the number of sex partners. One participant said that during six years at the onset of the AIDS crisis he had no sexual contact with men due to his concern about infecting his wife. Other participants also reported limiting the number of partners in order to reduce their risk.

The fact that I met these guys and already was having sex with them was a little promiscuous of me and I could have got myself infected. [n18, age 29, single]

With the same goal in mind, some participants limited the types of activities in a sexual encounter:

But I don't have many risk situations, no, no, no... I don't [anally] penetrate nor I get penetrated with people met at night. [n11, age 41, single]

In order to have [an absolutely] safe attitude, there is only [one possible attitude], that is not to kiss anyone. [n50, age 43, single]

Other strategies mentioned by participants were showing or asking for their partners' HIV test results, avoiding ejaculation during intercourse (even when using a condom), and limiting drug or alcohol use during sexual encounters.

Relationships and risk

Safer sex behaviors within steady relationships differed from those in casual encounters. Most men would consider stopping using condoms when in a relationship. In fact, some of those who had been in relationships mentioned that they had stopped using condoms at some point.

[I always use condoms], unless I would start a relationship with someone and at some point we would decide we didn't want to use condoms anymore between the two of us [n43, age 31, single]

The issue of trust was commonly mentioned in this context. Definitions of trust, however, varied.

All the relationships I had in the past were with persons with whom I would have safe sex with and then I think it continues to be safe, from the moment I trust. But that is a question of definition, but initially we always use condoms and then we stop using them at some point. [n22, age 36, single]

There was only one or two situations in which [using a condom] did not happen, for matters of trust, that is. He was my boyfriend I trusted him and we did not use it. Although I always go for the little HIV test afterwards. [n55, age 18, in a relationship]

These narratives show that trust is used as a justification not to use condoms, even in situations in which it may be important to use them. The younger of these two men (n55), for instance, also mentioned that none of his relationships had lasted for more than one month.

However, within the context of longer relationships, and before condom-use ceased, commonly both partners would test for HIV and other sexually transmitted infections.

Initially we used condoms. In the meanwhile we both tested. Everything was okay. And now we do it without a condom. [n8, age 49, bisexual, in a relationship]

Regardless of HIV-testing and negative results, some participants said that they regretted having taken chances, considering the risks involved in stopping condom use even within relationships.

[He] was the first man that I fell in love with, which was foolish, because we had nothing in common, but [I met him] over the Internet and I was obsessed with the Internet and I had sex without condoms, and that was foolish because he was having sex with other people too. [n10, age 42, in a relationship]

Many participants spoke of agreed or not agreed non-monogamy in their relationships and in the relationships of men they had sex with. However, in none of these there were direct references to sexual risk behaviors.

Risk reduction by HIV positive men

Two of the participants knew their HIV-status to be positive. Both admitted to having a very active sex life, one going as far as calling himself a “sex addict” (n32, age 46, single). He tended not to disclose his serostatus to his sex partners. The other participant (n46, age 36) had a sexually open, long-term relationship with another HIV-positive man. He practiced brachioproctic eroticism (known as *fisting* or *fist fucking*) and mentioned being careful at looking at the hands of the man who would fist him and he would sometimes ask him to use rubber gloves to minimize risk of Hepatitis C infection.

Both men indicated that they would only practice anal intercourse with a condom, but did not generally use one for insertive or receptive oral sex. However, they had slightly different attitudes towards ejaculation during oral sex:

Some practices that people are alerted to, including ejaculation inside the mouth, when the person is aware [of the risks], I think that, and you can call me whatever you like, I... I... I still do it [I ejaculate inside the guy's mouth]. It is a risk that the person is perfectly aware of taking. [n32]

I usually don't ejaculate in people's mouths if I think they're serodiscordant. Even when they're HIV-positive, I don't like to do it. I mean, I like it as an activity, but... sperm play is something you have to be really careful about, right? Due to drug resistance factors and all

that. Both for me and for my partners. Where I risk the most, maybe, is with my boyfriend. [n46]

Both would consider ejaculating in a partner's mouth without an open discussion about their own serostatus, although their personal ethics about it differed.

We are all adults and one way or another, I always bring up the word AIDS or seropositive or something like that. I may not tell people I'm HIV-positive because of the stigma, which would most certainly lead to the end of everything [sexual] that is going on or about to start... but I always bring up the topic, so people know. [n32]

No, I don't say [I'm HIV-positive]. Sometimes I do, when I understand people are [also positive], then I talk about it freely. But people don't talk much about it here [in Portugal]. They rather... even when it is assumed, even when it is understood and clear, it is not mentioned... [n46]

This participant also discussed how he often made assumptions about the serostatus of others using the information they included in their online profiles. He interpreted information such as "Discussion needed" or "No" for the safe sex option of the profile as a code for seropositivity.

Some of the HIV-negative participants of this study were asked if they inquired about their sexual partners' HIV status. Most said they didn't. Typically, they thought that, even if their potential partners were HIV-positive, they would not tell the truth.

Discussion

The MSM who participated in this research generally had good knowledge of sexual routes of HIV infection and prevention strategies. They also revealed safe behaviors in the majority of their anal sex practices. This suggests that they received accurate HIV-related information and that they are aware of risks and of how to avoid them, despite the traditional lack of prevention campaigns targeted at MSM in Portugal. Typically, condoms are produced at some moment before intercourse and used for anal sex. Thus, although partners did not discuss safe sex prior to sexual encounters, this did not seem to stand in the way of adequate prevention behaviors.

The significant levels of HIV information we found on our sample may reflect the participant's overall high educational background, which may additionally account for a

relative homogeneity of our results. Therefore, further research that might help texturize this reality is still needed.

Despite the high levels of safe anal sex knowledge and reported behaviors, most men in this study said that they did not use a condom during oral sex. Although oral sex is considered to be a lower risk practice, several studies have shown that it may account for a portion of HIV infections^{26, 27}. Some men reported using alternative strategies to keep safe during *fellatio*, such as avoiding oral contact with their partner's ejaculate. However, some of the others seem to hold inaccurate beliefs such as that risk is minimized by not swallowing semen, which means that they may be at risk via pre-ejaculate fluids or by taking semen in their mouths. These findings are also significant in light of the estimated high percentages of European MSM who are unaware of their HIV status⁸ and who may unknowingly be putting their sexual partners at risk of infection.

Many men tried to assess their partners' HIV status by evaluating their appearance or behavior. Despite showing a concern with infection, these are ineffective prevention strategies. Assuming that their partners are HIV-negative based on appearance may lead some men to be less safe²⁸. The analysis of the practices and concerns of the two HIV-positive men in this study along with those of the other men who often don't ask about their partners' serostatus, demonstrated that assumptions and communication shortcomings may be leading HIV-negative men to become exposed to HIV, in particular during oral sex.

Risk-reduction strategies were uncommon. Asking for a partner's HIV test result was only marginally mentioned in this sample and other strategies that MSM have been shown to use, such as serosorting, strategic positioning, or negotiation of viral load^{29,30} were not specifically mentioned by participants in our study. Therefore, our results are suggestive of a lacking HIV and risk related language that might be used to negotiate sexual activity among the MSM in our sample, leaving safety decisions to be made based on what is implicitly but not explicitly communicated. At least one of our participants (n46) believed this to be specific to the Portuguese context.

Men will collect some of this implicit risk information from the profiles of Internet based sites that they use to meet others for sex. This means that these websites and profiles may be relevant in filling in the communication gaps between MSM. Some of these websites do allow users to easily share with other users information about their HIV status; safety of activities sought and other related information, albeit not consistently³¹. Therefore, it may be relevant to work with website managers to develop more transparent and sexual health friendly interfaces for their users, as well as to help men be more clear and assertive in their sexual communication on and offline.

Most interviewees said that the prevention strategies they used with men met for sex offline or online were the same, which contrasts to European research which suggest more

risk behaviors with men met online^{18,19}. For instance, a Spanish study has suggested that more thorough partner selection processes online, which include engaging on intimate communication with potential partners, may lead to subjective impressions in regards to sexual risk, thus facilitating unprotected sexual activity with these partners³². Although a Portuguese study with MSM suggested changes in sexuality associated with meeting partners online, these changes seem unrelated with the protective behavioral patterns on and offline that we found on the current study²¹. Therefore, links between using the Internet to meet partners and sexual behavior patterns is an issue that would benefit from further analyses within the Portuguese context.

Steady relationships may be contexts where risks are permitted, as couples tend to relax patterns of safety at some point in the relationship. This result supports previous Portuguese MSM sexual behavior reports¹³. In spite of 'negotiated safety', in which couples stop using condoms after HIV-testing, risk situations may still occur since many relationships are not sexually closed and the decision to stop condom use within the relationship is based mostly on trust³³. However, trust, as some of our participants agreed, is a rather subjective concept, leaving space for various expectations and behaviors. A study showed a 23% rate of broken agreements of having sex outside of the primary relationship among MSM, with different aspects of couple's dynamics, including trust, as being the best predictors of agreement maintenance³⁴. Further research has also shown that most HIV infections occur from main sex partners^{27,33}. This suggests that relationship dynamics in relation to HIV risk practices are relevant and should be considered in the context of prevention efforts.

Our findings suggest that the concepts of safe sex on our sample are highly contextual and therefore in some ways not dissimilar from those found among Portuguese heterosexuals^{10,11}, but still maintaining their specificity that deserves further inquiry.

Study limitations

The sample used for this study is not representative of Portuguese MSM. It is possible that men who felt uncomfortable with disclosing unsafe sex refrained from participating. Therefore the results of this study reflect the bias associated with a convenience sample containing highly educated and mostly professional individuals, sensitive to the topic of this study, motivated and willing to disclose private matters to a researcher. All participants had experience of meeting sexual partners online, one of the key focus of our research, and therefore our results may disproportionately reflect those experiences.

Uncontrolled sensitivity to certain topics and unwilling bias in the selection of quotes to illustrate the issues being addressed is always a possibility in qualitative analysis. To

prevent this, standardized procedures were used as much as possible to provide bias-free results.

Final remarks

According to the latest European surveillance report⁷, “[f]or the countries in the EU/EEA and West, interventions to prevent and control HIV among MSM are the cornerstones of the HIV response” (p.ix). Despite our modest sample size and limitations pointed out, we believe our results can contribute to inform the development of more effective health education policies and strategies aimed at promoting safer sex and risk reduction among MSM living in Portugal. Considering that in general participants in our study were aware of HIV transmission risks and tended to protect themselves in most sexual practices, prevention efforts should do more than just provide information and focus on communication and negotiation skills both on and offline. They should also work towards building sustainability of safer practices that will be affected by different contexts of life, types of partners and social influences.

Changing trends in HIV in Portugal as shown by the infection rates for MSM over the last decade suggest that larger surveys as well as qualitative studies should be conducted to support effective and unbiased national prevention efforts.

References

- ¹ Despacho n.º 19871/2005. *Diário da República*. Nº 178, 15 de Setembro de 2005, Serie II. Lisboa: Imprensa Nacional Casa da Moeda.
- ² ILGA Portugal [Internet]. Lisbon: ILGA Portugal. ***Associação ILGA Portugal lança coleção de postais visando aumentar a confiança de HSHs em relação ao sexo e dando dicas para o tornar mais seguro***; 2009 [cited 2010 Feb 3]. Available from: <http://www.ilga-portugal.pt/glbtsaude20090312.htm>.
- ³ Cunha-Oliveira A, Cunha-Oliveira J, Pita JR, Cardoso SM. Os jovens universitários e a prevenção do VIH/sida. IX VIH/AIDS Virtual Congress 2008 [cited 2010 Feb 2]. Available from: http://www.aidscongress.net/article.php?id_comunicacao=353.
- ⁴ Lopes OMCMS. As campanhas publicitárias de SIDA (spot), destinadas ao público feminino. IV VIH/AIDS Virtual Congress. 2003 [cited 2010 Feb 2]. Available from: http://www.aidscongress.net/article.php?id_comunicacao=185.
- ⁵ European Opinion Research Group. Eurobaromètre Spécial. Brussels: European Commission; 2003. Report 183-2/Vague 58.2. European Opinion Research Group EEIG.
- ⁶ Amaral JA, Pereira EP, Paixão MT. Data and Projections of HIV/AIDS Cases in Portugal: An Unstoppable Epidemic? *Journal of Applied Statistics*. 2005; 32:127-140.
- ⁷ European Centre for Disease Prevention and Control, and World Health Organization. HIV/AIDS surveillance in Europe 2012. Stockholm: European Centre for Disease Prevention and Control; 2013.
- ⁸ Hamers FF, Phillips AN. Diagnosed and undiagnosed HIV-infected populations in Europe. *HIV Medicine*. 2008; 9:6-12
- ⁹ Dougan S, Evans BG, Elford J. Sexually transmitted infections in Western Europe among HIV-positive men who have sex with men. *Sexually Transmitted Diseases*. 2007;34:783-90.
- ¹⁰ Aboim S. Risco e prevenção do HIV/Aids: uma perspectiva biográfica sobre os comportamentos sexuais em Portugal. *Ciência & Saúde Coletiva*. 2012;17:99-112.

- ¹¹ Aboim S. Redes sociais e comportamento sexual: Para uma visão relacional da sexualidade, do risco e da prevenção. *Saúde e Sociedade*. 2011; 20:207-224.
- ¹² Dias S, Gama A, Fuertes R, Cohen G, Rosa R, Mendão L, et al. Utilização de serviços de saúde relacionados com a infecção VIH por parte de homens gays: acesso a informação, prevenção e teste. *Psicologia*. 2012; 26:109-128.
- ¹³ Aboim S. Homossexualidade e bissexualidade: Práticas, atracção e orientação sexual. In: Cabral MV, Ferreira PM, organizadores. *Sexualidades em Portugal: Comportamentos e Riscos*. Lisbon: Bizâncio; 2010. p.147-200
- ¹⁴ Harding R, Clucas C, Lampe FC, Norwood S, Leake Date H, Fisher M, et al. Behavioral surveillance study: Sexual risk taking behaviour in UK HIV outpatient attendees. *AIDS and Behavior*. 2012; 16:1708-15.
- ¹⁵ Le Vu S, Velter A, Meyer L, Peytavin G, Guinard J, Pillonel J, et al. Biomarker-based HIV incidence in a community sample of men who have sex with men in Paris, France. *PloS One*. 2012;7.
- ¹⁶ Villaamil F, Jociles M. Risk and community: The impact of HIV among gays in Madrid. The case of sex clubs. *Sexualities*. 2011;14:580-596.
- ¹⁷ Vanden Berghe W, Nostlinger C, Hospers H, Laga M. International mobility, sexual behaviour and HIV-related characteristics of men who have sex with men residing in Belgium. *BMC Public Health*. 2013;13:968.
- ¹⁸ Adam PC, Murphy DA, de Wit JB. When do online sexual fantasies become reality? The contribution of erotic chatting via the Internet to sexual risk-taking in gay and other men who have sex with men. *Health Education Research*. 2011;26:506-15.
- ¹⁹ Bolding G, Davis M, Hart G, Sherr L, Elford J. Gay men who look for sex on the Internet: is there more HIV/STI risk with online partners? *AIDS*. 2005;19:961-8.
- ²⁰ Fernández-Dávila P, Zaragoza Lorca K. Trust and sexual interaction: The significance of the Internet on the sex life and sexual risk behaviors of gay and bisexual men in Spain. *International Journal of Sexual Health*. 2011; 23:120-138.

- ²¹ Nodin N, Carballo-Diéguez A, Leal IMP. Sexual use of the Internet: Perceived impact on MSM's views of self and others. *New Media & Society*. 2013; Epub: June 7, 2013; DOI:1461444813489508.
- ²² Campos MJ, Teófilo E, Machado H, Brito J, Esteves J, Mendão L, et al. MSM testing and linkage to care in Lisbon (poster presentation). Conference HIV in Europe – Working together for optimal testing and care, Copenhagen, 2012. [cited 2014 Mar 9]. Available from: <http://www.checkpointlx.com/08-HIVinEurope.pdf>
- ²³ Carvalho C, Fuertes R, Lucas R, Martins A, Campos MJ, Mendão L, et al. HIV testing among Portuguese men who have sex with men--results from the European MSM Internet Survey (EMIS). *HIV Medicine*. 2013;14:15-8.
- ²⁴ Carballo-Dieguez A, Ventuneac A, Bauermeister J, et al. Is 'bareback' a useful construct in primary HIV-prevention? Definitions, identity and research. *Culture, Health and Sexuality*. 2009; 11:51-65.
- ²⁵ Braun V, Clarke V. Using thematic analysis in psychology. *Qualitative Research in Psychology*. 2006;3(2):77-101.
- ²⁶ Richters J, Grulich A, Ellard J, Hendry O, Kippax S. HIV transmission among gay men through oral sex and other uncommon routes: Case series of HIV seroconverters, Sydney. *AIDS*. 2003;17(15):2269-71.
- ²⁷ Sullivan PS, Salazar L, Buchbinder S, Sanchez TH. Estimating the proportion of HIV transmissions from main sex partners among men who have sex with men in five US cities. *AIDS*. 2009;23(9):1153-1162.
- ²⁸ Bailey A, Hutter I. Cultural heuristics in risk assessment of HIV/AIDS. *Culture, Health & Sexuality*. 2006;8(5):465-477.
- ²⁹ Jin F, Prestage GP, Ellard J, Kippax SC, Kaldor JM, Grulich AE. How homosexual men believe they became infected with HIV: The role of risk-reduction behaviors. *JAIDS*. 2007;46(2):245-7.

³⁰ Parsons JT, Schrimshaw EW, Wolitski RJ, Halkitis PN, Purcell DW, Hoff CC, et al. Sexual harm reduction practices of HIV-seropositive gay and bisexual men: serosorting, strategic positioning, and withdrawal before ejaculation. *AIDS*. 2005;19:13-25.

³¹ Carballo-Diéguez A, Dowsett GW, Ventuneac A, Remien RH, Balan I, Dolezal C, et al. Cybercartography of popular internet sites used by New York City men who have sex with men interested in bareback sex. *AIDS Education and Prevention*. 2006; 18(6):475-89.

³² Fernández-Dávila P, Zaragoza Lorca K. Trust and sexual interaction: The significance of the Internet on the sex life and sexual risk behaviors of gay and bisexual men in Spain. *International Journal of Sexual Health*. 2011; 23(2):120-138.

³³ Hart GJ, Elford J. Sexual risk behaviour of men who have sex with men: Emerging patterns and new challenges. *Current Opinion in Infectious Diseases*. 2010;23(1):39-44.

³⁴ Gomez AM, Beougher SC, Chakravarty D, Neilands TB, Mandic CG, Darbes LA, et al. Relationship dynamics as predictors of broken agreements about outside sexual partners: implications for HIV prevention among gay couples. *AIDS and Behavior*. 2012;16(6):1584-8.

2. Study 1: Sexual use of the Internet: Perceived impact on MSM's views of self and others

Nodin, N., Carballo-Diéguez, A., & Leal, I. M. (2013). Sexual use of the Internet: Perceived impact on MSM's views of self and others. *New Media & Society*, 16, 5, 719–736.

Abstract

An ongoing scientific and cultural debate has questioned whether using the Internet has changed users in relevant ways. We investigated whether men who have sex with men and who use the Internet to meet sexual partners consequently perceived any changes in themselves and in others. We interviewed 36 men and conducted a thematic analysis of the interview transcripts. Results suggest that many men perceived both sexual and non-sexual self changes, such as a greater acceptance of their sexuality, the exploration of new sexual possibilities, more assertive communication styles and, for a few, the occurrence of an excessive online behavior and diminished emotional availability towards others. Some also tended to be more suspicious of others both on and offline. We believe our results help build a strong case for the existence of a subjectively perceived Internet-related impact on these men's selves and on their perception of others.

Keywords: MSM, sexual behaviour, men, Internet, self-perception

Introduction

A significant portion of online communication is aimed at getting to know others for relationships and sex. Friend Finder Networks, owner of several dating and swingers websites, for instance, claims to have over 528 million users worldwide across its various sites (<http://ffn.com>, accessed Sept. 2012). Finkel et al. (2012) suggested that easy access to large numbers of partners that would otherwise not be reachable; facilitated communication between users; and the matching features offered by many dating sites might help explain this reality.

Studies in several parts of the world show that many men who have sex with men (MSM) also use the Internet as a way to meet others (Bolding et al., 2005; Frankland et al., 2008; Ko et al., 2012; Mettey et al., 2003). While to a large extent their expectations and experiences when dating online will be similar to those of the general population, MSM also experience specificities associated with their sexual interests and with the stigma that still affects homosexuality. Some of the specific motives presented by MSM to seek others online are the anonymity that the Internet allows (Brown et al., 2005) and the easier screening of others with similar interests (Davis et al., 2006).

MSM's use of the Internet has been studied extensively in relation to sexual risk behaviors (e.g. Berg, 2008; Carballo-Diéguez et al., 2009), in response to public health concerns following suspicion of increased risk of sexually transmitted infections following online encounters (McFarlane et al., 2000). However, other aspects of these men's use of the Internet for sexual purposes have been surprisingly understudied.

Given that many MSM spend a considerable amount of time seeking and interacting, sexually and non-sexually, with other men met online we question whether this has changed their perceptions of themselves or of others. The question of what happens to people when they spend several hours a day using and communicating through the Internet is not new (Rheingold, 2000). It links with the ongoing discussion about the possibilities of self exploration and transformation that the Internet allegedly facilitates. For instance Turkle (1995), in her early works, discussed how virtual games allowed identity exploration and deconstruction within the relatively safe and disembodied online environment, which in many ways mirrored but also multiplied the myriad of roles people assume in their non-virtual lives. Other authors have used Goffman's self-presentation theory (1959), a powerful social interaction theatrical metaphor, to the online social context. To our interest, Goffman's theory has been applied to understanding if and how using dating websites influences identity and the quality of interactions established online and offline, generally confirming that indeed it does in many different ways (Hardey, 2002; Whitty, 2008).

If identities are constructed via social exchange in significant spaces, as symbolic interactionists such as Goffman suggest, it is expected that the contacts established on

dating websites will have an impact upon identity construction and therefore facilitate change (Yurchisin et al., 2005). While we inform our research with the symbolic interactionist perspective we are not limited by it as we approach the topic of Internet impact on the self from a broader, culturally informed perspective.

Internet-induced psychological and social change is already considered by many to be an accomplished fact and is in the center of a heated debate (Chatfield, 2012). While some search and find proof that Internet use has a positive impact on psychosocial well-being (Amichai-Hamburger et al., 2011; Kraut et al., 2002), many others claim the Internet has disrupted our relationships (Lanier, 2010; Marche, 2012; Turkle, 2011), as well as different aspects of cognitive processing (Carr, 2008, 2010). With our study we aim at extending this debate to include MSM's online sexual experience (OSE) and dating practices.

Sexual use of the Internet: Consequential or Inconsequential?

Davis et al., (2006) exposed two opposing arguments on the relationship between the Internet and sexuality. On one side, there are those who believe that 'sex happened to the Internet' (Davis et al., 2006: 474). According to this hypothesis, the Internet is just another technological outlet for sexuality that, like video recorders, cell phones and other media, has been used for sexual gratification.

On the other side, one of the trends in looking at sexual behavior in relation to the Internet attributes agency to the medium ('the Internet happened to sexual practice'; Davis et al., 2006: 473), i.e., it assumes the Internet influences the behaviors that it facilitates and fuels the creation of new ones (Adam et al., 2011). For instance, as mentioned, some have suggested that the Internet may be inducing more sexual risk behaviors, such as sex without condoms and sex associated with drug use (Liau et al., 2006; McKirnan et al., 2007).

Remien and colleagues (2006) found that 61% of MSM perceived changing their sexual behavior since using the Internet. Fifty-one percent indicated they had more sexual partners, 41% more oral sex, 30% more anal sex, and 26% more unprotected anal sex. Participants also associated using the Internet with increased acceptance of their sexual orientation.

Another line of research has investigated the existence of sexual 'compulsivity' associated with Internet use (Corley and Hook, 2012; Meerkerk et al., 2006), including among MSM (Daneback et al., 2006; Parsons et al., 2008). One study identified a small portion of Internet sexual users for whom the medium seemed to have facilitated an excessive behavior that would otherwise not have emerged (Cooper et al., 1999).

Both lines of research, sexual risk behavior and sexual compulsivity, often suggest that the virtual context that mediates the behaviors may be responsible for its problematic outcomes (Perry et al., 2007).

Furthermore, researchers have discussed how information and communication technologies are channels for different types of sexual expression as well as they are increasingly constitutive of them (Hearn, 2008). Others have also claimed that while the Internet reinforces traditional norms associated with intimacy, it can alter the nature of relationships by creating new rules and opportunities (Barraket and Henry-Waring, 2008). In line with this, Hurley (2007) suggested that new media technologies might be reshaping sex as part of everyday life.

Therefore, many researchers and academics are questioning the extent to which using the Internet may be affecting people who use it for sexual purposes. As Dowsett and colleagues put it: '[s]ome see the internet as a better telephone, as merely a better way to communicate; but we ask: does this new form of communication change us, producing new cultural norms, new ways to be and do?' (Dowsett et al., 2008: 122). It is a discussion that Barraket and Henry-Waring (2008) have suggested may find its conceptual *alma mater* in Haraway's Cyborg Manifesto (1991) that questioned the boundaries of man and machine in the context of feminist critique. According to those authors the cyborg allusion may be useful to understand the transformations of intimacy online in its intersection with the offline, not in spite of it (Barraket and Henry-Waring, 2008), aligning with criticisms of the online disembodied hypothesis put forward by earlier research (Stone, 1991; Turkle, 1995).

If online it becomes clearer that sex does not require the physical presence of a partner or indeed a real partner (e.g. Gaspar and Carvalheira, 2012), OSE is nevertheless fueled by real bodies, may those be on the screen or in person following an online interaction.

It is in the intersection and the blurring between the virtual and the real (van Dorn, 2011) that we propose to conduct our analysis of MSM's online dating and sexual networking experience. Particularly we will be looking at two specific aspects of this experience: perceived self change and altered perceptions of others. Although we will not be looking into actual changes in men's behaviors and sexual habits, we hope to get insight into whether these hypothetical changes have substance.

Therefore, we ask: Has OSE affected MSM's perception of themselves and of others? Is it possible that some of these perceptions actually equate to real changes, the coming into being of new realities and behaviors?

Methods

Participant recruitment

This study was approved by an ethics evaluation conducted by the Scientific Committee of Instituto Superior de Psicologia Aplicada, Lisbon, Portugal.

Participants were recruited online and by word of mouth. Other methods included widespread emailing via professional networks, including LGBT and non-LGBT community-

based organizations. The majority of the final sample, however, was collected by using a profile placed on a popular website used by Portuguese MSM to meet others (Figure 1, See Appendix 1 – Screen shot of recruitment profile and recruitment text). Some individuals actively responded to the profile (58.3% of the final sample) and others were recruited by sending eight messages daily (the limit set to non-paying members of the website) to randomly selected members who were online, inviting them to participate (13.9%).

Potential participants were contacted by telephone and screened for eligibility: male, aged 18 or older, Portuguese or residing in Portugal for at least one full year, fluency in Portuguese and having had at least one sexual contact with another man met online. Lifetime OSE was considered in order to include a diverse sample of participants and experiences. Recruitment continued until no significantly new topics were identified in the interviews. It took place from May to December 2006.

Procedures

Participants were scheduled for face-to-face interviews. Informed consent was obtained at the beginning of each. Interviews were audio-recorded with participants' permission. After the interview, participants were asked to complete a written questionnaire covering demographics, sexual health and behavior.

Measures

A semi-structured interview guide was used to ask participants about Internet use, meeting partners online for sex, and safe sex. The guide was designed for this study based on that developed by Carballo-Diéguez et al. (2009), and amended after initial assessment of validity for Portuguese-speaking interviewees. For the assessment, three volunteers were interviewed and the experience used to inform changes.

Regarding this article, the interview guide included probes that helped participants compare pre- and post-Internet use experience; offline and online sexual experiences; and to explore subjectively perceived changes attributed to online experience.

Coding

Our analysis followed the procedures described by Braun and Clarke (2006). We used an inductive and semantic approach to the data informed by our research questions.

The audio-recorded interviews were transcribed, cleaned and coded. For the current analysis, we developed a basic functional code named 'Impact of Internet use.' It was initially used to extract the data set from the data corpus for this study and covered all sections of transcripts that included participants' experience, evaluation and reflections of how meeting other men through the Internet for sexual purposes could have influenced their perception of

themselves or of other people. A thorough reading and re-reading of this material generated initial codes and later informed the identification of themes by searching for patterns of meaning in the coded material, always in relation with the topic under analysis. Analytical bias was minimized by clear and consensual discussion and definition of codes by co-authors and by using transparent documentation (NVivo 8.0). Codes were also systematically verified for internal and external consistency, checking for overlaps and coherence of coded material.

Reporting

The categories of analysis used were: a) *Altered sexual self-perception*; b) *Altered non-sexual self-perception* and c) *Altered perception of others*. A 'No impact' code was also created to accommodate content pertaining to the absence of perceived Internet influence.

Quotations were translated from Portuguese maintaining the meaning and tone of the participants' testimonies using equivalent idiomatic expressions when appropriate.

Results

Thirty-six participants, ages ranging from 18 to 62 (\bar{x} =34.4; sd =9.1), were recruited and interviewed. The large majority self-identified as white (91.4%) and gay (94.4%) with the remaining identifying as bisexual (5.6%). Thirteen indicated being in an ongoing relationship (36.1%), one with a female.

We believe our results help build a strong case for the existence of an impact of OSE on these men's perceptions of themselves and of others. These changes seem to be mainly, but not strictly, sex-related. In order to better illustrate how we arrived to these conclusions, we organized our results thematically. Themes relevant to this analysis were: *Sexual diversification*; *Acceptance of sexual orientation*; *Different communication patterns*; *Excessive use*; and *Altered perception of others*.

Some men, even when specifically asked, said they didn't identify any changes in themselves or in their views of others as a result of their OSE. These, however, were a minority and we believe their views only illustrate the diversity of men's experiences regarding this issue.

Sexual diversification

If the Internet and other places where MSM socialize allow some common social and sexual experiences, the Internet has specifically delivered one specific relevant dimension for some men: volume. Facilitating access to high numbers of partners, in some cases,

exponentially increased men's sexual and homosocial experiences. With that also came an increased variety in sexual experiences and outlooks on sex.

'P – From the perspective of the persons I've met online, I think... Well, it is a different way to meet someone, but I think that the only difference is that, maybe, [online] I meet more people than I used to.

I – So it allows having more contacts, is that it?

P – Well, not necessarily only to have more, but the quality of the contacts I think is different. I think it's better.' (#017, 62)

According to this participant, the Internet allowed a quantitative shift, but also a qualitative one. The Internet was not a mere vehicle that increased the numbers of his sexual partners but it also affected the experiences that derived from it. Diversity in numbers associated with changes in other aspects of our interviewees' sexuality was a common theme that emerged from our analysis. For instance, other participants discussed how having more partners allowed new ways to conceptualize and experience sex. Others still elaborated on what they considered new possibilities that occurred because of the Internet. For these, the medium apparently allowed the emergence of activities that had been fantasized but never experienced before. These ranged from plain online sexual interaction (cybersex), to in-the-flesh practices made possible by contacting others with similar interests. Despite the fact that men described quite different experiences in type and intensity, these spoke of the erotic possibilities that the Internet allowed and of the uses men made of it.

'For me [cybersex] is not a gratifying experience because there is no physical touch, because it is not... However, I can say that I still do it but more as an exhibitionist and voyeuristic thing.' (#046, 36)

'Out of curiosity I had a profile at [website specialized in Bondage, Domination, Sadism and Masochism] because there was a time when I had some interest in understanding how it would be like to be in a dominant/submissive relationship. I was curious about that and eventually had an experience and, frankly, I thought it was better to leave it at that.' (#026, 29)

Both participants expressed ambivalent feelings about their experiences and their descriptions are marked by a sense of disappointment or unease. Curiosity about practices considered deviant or minority by larger social discourses were explored, experimented upon and either added to the sexual repertoire or abandoned. This exploration of the sexual potential of the Internet may not necessarily have created new behavioral patterns, but it

allowed the exploration of the sexual self which may be transformative in itself, creating likes and dislikes, informing choices of partners and activities, but sometimes also creating outlets for niche sexual interests. Another participant, for instance, accessed websites specialized in brachioproctic eroticism (Donovan et al., 1986; colloquially *fisting* or *fist fucking*) and another joined one aimed at people who eroticize boots.

These results suggest that the Internet may have created possibilities and opportunities that these men did not find or opt not to explore before having OSE. Therefore it may be opening up new ways of being sexually for these men, even if later they conclude that the fantasy was better than reality.

Acceptance of sexual orientation

In connection with the theme of sexual diversification, another pattern identified in these men's discourses was an increased self-confidence in dealing with sex in general, but more specifically with their sexual orientation. Men associated this change with exposure to a wider diversity of sexual partners and experiences than before their OSE. For many the Internet was experienced as a training ground of sorts, a place where they could go and experiment with being themselves feeling more relaxed about their private feelings and desires.

'[The Internet] is where people go when they don't feel so assured, where they can be more themselves and [where] they can talk freely. And when they go out into the [offline] world, they have developed internal resources that assure them, leaving them less fragile. That happened to me. Today, (...) I'm more confident in assuming my homosexuality, more assured, more open, more tolerant.' (#054, 24)

This participant, like others, suggested that his online experience lessened his internalized homophobia, allowing him to be more comfortable with himself and with other gay men. The more authentic self-expression that the Internet allowed, together with the interaction possibilities it opened up, created a space where his sexuality could be explored, experienced and assimilated. The strength drawn from this process appears to have had an actual impact in offline lived experience, transforming sexual and social understanding into new ways to feel and do.

On topic, another participant mentioned how meeting men online that worked, like himself, in healthcare was comforting and allowed him to be more relaxed when interacting with others in general. Others spoke of their OSE increasing their confidence in being and assuming to be gay. This suggests that the internalized homophobia that many of these men

possibly acquired while growing up may to a certain extent be minimized or undone by the social and sexual experiences facilitated by the Internet.

Different communication patterns

Another aspect of altered self-perception that emerged from our analysis was related with communication patterns. This perceived change is both sexual and non-sexual and is associated with sexual and non-sexual contexts facilitated by the Internet. Some participants discussed how their communication with other men online, and consequently offline, was qualitatively different when compared with their pre-Internet experience. Overall, they felt more able to interact intimately online, which they attributed both to the medium (the Internet facilitating textual communication) and to their willingness to disclose their feelings and desires to others within. This tendency was also pronounced when comparing the Internet with places where men go specifically to have sex with other men and where little is spoken:

‘If you go to a cruising ground, sex comes first and then comes the rest (laughter). Not there [on the Internet]; there you ask everything.’ (#043, 31)

Accordingly, and also in comparison with other contexts, the Internet was sometimes idealized as a good instrument to get to know someone before any offline interaction happened.

‘The Internet reminds me, a little, of the way people used to get to know each other... They would start by writing about themselves. (...) [Online t]hey start to write about all kinds of things and I think that we can more easily create a friendship and get to know the person a little better before taking the next step. And in a sauna you may not even talk with the person, right?’ (#017, 62)

With this nostalgic observation, this man seems to be discussing a need for emotional connection with potential sexual partners, something he doesn’t find in other places. Simultaneously, he is constructing the Internet as a social environment that improves the quality of interactions, including those aimed at sex. This is significantly linked with the topic of authenticity that came up in several other interviews.

I – Are your behaviors of looking for sex different online from those you have elsewhere?
 P – They certainly are (...). People act differently face-to-face as compared to when they have a screen between them where they can’t see each other, for whatever reason that might be. And people are more direct, meaning they censor a lot less what they say; they are a lot more spontaneous because they are not looking at the other person, they are protected by the screen between them.

I – And is that true for you as well?

P – Of course' (#033, 33)

The computer screen as a filter leading to a lack of visual cues seems to facilitate intimate exposure and an increased sense of connection with others online. Again computer-mediated communication is associated with different quality of interactions, as opposed to what happens in other contexts. Furthermore, the impact of online experience is identified as also extending onto offline communication:

'It seems, because I have met a lot of people online and not having met anyone... not having stabilized on a relationship or for not having found the sweetness I'm looking for, it causes me to become cold with other people. I react towards people less tenderly...'
(#018, 29)

'I – Has your use of the Internet to meet people for sex influenced your behavior in any way?

P – No, I don't think so. I think sex, having lots of sex does change, right? It makes us feel more secure, accomplished, in better mood. It is a lot easier to work with me now than before.' (#046, 36)

Also, some men also talked about how the Internet changed their communication patterns with other men in sexual contexts.

'I – Do you think the Internet had any influence on the way you interact with others?

P – It had a little. I started to be a lot more to the point with the questions I asked [in sexual interactions online and offline] and to be a lot more direct. I don't stall as much as I used to.' (#044, 30)

While this sexual directedness might be a repertoire acquisition common for many gay men, and indeed for many Internet users in the information era, our participants specifically associated their sexual and sometimes non-sexual assertiveness to the quality and quantity of sexual experiences they were having online.

Having OSE seems to have facilitated men's sense of intimacy and closeness with others online and it has made their sexual dialogue more precise, their interactions more refined and focused. Changes also occurred offline and left some with new ways of interacting with others in both sexual and non-sexual contexts with desirable and undesirable outcomes.

Excessive use

Many participants described what in their perception were experiences and periods of excessive use of the Internet as a means to interact and meet other men. A few mentioned that, at least for some time, being online became a central aspect of their existence, taking on time that they would otherwise dedicate to other activities and interests, particularly social interactions outside of the virtual realm. This excessive dedication to interacting with others on the Internet often did not affect other aspects of their lives to an extent that could be considered problematic. However, it effectively was perceived and narrated by the men as problematic and often left them questioning the ways they managed their time.

'I feel this need to go check on [gay men's networking website] and see if anyone sent me a message. (...) And this bothers me because I feel it as addictive and you get hooked. (...) I have been for a whole Sunday, stupidly, looking at a screen waiting for someone to message me (...) And then I think: what am I doing like a fool looking at the screen a whole afternoon instead of going to get some sun, go for coffee with someone, have a chat or go see a movie?' (#4, 38)

The reflexive and self-critical appraisal provided by this participant is similar to that of others in that it considers using the Internet to meet other men as affecting his personal will and use of time. Others also spoke of a certain developed indifference towards interacting with people offline, suggesting that the convenience of chatting online was inversely proportional to investing in real world relationships. This was often bitterly evaluated and self-criticized by the men.

For a minority of participants, however, the allure of the Internet may have actually caused a stronger impact and verged on the pathological, with considerable negative impact to well-being and to different aspects of these men's lives.

'At some point I was going every night to the [gay] chat rooms and that was my second life... If I couldn't go I would be sick; if the Internet was not working that night it was terrible and at some point I did lead a double life, as I had a normal life with a job, a house, kids and all those things, and then I had my second life online. (...) And I lived it intensely; to the point it was making me suffer, and nothing else mattered to me.' (#010, 42)

Despite minority, this and other accounts speak of the different and sometimes clearly problematic experiences that some of the men are having online, impacting on their day-to-day activities and relationships. For these, the sexual potential of the Internet seems to have engaged with specific individual needs in strong and possibly problematic ways.

Accidentally or not, the periods of intensive use described by some participants often coincided with initial exposure to the web; with the start of its use at home or were confined

to specific periods, such as vacation time. However, for several, despite continuing to use the Internet for the same social and sexual purposes they excessively did before, their use tended to stabilize after a while. This suggests that after a period of maladaptive behavior, apparently triggered by the erotic allure of the Internet, some spontaneously developed mechanisms to self-regulate those behaviors.

Altered perception of others

The other question that we tried to answer was whether men's OSE affected their perception of others. We did find evidence of such an impact, with most of the reports regarding this issue being quite grim. The social experience allowed by the Internet seemed in many cases to have increased suspiciousness about others, especially because of the apparent lack of honesty that many men claim they found online.

I – Do you think the Internet has influenced in some way how you deal with others?

P – No (pause). Unless if it is that I'm more suspicious.

I – And why's that?

P – Because on the Internet there are a lot of people who must live in a wonderland and they send to another computer a person, an image that is not of themselves (...)

I – And do you think that made you become more suspicious of people in general? Or only regarding what goes on online?

P – Well, on the Internet I'm super-suspicious, I am. In general [offline], with people I think I am as well by nature and more and more each day (...)

I – But does that mean that online you didn't used to be as suspicious as you are offline?

P – In the beginning [when I started to use the Internet] I used to fall for all the petty lies, but then I had to adjust.' (#043, 31)

There are two relevant levels of experience described in this account. One refers to a certain naiveté with which he initially went online, which contrasted with his usual offline suspiciousness. This openness to others links with the theme of altered communication patterns, particularly the increased sense of connection some men mention feeling when communicating online. The other level of his experience regards the learning process he went through while interacting with other men online and how he changed his attitude because of the lies and deceits he claimed to have found. Other men in our study had similar perceptions and characterized their impact as one of the predominantly negative consequences associated with their OSE.

'Yes, [the Internet] has changed me, I think I grew a lot because I think I developed defenses and I started to evaluate other people's behavior, not only gay people, I think it made me grow up and be more aware of or suspicious, trying to identify signals, signals...

I don't know, of criticism or... I'm not quite sure how to explain, but I think I learned a lot through the contact with people online. I think it has provided me with some education for society.' (#024, 27)

In the case of this participant, parallel to the theme of lost innocence that affected the expectations he had of other people in general, there is also an increased sensitivity towards being the target of negative reactions of others, which he reframes as something that may actually be useful. In doing so, he clearly identifies the Internet as influencing his views of others.

This theme adds depth to our understanding of the effects that OSE seems to be having upon these men's perceptions and behaviors. In contrast with other more optimistic assessments of Internet use, for some participants it provided a less fulfilling experience, unveiling what seems to be a world of half-truths, deceits and lack of honesty. These experiences changed men's outlook on others online but also offline.

Discussion

The debate around the psychological and behavioral impact of the Internet is not new. Nicholas Carr (2008), for instance, has been one of the voices arguing that the increased use of the Internet is changing us. In an article published in *The Atlantic*, he wrote: 'Thanks to the ubiquity of text on the Internet (...) we may well be reading more today than we did in the 1970s or 1980s, when television was our medium of choice. But it's a different kind of reading, and behind it lies a different kind of thinking—perhaps even a new sense of the self' (Carr, 2008). Turkle wrote that the Internet is 'changing the way we think, the nature of our sexuality, the form of our communities, our very identities.' (Turkle, 2004: 19). However, both authors have a rather negative outlook on the impact that this use is having upon us. Carr (2010) has argued that excessive use of resources like Google is turning our minds into a desert of ideas. Turkle, who was quite enthusiastic about human-machine interactions in her earlier work (Turkle, 1995), in her latest book 'Alone together: Why we expect more from technology and less from each other' (2011), as the title not very subtly suggests, is now more conservative on her approach to that very same issue.

While with our study we certainly found some worrisome aspects of MSM's OSE, including altered perceptions of others and, for a minority, behaviors that may verge on the problematic, we cannot align with these authors in their global perspectives. Our participants' experiences were varied and seem to have led some into important paths of self discovery and personal improvement that they did not think were possible; for others the Internet facilitated the exploration of unknown personal and sexual potential. OSE also seems to

have informed a varied view of other men and of people in general, as well as of sex. And for a few their online sexual digressions had no perceived impact at all.

The purpose of this article was to better understand an understudied phenomenon related to MSM's online dating experiences. As shown, we found several indicators that clearly point in the direction of our initial suppositions, i.e., that associated with their OSE, men perceived several changes in their views of themselves and of others. This impact seemed to be mainly sexual. For instance, several men discussed how using the Internet has made them more confident about sex and their sexual orientation. These results align with what other researchers have reported (Remien et al., 2006) and can be explained by the acculturation process that many gay men undergo when starting to interact sexually and socially with other gay men (e.g. Ritter and Terndrup, 2002).

In fact, the increase in numbers of social and sexual partners seems to be one of our key findings. According to Weatherburn and colleagues the Internet 'helps some men who would otherwise have little sex to have some. And it helps others who already have plenty to have even more' (Weatherburn et al., 2003: 2). This expanded experience, according to several of those we interviewed, was pivotal in the changes they identified in themselves, such as an increased sexual assertiveness.

Other researchers have suggested that MSM's access to more sexual partners online could be creating problematic behaviors (Bull and McFarlane, 2000). We did identify a certain self-perceived adventurousness that led some to the exploration of uncommon sexual activities that apparently they would not have pursued were it not for the possibilities opened by the Internet. This seems to be in line, for instance, with findings that associate Internet sex seeking with a greater interest in *fisting* (Mettey et al., 2003). It suggests that the Internet may be opening up virtual and real spaces of desire that were not explicit or conscious before. These new possibilities often translated into in-the-flesh practices, even if sometimes reality turned out to be disappointing when compared with fantasy. Even so, the erotic fluidity between the virtual and the tangible is not to be disregarded.

As reported elsewhere (Nodin, Carballo-Diéguez & Leal, 2013), when specifically asked about their sexual practices with men met online, none of the participants in our study mentioned having had sexual risk behaviors. However, bareback sex, i.e. sex where condoms are intentionally not used, has become an activity some MSM seek in many parts of the world (e.g. Halkitis, 2007; Mansergh, et al., 2002). References to it are widespread in websites that men use to meet others for sex (Groves, 2006), and it is eroticized through gay pornography also easily found online (Dean, 2008). If the Internet is a catalyst for sexual fantasies and practices, the possibility that some of these become problematic from a public health perspective should be further studied and specific prevention strategies put in place, as has been extensively suggested (Blackwell, 2007; Hurley, 2007).

This is particularly relevant as we identified behaviors associated with using the web in our study that border the problematic. The Internet seems to have touched underlying aspects of the desiring self (Davis et al., 2006) of some of the participants in our study that, after being elicited, became difficult to control, leading to situations described as of excessive sexual-related Internet use. This suggests that the Internet may have a pull factor (Rosenmann and Safir, 2006), actively triggering or facilitating problematic psychological dimensions of some of the men, in line with what Cooper and colleagues (1999) described.

However, even if a relationship between the Internet and problematic sexual behavior seems apparent in some cases, the reading of results like ours should be cautious, as the connection between OSE and sexual risk behaviors, despite being under researchers' scrutiny for at least a decade, remains unclear (Adam et al., 2011; Al-Tayyib et al., 2009). Furthermore, the Internet may also be a relevant medium to facilitate HIV prevention (Rosser et al., 2012) and, we might add, to allow the safest sex of all: cybersex, i.e. online sexual interactions (Carvalho and Gomes, 2003).

Overall, men in our study tended to positively evaluate their altered self-perception. For instance, OSE may have enhanced men's interpersonal skills, allowing them to have better and more authentic communication with others on and offline. This again may be a product of the volume of partners they were exposed to, but it may additionally have been influenced by the anonymity that the medium provides, known to decrease social inhibitions (Joinson, 2007; Suler, 2004).

This positive outlook at self-changes contrasts with the perception that men developed of others following their OSE. Many described losing trust in people due to the dissimulation that they claim reigns online. Furthermore, this increased suspiciousness is not exclusively directed at men met online, the alleged source of the reaction, but for some it has become a general way of looking at others, also offline.

This change in perception certainly speaks more of the men who point the finger than of the targets of their criticism per se. Not to say that dissimulation is absent from the online world. It has been argued that the Internet offers many opportunities for identity exploration that do not comply with traditional notions of honesty (Turkle, 1995). However, for some, the Internet does allow a safe and positive sampling of roles and identities, and therefore can be an important vehicle for self-exploration, for example, among adolescents questioning their sexuality (Subrahmanyam et al., 2004), and indeed for MSM exploring their sexuality, as some of the men in our sample did with positive outcomes. The exploration of some, however, will intersect with the expectations and desires of others who may become frustrated with repeated mismatched online experiences.

We may conclude then that in the deeply interactive context of online sexual (and social) experience different levels and types of self-presentations meet, apparently facilitating

fundamental, even if subjectively perceived, changes. We therefore believe our study provides ample credit to the symbolic interactionist hypothesis applied to the realm of the virtual (Hardey, 2002; Whitty, 2008). Although it is unclear exactly what role technology plays in this process, it nonetheless seems to shape the ways interactions and therefore changes occur. If the boundaries between man and machine have long been blurred (Haraway, 1991), the Internet seems to have deepened and amplified this effect, driven by our very human nature, the same nature that seeks pleasure, but above all the warmth of human interaction in the coldest of technological settings. It surely is to continue to be so as more sophisticated gadgets and newer technologies open up new social and sexual possibilities for exploration, use, and sometimes abuse.

Limitations

Our analysis was limited by our reliance in our participants' perceptions of change following their OSE. We can question to what extent their self-evaluated perceptions translated into effective changes, for instance, steady ways of looking at others or the development of certain behavioral patterns. Considering the expressed goal of the interviews in which these men participated (in general, to discuss their OSE), and the types of questions asked, we can also wonder whether the men were induced into thinking of connections that didn't exist, just because they were asked to consider them. It is also unclear to what extent some of the changes that were reported, such as a better acceptance of sexual orientation, were in fact due to men's Internet use or if they could have happened anyway, for instance, with more sexual experience or simply as a consequence of life experience. However, we consider that the perception that men have of change and the narratives they build around them are of great importance to the construction of the self and can equate to actual and steady ways of perceiving the self and others.

We used a convenience sample collected mostly through one specific website and is not representative of MSM who use the Internet for sexual purposes. Therefore, our results cannot be generalized to other MSM. As interviews were conducted face-to-face, a social desirability factor may have affected the results, with men less willing to discuss deeper personal or sexual impact of their OSE. However, we believe to have contributed to the ongoing discussion about how information technologies are shaping and affecting people in different ways.

As technology continues to evolve, so will MSM's experiences of using it and possibly their perceptions of who they are, sexually and otherwise. Although our results were collected at a time when smart phones and mobile applications were in their early stages of development, we believe that understanding what happened in the recent past of these

technologies and the uses men made of them can help us understand the present and prepare for the emergence of new patterns of online sexual networking for MSM and others alike.

References

- Adam PCG, Murphy DA and De Wit JBF (2011) When do online sexual fantasies become reality? The contribution of erotic chatting via the Internet to sexual risk-taking in gay and other men who have sex with men. *Health Education Research* 26(3): 506-515.
- Al-Tayyib AA, Rietmeijer CA, McFarlane M and Kachur R (2009). Finding sex partners on the internet: What is the risk for sexually transmitted infections? *Sexually Transmitted Infections* 85(3): 216-220.
- Amichai-Hamburger Y, Hayat Z and Current Research Topics in Cognitive Load Theory (2011) The impact of the Internet on the social lives of users: A representative sample from 13 countries. *Computers in Human Behavior*, 27(1): 585-589.
- Barraket J and Henry-Waring M (2008) Getting it on(line): sociological perspectives on e-dating. *Journal of Sociology* 44(2): 149-166.
- Braun V and Clarke V (2006) Using thematic analysis in psychology. *Qualitative Research in Psychology* 3(2): 77-101.
- Berg R (2008) Barebacking among MSM Internet Users. *Aids and Behavior* 12(5): 822-833.
- Blackwell CW (2007) Men who have sex with men and recruit bareback sex partners on the Internet: Implications for STI and HIV prevention and client education. *American Journal of Men's Health* 2(4): 306-313.
- Bolding G, Davis M, Hart G, et al (2005) Gay men who look for sex on the Internet: is there more HIV/STI risk with online partners? *AIDS* 19(9): 961-968.
- Brown G, Maycock B and Burns S (2005) Your picture is your bait: use and meaning of cyberspace among gay men. *Journal of Sex Research* 42(1): 63-73.
- Bull S and McFarlane M (2000) Soliciting sex on the Internet: what are the risks for sexually transmitted diseases and HIV? *Sexually Transmitted Diseases* 27(9): 545-50.

- Carballo-Diequez A, Ventuneac A, Bauermeister J, et al. (2009) Is 'bareback' a useful construct in primary HIV-prevention? Definitions, identity and research. *Culture, Health and Sexuality*. 11(1): 51-65.
- Carr N (2008) Is Google making us stupid? Why you can't read the way you used to. *Atlantic Monthly*, 1 January, 302(1).
- Carr N (2010) *The shallows. What the Internet is doing to our brains*. New York: W.W. Norton and Company.
- Carvalho A and Gomes FA (2003) Cybersex in Portuguese chatrooms: A study of sexual behaviors related to online sex. *Journal of Sexual and Marital Therapy* 29: 345–360.
- Chatfield T (2012) *How to thrive in the digital age*. London: Macmillan.
- Cooper A, Putnam DE, Planchon LA and Boies SC (1999) Online sexual compulsivity: getting tangled in the net. *Sexual Addiction and Compulsivity* 6(2): 79-104.
- Corley MD and Hook JN (2012). Women, Female Sex and Love Addicts, and Use of the Internet. *Sexual Addiction and Compulsivity* (19): 53-76.
- Daneback K, Ross MW and Månsson S (2006) Characteristics and behaviors of sexual compulsives who use the Internet for sexual purposes. *Sexual Addiction and Compulsivity* 13(1): 53-67.
- Davis M, Hart G, Bolding G, et al. (2006) E-dating, identity and HIV prevention: theorizing sexualities, risk and network society. *Sociology of Health and Illness* 28(4): 457-478.
- Dean T (2008) Breeding culture: barebacking, bugchasing, giftgiving. *The Massachusetts Review* 49(1): 80.
- Donovan B, Tindall B and Cooper D (1986) Brachioproctic eroticism and transmission of retrovirus associated with acquired immune deficiency syndrome (AIDS). *Genitourinary Medicine* 62(6): 390-2.

Dowsett GW, Williams H, Ventuneac A and Carballo-Diéguez A (2008) 'Taking it like a man': masculinity and barebacking online. *Sexualities* 11: 137–157.

Finkel EJ, Eastwick PW, Karney BR, Reis HT and Sprecher S (2012) Online Dating: A Critical Analysis From the Perspective of Psychological Science. *Psychological Science in the Public Interest*, 13(1): 3-66.

Frankland A **and** National Centre in HIV Social Research (Australia). (2008). *Gay community periodic survey: Melbourne 2008*. Report, Sydney, NSW: National Centre in HIV Social Research.

Gaspar MJ and Carvalheira A (2012). The Consumption of Pornography on the Internet in a Sample of Portuguese Women. *Psychology, Community and Health* 1(2): 163-171.

Goffman E (1959) *The presentation of self in everyday life*. Garden City, N.Y: Doubleday.

Grov C (2006) Barebacking websites: electronic environments for reducing or inducing HIV risk. *AIDS Care* 18(8): 990-7.

Grov, C., Parsons, J. T., & Bimbi, D. S. (2010). Sexual compulsivity and sexual risk in gay and bisexual men. *Archives of sexual behavior*, 39, 4, 940-949.

Halkitis PN (2007) Behavioral patterns, identity and health characteristics of self-identified barebackers: implications for HIV prevention and intervention. *Journal of LGBT Health Research* 3: 37-48.

Haraway D (1991) *Simians, cyborgs and women: The reinvention of nature*. New York: Routledge.

Hardey M (2002) Life beyond the screen: embodiment and identity through the internet. *The Sociological Review*, 50(4): 570-585.

Hearn J (2008) Sexualities future, present, past... Towards transectionalities. *Sexualities* 11(1/2): 37-45.

- Hurley M (2007) *Final project report to NSW Health. HIV/AIDS health promotion demonstration project. Activating the Internet: using new technologies to conduct health promotion with gay men.* Report, Melbourne: La Trobe University.
- Joinson AN (2007) Disinhibition and the Internet. In: Gackenbach J (ed) *Psychology and the Internet. Intrapersonal, interpersonal, and transpersonal implications.* San Diego, CA: Elsevier, pp.75-92.
- Lanier J (2010) *You are not a gadget. A manifesto.* New York: Alfred A. Knopf.
- Liau A, Millett G and Marks G (2006) Meta-analytic examination of online sex-seeking and sexual risk behavior among men who have sex with men. *Sexually Transmitted Diseases* 33(9): 576-84.
- Ko N-Y, Koe S, Lee H-C, Yen C-F, Ko W-C and Hsu S-T (2012) Online Sex-Seeking, Substance Use, and Risky Behaviors in Taiwan: Results from the 2010 Asia Internet MSM Sex Survey. *Archives of Sexual Behavior.* (Suppl. 1)
- Kraut R, Kiesler S, Boneva B, Cummings J, Helgeson V and Crawford A (2002) Internet Paradox Revisited. *Journal of Social Issues*, 58(1): 49-74.
- McFarlane M, Bull S and Rietmeijer C (2000) The Internet as a newly emerging risk environment for sexually transmitted diseases. *Journal of the American Medical Association* 284: 443-446.
- McKirnan D, Houston E and Tolou-Shams M (2007) Is the Web the culprit? Cognitive escape and Internet sexual risk among gay and bisexual men. *Aids and Behavior* 11(1): 151-160.
- Mansergh G, Marks G, Colfax GN, et al. (2002) 'Barebacking' in a diverse sample of men who have sex with men. *AIDS* 16: 653-659.
- Marche, S. (2012) Is Facebook Making Us Lonely? *Atlantic Monthly*, 309, 4: 60-69.

- Meerkerk GJ, Van Den Eijnden RJ and Garretsen HF (2006) Predicting compulsive Internet use: it's all about sex! *Cyberpsychology and Behavior: the Impact of the Internet, Multimedia and Virtual Reality on Behavior and Society* 9(1): 95-103.
- Mettey A, Crosby R, DiClemente RJ and Holtgrave DR (2003) Associations between Internet sex seeking and STI associated risk behaviours among men who have sex with men. *Sexually Transmitted Infections* 79(6): 466-8.
- Nodin, N., Carballo-Diéguez, A., & Leal, I. M. (2013). Sexual use of the internet: Perceived impact on MSM's views of self and others. *New Media & Society*, 16, 5, 719–736.
- Parsons J, Kelly B, Bimbi D, et al. (2008) Explanations for the origins of sexual compulsivity among gay and bisexual men. *Archives of Sexual Behavior* 37(5): 817-826.
- Perry M, Accordino M and Hewes R (2007) An investigation of Internet use, sexual and nonsexual sensation seeking, and sexual compulsivity among college students. *Sexual Addiction and Compulsivity* 14(4): 321-335.
- Remien RH, Sandfort TG, Chiasson MA, et al. (2006) Self-reported behavioral change since using the Internet to find sex partners: An online study among MSM in the US and Canada. Paper presented at the *XVI International AIDS Conference*, Toronto, Canada, 13-18 August 2006.
- Rheingold H (2000) *The virtual community: homesteading on the electronic frontier*. Cambridge, Mass: MIT Press.
- Ritter K and Terndrup AI (2002) *Handbook of affirmative psychotherapy with lesbians and gay men*. New York: Guilford Press.
- Rosenmann A and Safir MP (2006) Forced online: push factors of Internet sexuality: A preliminary study of online paraphilic empowerment. *Journal of Homosexuality*, 51(3): 71-92.
- Rosser BRS, Grey JA, Wilkerson JM, Iantaffi A, Brady SS, Smolenski DJ and Horvath KJ (2012). A commentary on the role of sexually explicit media (SEM) in the

transmission and prevention of HIV among men who have sex with men (MSM). *Aids and Behavior*, 16(6): 1373-1381.

Stone AR (1991) Will the real body please stand up? Boundary stories about virtual cultures. In: Benedict M (ed). *Cyberspace: first steps*. Cambridge, Mass: MIT Press, pp.80-118.

Subrahmanyam K, Greenfield PM and Tynes B (2004) Constructing sexuality and identity in an online teen chat room. *Journal of Applied Developmental Psychology: An International Lifespan Journal* 25(6): 651-666.

Suler J (2004) The online disinhibition effect. *Cyberpsychology and Behavior* 7: 321-326.

Turkle S (1995) *Life on the screen: identity in the age of the Internet*. New York: Simon and Schuster.

Turkle S (2004) Whither psychoanalysis in computer culture? *Psychoanalytic Psychology* 21: 16-30.

Turkle S (2011) *Alone together: Why we expect more from technology and less from each other*. New York: Basic Books.

van Dorn, N (2011) Digital spaces, material traces: How matter comes to matter in online performances of gender, sexuality and embodiment. *Media, Culture and Society*, 33(4): 531-547.

Weatherburn P, Hickson F and Reid D (2003) *Net benefits: Gay men's use of the Internet and other settings where HIV prevention occurs*. London: Sigma Research.

Whitty MT (2008) Revealing the 'real' me, searching for the 'actual' you: Presentations of self on an internet dating site. *Computers in Human Behavior* 24(4): 1707-1723.

Yurchisin J, Watchravesringkan K and McCabe DB (2005) An Exploration of Identity Re-Creation in the Context of Internet Dating. *Advances in Consumer Research*, 32: 193-194.

3. Study 2: Validation of a scale assessing perceptions, processes and preferences of using the Internet to meet sexual partners among men who have sex with men

Nodin, N., Leal, I., & Carballo-Diéguez, A. (submitted a). Validation of a scale assessing perceptions, processes and preferences of using the Internet to meet sexual partners among men who have sex with men.

Abstract

This study examined the psychometric properties of a new standardised instrument, the Sexual Use of the Internet Scale (SUIS), to measure different aspects of how gay and bisexual men use the Internet to meet sexual partners. Approximately 317 self-identified gay and bisexual men with ages ranging from 18-62 who met selection criteria participated in the study. Data were collected online. An exploratory factor analysis identified six thematically interconnected and statistically coherent factors, which included 42 of the initial 65 items of the scale. Altogether these factors explained 51% of the variance of the scale covering different aspects of men's online sexual preferences and practices. These factors were: "Positive impact of the Internet", "Sexual self-exposure online", "Advantages of meeting men online", "Preference for meeting men online", "Mistrust of men online", and "Negative impact of the Internet". The Sexual Use of the Internet Scale could be used to evaluate gay and bisexual men's perceptions, processes and preferences associated with using the Internet to meet sexual partners, including non-problematic aspects of this experience, which have been largely overlooked and understudied, particularly in this population. The SUIS may be used to complement other measures of these men's erotic uses of the Internet.

Key words: gay, bisexual, men, Internet, scale, SUIS

Introduction

A growing academic debate has discussed the influence of Internet use in the ways people think and socialize (Goren, 2003; Litowitz, 2012; Thompson, 2013; Tylim, 2012) also voicing concerns about the potential for negative impact of such use (e.g. Lanier, 2010; Turkle, 2011). Social research has started to study the effects of online dating and sexual networking on various psychosocial dimensions of those who engage in these practices, highlighting changes in the nature of relationships (Barraket & Henry-Waring, 2008; Dowsett, Williams, Ventuneac & Carballo-Diéguez, 2008; Finkel, Eastwick, Karney, Reis and Sprecher, 2012), in the experience of identity and of the self (Couch & Liamputtong, 2008; Davis et al., 2006; Heino, Ellison & Gibbs, 2010; Yurchisin, Watchravesringkan & Brown, 2005) and in the perception of others within dating services, particularly by a process of commodification of potential mates (Best & Delmege, 2012; Heino et al., 2010). However, limited research has studied the potential for positive impact of using online dating and sexual networking websites, or other aspects of this experience, particularly amongst men who have sex with men (MSM) who have taken on the Internet as a preferred environment to seek sexual and romantic partnerships (Bolding et al., 2005; Frankland et al., 2008; Pitts et al., 2007). Furthermore, there is a dearth of standardised instruments that may be applied to this field of inquiry and for this population. This paper and the scale it presents address these gaps in the scientific information.

MSM and the Internet

The diversity of contexts that MSM use for the purpose of finding sex and the creativity they apply to that pursuit has been documented (e.g. Dowsett, 1999; Leap, 1999; Villaamil & Jociles, 2011), suggesting that cyberspace could just be another one of these contexts. However, other factors may also explain this enthusiastic uptake. For example, if anonymity accounts for the popularity of using of the Internet to find sexual partners for many people regardless of their sexual orientation (e.g. Carvalheira & Gomes, 2003; Cooper, 1998; Strassberg & Holty, 2003), research has shown that particularly for MSM who do not identify as gay or who fear negative consequences from disclosing their sexual orientation, anonymity may be the main factor explaining extensive online sexual networking (Brown, Maycock & Burns, 2005).

Studies by McKenna and colleagues (McKenna & Bargh, 1998; McKenna, Green & Smith, 2001) corroborated that individuals with marginalised identities, including non-heterosexuals, feel compelled to use the Internet to interact with others with similar experiences due to the anonymous (and therefore “safe”) nature of that medium. They also found that due to the influence of such experiences, those users’ online selves merged onto their offline ones, leading to the *demarginalization* of one’s sexual self or “the acquisition of a

positive sexual identity where before there were feelings of isolation and shame” (McKenna, Green & Smith, 2001, p.309). Similarly, Rosenmann and Safir (2006) have discussed how Internet specific factors, for example, the interaction with similar others who will positively condone their preferences and activities, may cause a sense of sexual empowerment for individuals with minority sexual preferences.

Additionally, the Internet makes screening for others with similar sexual interests easy for MSM (Davis et al., 2006). Men may seek partners online, for instance, for sex without condoms (e.g. Blackwell, 2008; Carballo-Diéguez et al., 2009; Grov, 2006), for fetish sex (Mettey et al., 2003) or they may look for others who fit within specific sexual position preferences, such as that of being the receptive or the insertive partner in anal intercourse (Klein, 2008).

If online dating and sexual networking have come to define much of these men’s sexual dynamics and partnerships (Fernández-Dávila & Zaragoza, 2011), there has been limited scholarly interest in dimensions of these practices beyond those pertaining to sexual risk behaviours (Berg, 2008; Ko et al., 2012; Rosser, Miner & Bockting, 2009). Additionally, as we will demonstrate, the options for the standardised assessment of other psychosocial aspects of using the Internet for sexual purposes are restricted, and even more so when considering MSM as the target population.

Measuring sexual use of the Internet

Few standardised instruments are available to evaluate the relationship between sexuality and the Internet. Existing instruments mostly focus on problematic aspects of online sexual practices. For instance, there are three scales that evaluate online sexual compulsivity (Weiss, 2013; Young, 2013) including Delmonico’s Internet Sex Screening Test or ISST (Delmonico & Miller, 2003). Diverse measures have been developed to assess other problematic behaviours such as Internet-initiated sex crimes against minors (Wolak, Finkelhor & Mitchell, 2004) and sexual risk behaviours associated with finding partners online (Buhi, Klinkenberger & McFarlane, 2013; Grov et al., 2007).

A few instruments cover non-problematic aspects of the links between sexuality and the Internet, for instance evaluating HIV prevention delivered online (Pequegnat et al., 2007; Williams, Bowen & Ei, 2010). Also, the Sex and the Internet Scale (SIS) was developed to measure attitudes toward using the Internet for obtaining sexuality-related information, for establishing personal connections and for sexual entertainment (Goodson, McCormick & Evans, 2000). Finally, the erotic cyber-communication scale (ECCS) was created to study the sexual arousing effect of online sexual networking amongst MSM (Robinson & Moskowitz, 2013), making it one of very few instruments reviewed specifically developed for MSM. Furthermore, of all the aforementioned scales, only the ISST, the SIS and the ECCS have

had their psychometric qualities published resulting in limited options for the standardised study of MSM's use of the Internet for sexual purposes.

Given this gap in the academic information, we decided to develop an instrument for MSM that allowed a more holistic insight into their sexual uses of the Internet based on their own interests and experiences and informed by the existing literature. This article presents and discusses the development and assessment of the psychometric properties of this instrument, the Sexual Use of the Internet Scale (SUIS).

Method

Procedures

In 2006 a qualitative exploratory study was conducted in order to better understand Portuguese MSM's perceptions, motivations and practices associated with Internet sexual networking (deleted for anonymity). The thematic analysis that was conducted informed the development of a questionnaire aimed at expanding further our understanding of these issues. This questionnaire was programmed using SSI Web Survey software, hosted on a website created for this study, tested and launched. This study was approved by an ethics assessment conducted by the Scientific Committee of ISPA Instituto Universitário de Ciências Psicológicas, Sociais e da Vida, Lisbon, Portugal.

Measures

The questionnaire that included the SUIS also incorporated questions about participant demographics; relationship status; sexual behaviour and orientation, among other. The SUIS was formatted as a 5-point Likert scale (Completely disagree to Completely agree) and in its original version included 65 items. These items were based on the experiences and themes that were identified during the qualitative phase of the study (deleted for anonymity), with some being adapted directly from thoughts and expressions formulated by the men who were interviewed. All items were related to various aspects of the experience of using the Internet to meet sexual partners, including perceived ways by which that behaviour might affect users (e.g. "Using the Internet to meet other men has helped me to better accept my homosexuality or bisexuality"); perceptions of others (e.g. "Men tend to lie more when chatting online"); preference and advantages of using the Internet to meet partners (e.g. "Online it is easier to meet the men that I really want to meet"); difficulties with the online experience (e.g. "I waste a lot of time looking for men online); among other (Table 2).

Study Sample

The study was advertised online via emailing, using ads on websites targeted at gay men, through LGBT organizations and word of mouth. The questionnaire was online from

January through June 2009. During that period, a total of 1351 people accessed the questionnaire. We only retained for this study the completed questionnaires of men self-identifying as gay or bisexual aged 18 or older ($n=317$).

Analysis

The SUIIS was evaluated by using an exploratory factor analysis (EFA) in order to explore its matrix of correlations with extraction of factors using a principal component analysis (PCA), followed by a Varimax rotation. The scree plot rule (Cattell, 1966) was used for the retention of common factors because the eigenvalue-greater-than-one rule would lead to the retention of a number of factors that would not be thematically viable. Analyses were carried out using SPSS 20 software.

Results

Characteristics of the sample

Average participant age was 30.8 ($sd=9.4$ [18-62]). The majority indicated they lived on a big city (58.7%), followed by those who lived on a small town (23.7%), on a village (15.1%) and on a rural area (2.5%). Seventy-eight percent identified as gay with the remainder identifying as bisexual; however, only 55.5% of the total sample reported being exclusively attracted to men when using an adapted Kinsey-scale (Kinsey, Pomeroy & Martin, 1948).

Sensitivity Analysis

The psychometric sensitivity of the items of the SUIIS was evaluated by using skewness (Sk) and kurtosis (Ku) asymmetry coefficients. None of the items reached Sk and Ku factors of above 3 or 10 respectively in repeated absolute values, which would be considered indicative of sensitivity problems and significant deviation from normality (Kline, 2011).

TABLE 1 HERE

Factorial Validation and Reliability Analysis

The EFA with all the items had a KMO of .859, suggesting that the items were appropriate for this analysis. The communalities were above .5 for all items, thereby all contributed to the factorial structure reached. This analysis produced a factorial structure of 16 factors in respect to the rule of values above one. Altogether these factors explained 63.7% of all observed variance. Nevertheless, this solution was thematically problematic and not all items saturated the factors that were produced. Furthermore some of the factors only included one or two items. According to the scree plot rule six or seven factors should be kept, which was coherent with the range of topics used to create the scale. Retaining six

factors using all of the items led to a solution in which the total variance explained was of 44%. However there were several items with factorial weights below .5 that therefore should be eliminated.

Items were progressively eliminated until a solution was reached that was statistically as well as thematically acceptable. The final model included 42 items, a KMO of .859 and a factorial structure of six latent dimensions that altogether explained 51% of the variance of the scale. Factorial weights for all items were above .5 except for item 44r7 (Factor 4). We decided to keep this item because it was thematically coherent with the factor where it was located and eliminating it would not improve the factorial structure of the scale.

TABLE 2 HERE

The majority of the communalities were higher than 50%. The scale presented high internal consistency, as measured by Cronbach's alpha (Table 2), for the first two factors; factors 3 and 4 had a moderate internal consistency and the last two factors had a lower internal consistency (Maroco & Garcia-Marques, 2006).

Thematic Analysis of Factors

A thematic analysis of the items included in each of the factors obtained was conducted. This procedure intended on identifying and describing the essence of each factor. Table 3 presents the names and contents of all six factors of the SUIS.

TABLE 3 HERE

Altogether the factors describe diverse but thematically linked aspects of the online sexual networking experience of MSM that incorporate dimensions of self-perception (F1 and F6), perception of others (F5) and of the advantages of using the Internet (F3), as well as preferences associated with that experience (F4) and finally of the affective dynamics of sexual exposure online (F2).

Discussion

This study investigated the psychometric properties of a new instrument, the Sexual use of the Internet Scale or SUIS, by using a sample of 317 gay and bisexual men who use the Internet to meet sexual partners. It allowed us to extend the research further by contributing to a better understanding of how these experiences are quantifiably measured. By using an EFA we reached a solution for the scale that included 42 items and a factorial structure of six latent dimensions. These dimensions are thematically coherent and covered distinct but interconnected aspects of MSM's experience online, including perceptions of self-change; perceptions of others online; perceived advantages of using the medium; processes of sexual self-exposure online; and reasons and contexts behind the preference for the online sexual experience.

Although all of the items and dimensions are related with the Internet-mediated sexual experiences of MSM, it can be argued that the scale includes quite different aspects of that experience. For instance, the emotional dimensions of sexual self-exposure online might be considered qualitatively distinct from the perception that using the Internet to meet other men has impacted on aspects of the self. However, we argue that the various aspects that the SUIIS covers actually complement each other and also that its diversity is, in fact, one of the scale's strengths, as it allows for an ample understanding of the complex social, emotional and behavioural phenomenon of meeting sexual partners online, which has been missing in instruments developed to date.

The items of the scale were mostly based on findings from the qualitative study that preceded it for which 36 MSM were interviewed about their online sexual networking experiences (deleted for anonymity), thus reflecting the diversity of interests and anxieties that men have when seeking potential sexual partners on the Internet. Therefore, the SUIIS may be used for exploratory purposes and, if required, its different dimensions may be used as independent sub-scales in the context of specific research interests. Furthermore, the scale may help improve and complement the understanding of important aspects of the sexual and relational practices of MSM in areas that have so far been understudied.

Unlike various other scales reviewed (Buhi, Klinkenberger & McFarlane, 2013; Delmonico, 2013; Wolak, Finkelhor & Mitchell, 2004), the SUIIS takes the emphasis away from problematic aspects of sexual Internet use and instead focuses on general psychosocial processes that may occur associated with or as a consequence of the online experience. Nevertheless, the scale reflects a wide range of MSM's experiences online, including items about positive, negative and neutral contextual aspects of those experiences.

Unlike other available scales that measure different aspects of the online sexual experience, such as the ISST (Delmonico, 2013) or the SIS (Goodson, McCormick & Evans, 2000), and with a few notable exceptions (Groves et al., 2007; Robinson & Moskowitz, 2013; Williams et al., 2010), the SUIIS was developed specifically for the MSM population. Considering that this scale reflects a breadth of experiences and concerns that men go through when using the Internet for purposes of sexual pursuit and gratification, it may be used to provide a finer understanding of MSM's erotic patterns on- and offline.

The SUIIS also taps into notions of perceived self-change and of altered perceptions of others as a consequence of the interactive social and sexual experience online (Couch & Liamputtong, 2008; Davis et al., 2006; Heino, Ellison & Gibbs, 2010; Yurchisin, Watchravesringkan & Brown, 2005), which in turn links with contemporary discussions and concerns regarding identity and change in a networked world (Goren, 2003; Lanier, 2010; Litowitz, 2012; Thompson, 2013; Turkle, 2011). This is particularly relevant for MSM as early up-takers and keen users of new technologies for purposes of social and sexual interactions

(Fernández-Dávila & Zaragoza, 2013; Hull et al., 2011; Ko et al., 2012; Rosser et al., 2009) at a time when there is suggestion of challenging consequences of these practices from a public health point of view, such as the potential for increased sexual risk taking (McKirnan, Houston & Tolou-Shams, 2007; Parsons et al., 2008). The SUIIS may add to the better understanding of these phenomena when used in association with other measures of MSM's sexual practices and experiences.

The rapid shift from web-based tools, such as the ones we focused on, to other more current forms of dating and sexual networking attests to an ever-changing social and technological reality that can potentially render obsolete some of the research carried out in the space of only a few years. Therefore, as a limitation it is noteworthy that data collection for this study was carried out at a time when online dating applications for smartphones (Blackwell, Birnholtz, & Abbott, 2014; Grosskopf, LeVasseur & Glaser, 2014; Quiroz, 2013) were still in its infancy and therefore its use was not covered by this research. The famous principle put forward by Marshall McLuhan *the medium is the message* (McLuhan, 1964) should not be underestimated. It can be interpreted as suggesting that the format of any communication technology is more relevant than its content. In the case of our field of analysis, this could imply that sexual networking on a computer will raise different issues than when doing it on a mobile device.

However, research and instruments such as the SUIIS may help understand and monitor trends even as they shift and may also increase our understanding of what is to come, especially as web-based dating tools are still in use and as new generations of young people arrive to the digital age of dating and sexual networking. Additionally, the SUIIS can be minimally adapted to assess aspects of sexual networking when done through smartphone applications. After all, the Internet is the Internet regardless of what device is used to access it.

The low numbers of bisexual men in our sample did not allow the study of the properties of the SUIIS for this subset of the MSM population. Therefore, any interpretation of the findings of the SUIIS will need to consider these to be applicable to MSM as a whole with the limitations that this implies.

Concluding, the SUIIS has good psychometric qualities and can be used as an assessment instrument for MSM populations for which the Internet is at the centre of social, dating and sex-seeking activities, as a standardised measure of relevant aspects of those practices. It will contribute to the information about the impact of using online dating and sexual networking tools on the psychosocial dynamics of users.

The final formatted version of the SUIIS is available from the lead author.

Table 1 – Sensitivity analysis of the scale

	Mean	Skewness (Sk)	Std. Error of Skewness	Kurtosis (Ku)	Std. Error of Kurtosis	Minimum	Maximum
Q42_r1	4.25	-1.423	.137	1.773	.273	1	5
Q42_r2	4.19	-.546	.137	-.293	.273	2	5
Q42_r3	2.77	.156	.137	-1.027	.273	1	5
Q42_r4	2.73	-.034	.137	-.842	.273	1	5
Q42_r5	2.56	.377	.137	-.928	.273	1	5
Q42_r6	3.77	-.851	.137	.140	.273	1	5
Q42_r7	2.62	.257	.137	-.801	.273	1	5
Q42_r8	2.30	.467	.137	-1.022	.273	1	5
Q42_r9	4.00	-.892	.137	.157	.273	1	5
Q42_r10	2.12	.688	.137	-.572	.273	1	5
Q42_r11	2.25	.441	.137	-.608	.273	1	5
Q42_r12	3.15	-.309	.137	-.527	.273	1	5
Q42_r13	3.19	-.402	.137	-.777	.273	1	5
Q42_r14	2.15	.568	.137	-.657	.273	1	5
Q42_r15	4.10	-1.499	.137	3.405	.273	1	5
Q42_r16	4.06	-1.088	.137	1.189	.273	1	5
Q43_r1	3.41	-.621	.137	-.215	.273	1	5
Q43_r2	2.87	-.088	.137	-.663	.273	1	5
Q43_r3	2.83	-.206	.137	-.920	.273	1	5
Q43_r4	2.98	-.072	.137	.030	.273	1	5
Q43_r5	3.18	-.420	.137	-.208	.273	1	5
Q43_r6	2.73	.109	.137	-.447	.273	1	5
Q43_r7	3.75	-.695	.137	-.486	.273	1	5
Q43_r8	2.31	.441	.137	-.814	.273	1	5
Q43_r9	3.10	-.068	.137	-.887	.273	1	5
Q43_r10	3.54	-.430	.137	-.569	.273	1	5
Q43_r11	3.10	-.237	.137	-.620	.273	1	5
Q43_r12	2.96	-.247	.137	-.724	.273	1	5
Q43_r13	1.96	.955	.137	-.114	.273	1	5
Q43_r14	2.16	.309	.137	-.571	.273	1	5
Q43_r15	3.80	-.870	.137	1.348	.273	1	5
Q44_r1	2.31	.466	.137	-1.021	.273	1	5
Q44_r2	3.10	-.205	.137	-.762	.273	1	5
Q44_r3	2.62	.312	.137	-.784	.273	1	5
Q44_r4	2.68	.001	.137	-.823	.273	1	5

Q44_r5	2.44	.309	.137	-.827	.273	1	5
Q44_r6	2.12	.543	.137	-.333	.273	1	5
Q44_r7	3.32	-.395	.137	-.366	.273	1	5
Q44_r8	2.85	-.059	.137	-.636	.273	1	5
Q44_r9	3.57	-.495	.137	-.529	.273	1	5
Q44_r10	2.62	.233	.137	-.533	.273	1	5
Q44_r11	2.86	.004	.137	-.621	.273	1	5
Q44_r12	2.76	.099	.137	-.560	.273	1	5
Q44_r13	4.20	-1.368	.137	2.515	.273	1	5
Q44_r14	2.99	-.077	.137	-.723	.273	1	5
Q44_r15	3.83	-1.000	.137	1.642	.273	1	5
Q44_r16	1.79	1.045	.137	.771	.273	1	5
Q44_r17	3.10	-.329	.137	-.515	.273	1	5
Q44_r18	2.98	-.166	.137	-.466	.273	1	5
Q45_r1	3.34	-.530	.137	-.942	.273	1	5
Q45_r2	2.33	.574	.137	-.341	.273	1	5
Q45_r3	3.20	-.330	.137	-.471	.273	1	5
Q45_r4	2.71	.263	.137	-.645	.273	1	5
Q45_r5	2.44	.431	.137	-.565	.273	1	5
Q45_r6	3.04	-.095	.137	-.742	.273	1	5
Q45_r7	3.05	-.247	.137	-.733	.273	1	5
Q45_r8	2.73	.154	.137	-.715	.273	1	5
Q45_r9	3.27	-.526	.137	-.220	.273	1	5
Q45_r10	3.10	-.131	.137	-.883	.273	1	5
Q45_r11	3.48	-.727	.137	-.174	.273	1	5
Q45_r12	2.95	-.036	.137	-.638	.273	1	5
Q45_r13	2.30	.501	.137	-.616	.273	1	5
Q45_r14	3.58	-.464	.137	-.225	.273	1	5
Q45_r15	3.44	-.670	.137	-.184	.273	1	5
Q45_r16	2.53	.310	.137	-.874	.273	1	5

Table 2 – Factorial structure of the scale, after extraction of the factors by using principle component analysis with Varimax rotation, retaining 6 factors

Item code/ Order in final version of scale	Items	F1	F2	F3	F4	F5	F6	Communalities
F1 – Positive impact of the Internet								
Q44_r8/39	I feel better about myself since I started to use the Internet to meet other men	.806						.719
Q44_r12/43	I consider myself a happier person since I use the Internet to meet other men	.772						.664
Q42_r4/4	I feel more confident in myself since I started to use the Internet to meet other men	.735						.546
Q43_r12/28	I believe I'm more open now because I use the Internet to meet sexual partners	.724						.633
Q44_r4/35	I consider myself to be more accomplished since I use the Internet to meet other men	.675						.549
Q43_r11/27	Because of the Internet I have a more fulfilling sex life	.580						.492
Q45_r1/50	Using the Internet to meet other men has helped me to better accept my homosexuality or bisexuality	.562						.460
Q45_r9/58	The Internet has allowed me to have better sexual experiences with other men	.520						.486
Q42_r11/11	The Internet allows for stronger relationships than those established elsewhere	.486						.341
F2 – Sexual self-exposure online								
Q45_r16/65	I have no problem in exposing myself online for other men's satisfaction		.821					.690
Q45_r13/62	I like exposing my body online		.815					.718
Q43_r8/24	I enjoy exhibiting my body online		.786					.670

Q42_r8/8	I like to think other men masturbate while viewing my pictures online	.742	.603
Q44_r10/41	I think it is distasteful that other men might masturbate while looking at my pictures (<i>reversed</i>)	-.709	.572
Q44_r1/32	I enjoy getting undressed in front of a webcam for other men to watch	.707	.530
Q43_r13/29	I love to feel like a sex object online	.638	.516
Q44_r14/45	It is uncomfortable for me to be seen like a sex object online (<i>reversed</i>)	-.599	.516
Q43_r5/21	I like it that other men look at the pictures I have in my online profile	.603	.458
F3 – Advantages of meeting men online			
Q42_r15/15	It is convenient to use the Internet to meet other men	.703	.566
Q42_r1/1	Using the Internet to meet other men is easy	.610	.412
Q42_r2/2	Using the Internet to meet men is perfectly normal	.527	.384
Q44_r13/44	The Internet has allowed me to meet men that otherwise I would not have met	.544	.448
Q42_r5/5	Because of the Internet I have as much sex as I want to	.487	.489
Q43_r15/31	Through the Internet I met men with sexual tastes adjusted to mine	.504	.452
Q44_r15/46	Through the Internet it is easier to find men with sexual preferences similar to my own	.546	.463
Q43_r6/22	It is hard to find what I'm looking for sexually with the men that I meet online (<i>reversed</i>)	-.468	.381
Q42_r6/6	Online it is easier to say what I'm looking for sexually	.523	.447
F4 – Preference for meeting men online			
Q44_r11/42	I rather meet men for sex on the Internet than at a bar	.747	.641

Q44_r5/36	I rather meet men for sex on the Internet than through friends or acquaintances						.682	.572
Q44_r2/33	I rather meet men for sex on the Internet than on the street						.572	.446
Q44_r18/49	It is safer to meet men online than elsewhere						.475	.398
Q44_r7/38	Online it is easier to discuss safe sex with potential sex partners						.342	.348
F5 – Mistrust of men online								
Q45_r10/59	I feel insecure when I meet with men I initially contacted online						.678	.483
Q45_r6/55	It is risky to meet men initially contacted online						.672	.531
Q42_r9/9	You never know the intentions of the men you chat with online						.638	.446
Q43_r4/20	I don't trust the men I meet online						.567	.401
Q44_r9/40	I rather not reveal personal information to the men I meet online						.551	.367
F6 – Negative impact of the Internet								
Q44_r6/37	Using the Internet to meet sexual partners had a negative impact in the way I see myself						.794	.675
Q44_r16/47	I'm a worst person since using the Internet to meet other men						.728	.626
Q43_r14/30	The Internet makes me less satisfied sexually						.558	.471
Q44_r3/34	Online I feel as if I'm exposed on a butcher's window						.554	.431
Q42_r14/14	Because of the Internet I don't know how to meet men for sex elsewhere anymore						.433	.430
Eigenvalues		8.002	4.352	3.644	2.187	1.730	1.553	
% total explained variance		19.053	10.362	8.667	5.208	4.119	3.698	
□-Cronbach		0.887	0.864	0.767	0.712	0.690	0.669	

Table 3 – Thematic Analysis of Final Factors

Fx	Name of factor	N of items	Description of factor
F1	Positive impact of the Internet	9	This factor includes items that describe the perception of meeting men for sex online as having a positive impact on different aspects of the self, including on confidence, happiness and sexual fulfillment
F2	Sexual self-exposure online	9	This factor includes items that describe a preference or liking in the act of exposing oneself online sexually or in appreciating that other men take pleasure in viewing their images on the Internet
F3	Advantages of meeting men online	9	This factor includes items that describe the perceived ways by which using the Internet to meet other men is advantageous in regards to different aspects of the experience, such as how convenient or practical it is and also how it has positively affected men's sexual lives, for instance concerning numbers of partners and types of activities sought
F4	Preference for meeting men online	5	This factor includes items that describe how men prefer to meet others online as opposed to elsewhere, including how that experience is superior to other places in regards to general safety and opportunities to discuss safer sex
F5	Mistrust of men online	5	This factor includes items that describe perceptions of negative intentions of others online, translated in mistrust and lack of confidence towards men met online
F6	Negative impact of the Internet	5	This factor includes items that describe the perception of meeting men for sex online as having a negative impact on different aspects of the self, including on self-perception and evaluation, as well as on sexuality

References

- Barraket, J., & Henry-Waring, M. (2008). Getting it on(line). *Journal of Sociology*, *44*, 2, 149-165.
- Berg, R. C. (2008). Barebacking among MSM Internet users. *AIDS and Behavior*, *12*, 5, 822-833.
- Best, K., & Delmege, S. (2012). The filtered encounter: Online dating and the problem of filtering through excessive information. *Social Semiotics*, *22*, 3, 237-258.
- Blackwell, C. W. (2008). Men who have sex with men and recruit bareback sex partners on the internet: implications for STI and HIV prevention and client education. *American Journal of Men's Health*, *2*, 4, 306-13.
- Blackwell, C., Birnholtz, J., & Abbott, C. (2014). Seeing and being seen: Co-situation and impression formation using Grindr, a location-aware gay dating app. *New Media & Society*, *16*, 5, 719–736.
- Bolding, G., Davis, M., Hart, G., Sherr, L., & Elford, J. (2005). Gay men who look for sex on the Internet: is there more HIV/STI risk with online partners? *AIDS*, *19*, 9, 961-968.
- Brown G, Maycock B, & Burns S. (2005). Your picture is your bait: use and meaning of cyberspace among gay men. *Journal of Sex Research*. *42*, 1, 63-73.
- Buhi, E. R., Klinkenberger, N., McFarlane, M., Kachur, R., Daley, E. M., Baldwin, J., Blunt, H. D., ... Rietmeijer, C. (2013). Evaluating the Internet as a sexually transmitted disease risk environment for teens: findings from the communication, health, and teens study. *Sexually Transmitted Diseases*, *40*, 7, 528-33.
- Carballo-Diéguez, A., Ventuneac, A., Bauermeister, J., Dowsett, G. W., Dolezal, C., Remien, R. H., Balan, I., ... Rowe, M. (2009). Is 'bareback' a useful construct in primary HIV-prevention? Definitions, identity and research. *Culture, Health & Sexuality*, *11*, 1, 51-65.
- Carvalho, A., & Gomes, F. A. (2003). Cybersex in Portuguese chatrooms: a study of sexual behaviors related to online sex. *Journal of Sex & Marital Therapy*, *29*, 5, 345-60.
- Cattell, R. B. (1966). The scree test for the number of factors. *Multivariate Behavioral Research*, *1*, 2, 245-276.
- Copper, A. (1998). Sexuality and the Internet: surfing into the new millennium. *Cyberpsychology and Behavior*, *1*, 187-194.
- Couch, D., & Liamputtong, P. (2008). Online dating and mating: the use of the internet to meet sexual partners. *Qualitative Health Research*, *18*, 2, 268-79.
- Davis, M., Hart, G., Bolding, G., Sherr, L., & Elford, J. (2006). E-dating, identity and HIV prevention: theorising sexualities, risk and network society. *Sociology of Health and Illness*, *28*, 4, 457-478.

- Delmonico, D., & Miller, J. (2003). The Internet Sex Screening Test: A comparison of sexual compulsives versus non-sexual compulsives. *Sexual and Relationship Therapy, 18*, 3, 261-276.
- Dowsett, G. (1999). Bodyplay Corporeality in a discursive silence. In Parker, R. G., & Aggleton, P. (eds). *Culture, society and sexuality A reader*. (pp. 29-45). Social aspects of AIDS. London: UCL Press.
- Dowsett, G., Williams, H., Ventuneac, A., & Carballo-Diéguéz, A. (2008). 'Taking it Like a Man': Masculinity and Barebacking Online. *Sexualities, 11*, 1-2.
- Fernández-Dávila, P., & Zaragoza Lorca, K. (2011). Trust and sexual interaction: The significance of the Internet on the sex life and sexual risk behaviors of gay and bisexual men in Spain. *International Journal of Sexual Health, 23*, 2, 120-138.
- Finkel, E.J., Eastwick, P.W., Karney, B.R., Reis, H.T., & Sprecher, S. (2012). Online Dating A Critical Analysis From the Perspective of Psychological Science. *Psychological Science in the Public Interest, 13*, 1, 3-66.
- Frankland, A., & National Centre in HIV Social Research (Australia) (2008). *Gay community periodic survey: Melbourne 2008*. Sydney, N.S.W.: National Centre in HIV Social Research.
- Goodson, P., McCormick, D., & Evans, A. (2000). Sex and the Internet: A survey instrument to assess college students' behavior and attitudes. *Cyberpsychology and Behavior, 3*, 2, 129-149.
- Goren, E. (2003). America's Love Affair With Technology: The Transformation of Sexuality and the Self Over the 20th Century. *Psychoanalytic Psychology, 20*, 3, 487-508.
- Grosskopf, N.A., LeVasseur, M.T., & Glaser, D.B. (2014). Use of the Internet and Mobile-Based "Apps" for Sex-Seeking Among Men Who Have Sex With Men in New York City. *American Journal of Men's Health, 15*57988314527311.
- Grov, C. (2006). Barebacking websites: electronic environments for reducing or inducing HIV risk. *AIDS Care, 18*, 8, 990-7.
- Grov, C., DeBusk, J. A., Bimbi, D. S., Golub, S. A., Nanin, J. E., & Parsons, J. T. (2007). Barebacking, the Internet, and harm reduction: an intercept survey with gay and bisexual men in Los Angeles and New York City. *AIDS and Behavior, 11*, 4, 527-536.
- Heino, R., Ellison, N., & Gibbs, J. (2010). Relationshopping: Investigating the market metaphor in online dating. *Journal of Social and Personal Relationships, 27*, 4, 427-447.
- Hull, P., Holt, M., Mao, L., et al. (2011) *Gay Community Periodic Survey: Sydney February 2011*. Sydney: National Centre in HIV Social Research, The University of New South Wales.

- Kinsey, A.C., Pomeroy, W.B., & Martin, C.E. (1948). *Sexual behavior in the human male*. Philadelphia: W.B. Saunders Co.
- Klein, H. (2008). Self-Identification as a "Top" Versus a "Bottom" and HIV Risk Preferences among Men Who Specifically Seek Unprotected Sex Partners Via the Internet. In http://apha.confex.com/apha/136am/techprogram/paper_169296.htm Accessed April 18, 2009.
- Kline, R. B. (2011). *Principles and practice of structural equation modeling*. Guilford press.
- Ko, N. Y., Koe, S., Lee, H. C., Yen, C. F., Ko, W. C., & Hsu, S. T. (2012). Online sex-seeking, substance use, and risky behaviors in Taiwan: results from the 2010 Asia Internet MSM Sex Survey. *Archives of Sexual Behavior*, *41*, 5, 1273-1282.
- Lanier, J. (2010). *You are not a gadget. A manifesto*. New York: Alfred A. Knopf.
- Leap, W. (1999). *Public sex/gay space*. Between men--between women. New York: Columbia University Press.
- Litowitz, B.E. (2012). Psychoanalysis and the Internet: Postscript. *Psychoanalytic Inquiry*, *32*, 5, 506-512.
- Maroco, J., & Garcia-Marques, T. (2006). Qual a fiabilidade do alfa de Cronbach? Questões antigas e soluções modernas? *Laboratório de Psicologia*, *4*, 65-90.
- McKenna, K. Y., & Bargh, J. A. (1998). Coming out in the age of the Internet: Identity "demarginalization" through virtual group participation. *Journal of personality and social psychology*, *75*, 3, 681-694.
- McKenna, K. Y., Green, A. S., & Smith, P. K. (2001). Demarginalizing the Sexual Self. *The Journal of Sex Research*, *38*, 4, 302.
- McKirnan, D., Houston, E., & Tolou-Shams, M. (2007). Is the Web the culprit? Cognitive escape and Internet sexual risk among gay and bisexual men. *AIDS and Behavior*, *11*, 1, 151-160.
- McLuhan, M. (1964). *Understanding media: The extensions of man*. New York: McGraw-Hill.
- Mettey, A., Crosby, R., DiClemente, R.J., & Holtgrave, D.R. (2003). Associations between internet sex seeking and STI associated risk behaviours among men who have sex with men. *Sexually Transmitted Infections*, *79*, 6, 466-8.
- Parsons, J., Kelly, B., Bimbi, D., DiMaria, L., Wainberg, M., & Morgenstern, J. (2008). Explanations for the origins of sexual compulsivity among gay and bisexual men. *Archives of Sexual Behavior*, *37*, 5, 817-826.
- Pequegnat, W., Rosser, B. S., Bowen, A. M., Bull, S. S., DiClemente, R. J., Bockting, W. O., ..., & Zimmerman, R. (2007). Conducting Internet-based HIV/STD prevention survey research: Considerations in design and evaluation. *AIDS and Behavior*, *11*, 4, 505-521.
- Pitts, M., Smith, A., Mitchell, A., & Patel, S. (2007). *Private Lives Report*. Melbourne: Australian Research Center in Sex, Health and Society.

- Quiroz, P. A. (2013). From Finding the Perfect Love Online to Satellite Dating and 'Loving-the-One-You're Near': A Look at Grindr, Skout, Plenty of Fish, Meet Moi, Zoosk and Assisted Serendipity. *Humanity & Society*, 37, 2, 181-185.
- Robinson, B. A., & Moskowitz, D. A. (2013). The eroticism of Internet cruising as a self-contained behaviour: a multivariate analysis of men seeking men demographics and getting off online. *Culture, Health & Sexuality*, 15, 5, 555-569.
- Rosenmann A, & Safir MP. (2006). Forced online: push factors of internet sexuality: A preliminary study of online paraphilic empowerment. *Journal of Homosexuality*. 51, 3, 71-92.
- Rosser, B. S., Miner, M. H., Bocking, W. O., Ross, M. W., Konstan, J., Gurak, L., ..., & Coleman, E. (2009). HIV risk and the internet: results of the Men's INternet Sex (MINTS) Study. *AIDS and Behavior*, 13, 4, 746-756.
- Strassberg, D.S.; & Holty, S. (2003). An experimental study of women's Internet personal ads. *Archives of Sexual Behaviour*, 32, 3, 253-260.
- Thompson, K. C. (2013). *Smarter than you think: How technology is changing our minds for the better*. London: William Collins
- Turkle, S. (2011). *Alone together: Why we expect more from technology and less from each other*. New York: Basic Books.
- Tylim, I. (2012). The Techno-Body and the Future of Psychoanalysis. *Psychoanalytic Inquiry*, 32, 5, 468-479.
- Villaamil, F., & Jociles, M. (2011). Risk and community: The impact of HIV among gays in Madrid. The case of sex clubs. *Sexualities*, 14, 580-596.
- Weiss R. Cybersex addiction screening test. Retrieved August 22, 2013 from <http://www.sexualrecovery.com/resources/self-tests/csat.php>
- Williams, M., Bowen, A., & Ei, S. (2010). An evaluation of the experiences of rural MSM who accessed an online HIV/AIDS health promotion intervention. *Health Promotion Practice*, 11, 4, 474-482.
- Wolak, J., Finkelhor, D., & Mitchell, K. (2004). Internet-initiated sex crimes against minors: Implications for prevention based on findings from a national study. *Journal of Adolescent Health*, 35, 5, 424-e11.
- Young K. Cybersex Self Test. Retrieved on August 22, 2013 from <http://netaddiction.com/cybersex-self-test/>
- Yurchisin, J., Watchravesringkan, K., & Brown, M. D. (2005). An exploration of identity re-creation in the context of internet dating. *Social Behavior and Personality*, 33, 8, 735.

4. Study 3: Meeting sexual partners online: A study of MSM's perceptions of self-change using the Sexual Use of the Internet Scale (SUIS)

Nodin, N., Leal, I.P., & Carballo-Diéguez, A. (submitted b). Meeting sexual partners online: A study of MSM's perceptions of self-change using the Sexual Use of the Internet Scale (SUIS)

Abstract

There is evidence that using online dating and sexual networking websites can impact upon the self-perception of users. This study explores the influence of demographics and user characteristics on levels of perceived impact upon the self amongst gay or bisexual men who use such websites. A total of 313 gay or bisexual men participated in an online survey using sub-scales 1 (Positive impact of the Internet) and 6 (Negative impact of the Internet) of the Sexual Use of the Internet Scale (SUIS). ANOVA analysis revealed that men with less experience of meeting others online, younger men, and single men had significantly higher levels of perceived self-change associated with using the Internet to meet sexual partners. The number of online partners, the frequency of using the Internet to meet sexual partners, and sexual orientation did not have a significant impact on self-perception. More differences were found in relation to the negative impact of using the Internet to meet sexual partners, indicating that positive self-perception associated with that practice might be more stable. Our research adds to the literature on the impact that emergent technologically-facilitated practices, particularly online dating and sexual networking, may have on the self-perception of users and suggests a greater negative than positive impact on self-perception for men who use these resources to find same-sex partners.

Keywords: Internet; online dating; MSM; sexual networking; self-perception

Introduction

The Internet has helped transform the use of ads for finding partners for relationships and sex from a niche into a mainstream practice (Noonan, 2007; Quiroz, 2013), with many people currently finding their future spouses online (Cacioppo et al., 2013; Lawson & Leck, 2006) and many others actively using it to pursue their erotic interests (Carvalho & Gomes, 2003; Couch & Liamputtong, 2008).

Findings from different parts of the world show that a majority of gay men and other men who have sex with men (MSM) use online platforms to meet their sexual and romantic partners (Bolding et al., 2005; Hull et al., 2013; Ko et al., 2012). Despite the considerable body of research dedicated to other aspects of Internet-mediated impacts on this population, such as sexual risk behaviour (e.g. Adam, Murphy & de Wit, 2011; Berg, 2008; Carballo-Díéguez et al., 2009; Fernández-Dávila & Zaragoza Lorca, 2011) and sexual 'compulsivity' (e.g. Coleman et al., 2010; Grov, Parsons & Bimbi, 2010; Parsons et al., 2008), the effects of online dating and sexual networking on other psychosocial dimensions of users remains largely understudied. Only limited attention, for example, has been dedicated to understanding the effects of online dating and sexual networking on self-perception and identity. Considering how central the self and identity are in the ways in which people experience the world (Dainton, 2014), and how communication technologies potentially shape that experience (McLuhan, 1964; Postman, 1992; Virilio, 1997), there is a need to understand further the finer aspects of this impact.

In order to help address this gap in information we conducted a study among MSM who use the Internet to meet sexual partners, using two sub-scales of the Sexual Use of the Internet Scale (SUIS) that specifically measure perceived self-change associated with using the Internet to elucidate those factors associated with altered self-perception in this context.

Literature review

Internet-related identity change has drawn attention from academics since the early stages of online networking (Rheingold, 2000; Tomas, 1991). Seminal work by Turkle (1995) discussed how people used online gaming platforms to experiment with their identities in a safe way, but also how the boundaries between the virtual and the real had started to blur for many users. In turn Mitchell (2003) suggested that the extensive use of communication technologies such as mobile phones and the Internet causes shifts in subjectivity. More recently, Rodogno asserted that autobiographical narratives such as the ones currently found on social media may affect the identity through processes of self-reinterpretation (Rodogno, 2012).

The ubiquitous and extensive use of dating and sexual networking websites has also triggered discussions around how their use might affect individuals. Studies have found that

individuals can re-create their identities and improve their sense of desirability through their Internet dating profiles and through the feedback they receive from others in that context (Heino, Ellison & Gibbs, 2010; Yurchisin, Watchravesringkan & Brown, 2005). Research has also described how people who use these platforms often develop a dating 'shopping' mentality, whereby potential partners are perceived as commodities, hence highlighting the alienating effects that these websites may have on users' perceptions of others (Best & Delmege, 2012; Heino, Ellison & Gibbs, 2010).

Conversely, research on websites used by MSM to meet partners for sex without condoms examined how men go through a self-reflexive process about their identity and behaviour while deciding how to present themselves in relation to the options offered by the website (Dowsett et al., 2008). In a qualitative study about perceived change in the self and in perceptions of others associated with meeting sexual partners online, MSM reported that this experience allowed for important insights and led them into paths of self-discovery and personal improvement that might otherwise have remained unexplored (Nodin, Carballo-Diéguez & Leal, 2013). For some of the participants in this study the Internet facilitated the exploration of experimental personal and sexual potential, and informed an altered view of other men and of people in general. For instance, some reported increased levels of suspiciousness towards others due to unmet expectations and deceit found online. The study concluded that the online sexual networking environment and the experiences it allowed seemed to facilitate fundamental, even if subjectively perceived, changes for participants.

The current study

The current study aims at increasing the body of information about self-perceived Internet-facilitated change. We were particularly interested in ascertaining whether specific aspects of the online sexual networking experience and site-user characteristics affect the perceived impact on the self, as measured by the SUIIS. Our research question was: Which demographic and user characteristics are linked with higher levels of perceived impact upon the self among users of sexual networking websites?

Our hypotheses were:

H1: There are differences in the levels of perceived self-change associated with using the Internet to meet sexual partners among users with different lengths of experience of using the Internet to meet sexual partners

H2_a and H2_b: There are differences in the levels of perceived self-change associated with using the Internet to meet sexual partners among users who have met different numbers of sexual partners online over (a) the previous year and (b) the previous three months

H3: There are differences in the levels of perceived self-change associated with using the Internet to meet sexual partners among users with different frequencies of accessing the Internet for this purpose

H4: There are differences in the levels of perceived self-change associated with using the Internet to meet sexual partners among users of different age groups

H5: There are differences in the levels of perceived self-change associated with using the Internet to meet sexual partners among users of different relationship status

H6: There are differences in the levels of perceived self-change associated with using the Internet to meet sexual partners among users of different sexual orientations

Materials and Methods

This study was approved by the Scientific Committee of the ISPA- Instituto Universitário de Ciências Psicológicas, Sociais e da Vida, Lisbon, Portugal. Data for this study were collected online.

Recruitment and study participants

Recruitment was conducted via emailing, word of mouth and lesbian, gay, bisexual and transgender (LGBT) community based organizations' networks, by providing information about the research and sharing the link to the study's online survey.

After removing incomplete surveys and those who did not meet inclusion criteria for this study, the final sample used for this study included 313 participants. Inclusion criteria were: 18 years of age or older, self-identified gay or bisexual men, and experience of having met at least one male sexual partner online during the year prior to participation.

Measures

User demographics and characteristics

A questionnaire that included items about various demographic and user characteristics was used for description of the sample and to identify the independent variables to be used in the analyses. These items were (categories used for analysis in parenthesis):

Age: From the open ended numeric question 'How old are you today?', transformed into a categorical variable with four age groups (ages 18-25, ages 26-35, ages 36-45, ages ≥46 years)

Relationship status: From the question 'Are you currently in a relationship?', with yes/no reply option (in a relationship; not in a relationship)

Sexual orientation: From the question 'Do you consider yourself to be:' with reply options 'heterosexual'; 'homosexual/gay'; 'bisexual'; 'other'. For this study identification as

homosexual/gay and bisexual were used as inclusion criteria, therefore only those two categories were used for analyses (homosexual/gay, bisexual)

Time in years since starting to use the Internet to meet sexual partners: From the question 'How long has it been since you started to use the Internet to meet men?' with the option to reply in number of months and of years, grouped into three time-in-years categories (≤ 5 , 6-8, ≥ 9)

Number of sexual partners met online over the last year: From the open-ended numeric question 'How many of the men you had sex with over the last year did you meet online?' grouped into three categories (1, 2-4, ≥ 5)

Number of sexual partners met online over the last three months: From the open-ended numeric question 'How many of the men you had sex with over the last three months did you meet online?' grouped into three categories (0, 1, ≥ 2)

Frequency of Internet use to meet sexual partners: From the question 'How frequently do you use those [sexual networking] sites?' with six answers ranging from 'never' to 'everyday', grouped into two categories (frequent use [daily and more than once weekly use] and infrequent use [once-a-week or less frequently])

Sexual Use of the Internet Scale

The SUIIS was developed as a 5-point Likert scale (1 Completely disagree to 5 Completely agree) based on a qualitative study of the perceived impact upon self of using the Internet to meet sexual partners among MSM (deleted for anonymity), and evaluated using an exploratory factor analysis (EFA) to explore its matrix of correlations with extraction of factors using a principal component analysis (PCA), followed by a Varimax rotation. This generated six sub-scales comprising 42 items: 1 – Positive impact of the Internet (nine items); 2 – Sexual self-exposure online (nine items); 3 – Advantages of meeting men online (nine items); 4 – Preference for meeting men online (five items); 5 – Mistrust of men online (five items); 6 – Negative impact of the Internet (five items).

The sub-scales of particular interest to this study are numbers 1 and 6, as they directly address our research questions, and we report the results of these. SUIIS sub-scale 1 (SUIIS_ss1) had a Cronbach alpha of 0.89 and explained 19% of the total variance of the scale. It describes the perception of meeting men for sex online as having a positive impact on different aspects of the self, including on confidence, happiness, and sexual fulfilment. SUIIS sub-scale 6 (SUIIS_ss6) explained 4% of the total variance of the scale. It describes the perception of meeting men for sex online as having a negative impact on different aspects of the self, including on self-perception and evaluation, as well as on sexuality. The higher the total scores for either of the sub-scales, the higher the perception of self-change associated with using the Internet to meet sexual partners.

Analyses

We ran one-way between-group analysis of variance (ANOVA) for all independent variables in their relation to the results of SUIS_ss1 and SUIS_ss6. Total average scores of the two sub-scales were used for this purpose. All tests were conducted at the $p < .05$ significance level. The study hypotheses were accepted if the analyses carried out with at least one of the sub-scales per hypothesis showed significant results. Only significant results are reported. Analyses were performed using SPSS version 20 software (IBM Chicago, IL).

Results

The average age of the participants was 30.8 years ($SD=9.4$, range 18-62 years). Seventy-eight per cent of participants identified as gay; however, when asked about their sexual attraction on an adapted Kinsey scale (Kinsey, 1948), only 55.5% of the total sample reported being exclusively attracted to other men. About half of the participants were in a relationship (49.5%), the majority of which were with another man (83.4%).

The impact of time of using the Internet to meet sexual partners on SUIS_ss6 was statistically significant [$F(2, 310) = 9.642$, $p = .001$]. The effect size, calculated using eta squared, was .06, which is considered moderate (Cohen, 1988). Post-hoc comparisons using the Tukey HSD test indicated that the mean score for the group with ≤ 5 years of using sexual networking sites ($n=139$, $M=11.59$, $SD=3.29$) was significantly different from the group with ≥ 9 years of experience ($n=85$, $M=9.66$, $SD=3.29$). This suggests that the men who used the Internet to meet sexual partners for a shorter time had a higher perception of a negative impact of that use than men who had used it for a longer time.

The impact of age was statistically significant on both SUIS_ss1 and SUIS_ss6 [$F(3, 309) = 2.96$, $p = .03$ and $F(3, 186) = 5.5$, $p = .001$, respectively; reporting adjusted Brown-Forsythe test results for the SUIS_ss6 due to violation of equality of variance as assessed by Levene's test]. The effect size, calculated using eta squared, was .03 for SUIS_ss1, therefore relatively modest, but higher for SUIS_ss6 at .05, hence moderate (Cohen, 1988). Post-hoc comparisons using the Tukey HSD test in the case of the results of SUIS_ss1 indicated that the mean score for the ≥ 46 age group ($n=29$, $M=22.76$, $SD=8.68$) was significantly different from both the 18-25 age group ($n=104$, $M=26.45$, $SD=6.16$) and the 36-45 years age group ($n=58$, $M=25.8$, $SD=6.68$). In regard to the results from SUIS_ss6, both Hochberg's GT2 and Games-Howell procedures were used for post-hoc comparisons due to differences in sample sizes and non-homogeneity of variances (Field, 2013). Both tests indicated that the 18-25 age group ($M=11.76$, $SD=3.66$) was significantly different from both the 36-45 ($M=9.98$, $SD=2.52$) and the ≥ 46 age groups ($M=9.86$, $SD=3.29$). Taken together, these results seem to indicate that, in general, the younger age groups tended to have a higher perception of both

negative and positive impact of using the Internet to meet sexual partners when compared with the older age groups.

The impact of relationship status on SUIS_ss6 was also statistically significant [$F(1, 311) = 12.07, p = .001$]. The effect size, calculated using eta squared, was .04, which is considered moderate (Cohen, 1988). Post-hoc comparisons using the Tukey HSD test indicated that the mean score for the group of individuals not in a relationship at the time of participation in the survey ($n=158, M= 11.46; SD= 3.27$) was significantly different from the group of participants in a relationship ($n=155, M= 10.19, SD= 3.19$). This suggests that the men who were single had a higher perception of a negative impact of using the Internet to meet sexual partners than men who were in a relationship.

No other results were statistically significant.

Discussion

The analyses carried out to answer our research question allowed us to accept our hypotheses H1, H4 and H5, and to reject H2a, H2b, H3 and H6, as significant differences in levels of perceived self-change among men using the Internet to meet male sexual partners were associated with the time since the onset of that use, age, and relationship status.

Our results suggest that men who use the Internet to meet sexual partners for a shorter time have a higher perception of a negative impact of that use than men who have used it for a longer time. It may be that men newly or recently using online sexual networking environments have expectations that are unmet, leading them to evaluate the impact of the interactions facilitated through that context less favourably than men who have been using the Internet for that purpose for a longer time. For the latter, given their longer online experience, any perceived impact might already have been incorporated into their general sense of self, thus leaving them less attuned to the possible negative influences of the Internet on their general self-evaluation or their sexual satisfaction. In research about the extent to which one's identity remains constant from one context to the next, Rodogno (2012) suggested that contemporary accounts of the self encompass its offline as well as its online dimensions, therefore unifying both in a single narrative. It is conceivable that the length of time experiencing online interactions with other men might have a levelling effect on that process, which could explain our findings.

Interestingly, age was the only variable for which perceptions of both positive and negative impact upon the self were found. We found that younger men tended to have a higher perception of both negative and positive impact of using the Internet to meet sexual partners when compared with older men. This may be due both to younger men being more sensitive to the possible effects of meeting others online for sex, and to the greater stability of the general sense of the self in older men leading to the reverse effect. It has been shown

that as people get older, so their sense of self becomes more stable and less permeable to the influence of experience (Finn, 1986). Our results indicate that this might also be true in regard to the perceived effects of meeting sexual partners online. Therefore the shifts in subjectivity associated with the use of the Internet that Rheingold (2000) and Mitchell (2003) discuss, or the impact of online dating analysed by Heino et al. (2010) and by Yurchisin et al. (2005), may be moderated by age, at least within the specific niche of the MSM we analyse here.

Differences were also found in regard to relationship status. Single men were shown to have a higher perception of the negative impact of using the Internet to meet sexual partners when compared with men who were in a relationship. This may be because single men are more likely to be active users of the Internet for that purpose, thus having a more current experience and being more sensitive to its less desirable aspects, and thus to its negative impact upon themselves. Men in relationships will either not use the Internet at all to seek sexual partners or use it less frequently than their single counterparts, therefore becoming less exposed to that reality and developing a reduced perception of its impact on their sense of self. As these men are in a relationship, they may also be less invested in finding partners online or may evaluate their experiences of men they meet or attempt to meet via the Internet less severely. However, we did not analyse the intensity of online sexual networking according to relationship status and therefore this matter is still open for further exploration.

We found no significant interaction between perceptions of self-change and the number of partners met online in the previous year or the previous three months, the frequency of Internet use to meet sexual partners, or sexual orientation. This is somewhat counter-intuitive in the case of those relating to the intensity of the online experience of MSM. It would be expected to a certain extent that having met many sexual partners online, and doing so often, would have an effect on perceived self change, i.e., that the quantity of that experience would translate more strongly into an altered sense of self. However, that was not the case in our study. As discussed above, this may be because factors such as the time since starting to meet partners online may eventually normalize the experience, thus rendering other aspects of the practice less preeminent in regard to their impact on perceived self-change. For instance, if the men have a steady experience of meeting a certain number of sexual partners online across the several years that they have been using the Internet for this purpose, their perception of associated self-change might be less affected by the number of partners met online over the last year or the last three months. This possibility, which we cannot confirm from our data, opens up interesting future directions for research in this field.

Of note, the majority of significant results were found in relation to the perception of a negative impact of using the Internet to meet sexual partners, as measured by the SUIS_ss6.

This suggests that a positive self-perception associated with online sexual networking may be more stable across the various dimensions of analysis used than a negative self-perception. Many authors have described the perceived dangers of the Internet and its potential detrimental impact upon individuals and society (e.g. Carr, 2011; Lanier, 2010; Turkle, 2011). Indeed, in a qualitative study of MSM which preceded and informed the present study, we found that, together with a positive evaluation of the impact of their online experience, participants also spoke of how they considered themselves to have become more suspicious of other people both on- and offline, while some also described a diminished emotional availability towards others, both as a result of being exposed to deceit on the Internet (deleted for anonymity).

These reactions, perceptions of a negative impact of using the Internet as a facilitator for sexual interactions, and the uneasiness that some people admit to having towards using others as commodities on the dating/sexual online 'marketplace' (Heino et al., 2010) link with long-standing concerns of alienation caused by the use of technology. For instance, Heidegger discussed how the technological viewpoint considered nature, including humans, as resources to be exploited, reducing beings to non-beings, therefore ultimately reorganizing our perception of reality (Heidegger, 1977). Similarly, Marcuse expressed concerns regarding how machines have progressively come to mediate relationships between people, with alienating effects, taking over their libido and their freedom (Marcuse & Kellner, 1998). These reactions are ever more present in the contemporary world, where relationships are increasingly negotiated over a myriad of devices and applications.

It may be that our results, which show more nuanced perceptions of the negative impact of online sexual networking, reflect a higher awareness of, and concerns surrounding the deleterious consequences of using machines for purposes that are all too human. However, these anxieties do not stop people, particularly specific groups of people like MSM, from embracing new technologies enthusiastically, suggesting that they must be adding something to their lived experience and, hence, also to their sense of self. These dynamic and sometimes contradictory reactions are likely to continue to evolve and shift as newer social and sexual networking technologies are created and used.

This study has some limitations that we would like to point out. We used a non-representative sample of MSM and therefore our findings cannot be generalized to all MSM. It is also likely that men with a particular interest in the topic of the research participated in the study, thus under-representing those who may have alternative perspectives and experiences of meeting others online. The topic under analysis may potentially be influenced by the social and cultural context of its participants, and therefore it may be that our results do not equate to those found in other countries or in different social and cultural realities.

We are also aware that the category of MSM is a crude one that does not take into account the diversity found in the population of men who have other men as their objects of attraction and sexual partners. For example, for the bisexually-identified men we were unable to assess the potential of an altered self perception deriving from their online experiences (if any) with women. However, considering that men who are generally included in the MSM umbrella are reported to use the Internet extensively to meet sexual partners (Bolding et al., 2005; Hull et al., 2013; Ko et al., 2012), possibly to a further extent than non-MSM men, we believe that the study of MSM's patterns can better help us understand the psychosocial dynamics of the mating process in a networked world as they evolve and increasingly become normative processes for younger generations coming of age online.

Cyberspace has become a relevant dimension where many people socialize, find recognition, seek affection and sex, fall in and out of love, start and end relationships. Although there has been considerable interest from public health sectors and consequently from academia about MSM's problematic uses of the Internet for purposes related with their sexuality, less research has focused on other aspects of this experience. Our study hopefully contributes to a more diverse and nuanced view of an important aspect of MSM's contemporary mating practices.

References

- Adam, P.C., Murphy, D.A., & de Wit, J.B. (2011). When do online sexual fantasies become reality? The contribution of erotic chatting via the Internet to sexual risk-taking in gay and other men who have sex with men. *Health Education Research*, 26, 3, 506-15.
- Bartholome, A., Tewksbury, R., & Alex, B. (2000). "I want a man": Patterns of attraction in all-male personal ads. *Journal of Men's Studies*, 8(3), 309-321.
- Berg, R. (2008). Barebacking among MSM Internet Users. *AIDS and Behavior*, 12(5), 822-833.
- Best, K., & Delmege, S. (2012). The filtered encounter: Online dating and the problem of filtering through excessive information. *Social Semiotics*, 22(3), 237-258.
- Bolding, G., Davis, M., Hart, G., Sherr, L., & Elford, J. (2005). Gay men who look for sex on the Internet: is there more HIV/STI risk with online partners? *AIDS*, 19(9), 961-968.
- Cacioppo, J.T., Cacioppo, S., Gonzaga, G.C., Ogburn, E.L., & VanderWeele, T.J. (2013). Marital satisfaction and break-ups differ across on-line and off-line meeting venues. *Proceedings of the National Academy of Sciences*, 110(25), 10135-10140.
- Carballo-Diéguez, A., Ventuneac, A., Bauermeister, J., Dowsett, G.W., Dolezal, C., Remien, R.H., et al. (2009). Is 'bareback' a useful construct in primary HIV-prevention? Definitions, identity and research. *Culture, Health & Sexuality*, 11(1), 51-65.
- Carr, N. (2010). *The shallows: What the Internet is doing to our brains*. New York: W.W. Norton.
- Carvalho, A., & Gomes, F. A. (2003). Cybersex in Portuguese chatrooms: a study of sexual behaviors related to online sex. *Journal of Sex & Marital Therapy*, 29(5), 345-60.
- Coleman, E., Horvath, K.J., Miner, M., Ross, M.W., Oakes, M., Rosser, B.R., & Men's INternet Sex (MINTS-II) Team. (2010). Compulsive sexual behavior and risk for unsafe sex among internet using men who have sex with men. *Archives of Sexual Behavior*, 39(5), 1045-53.

- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. Hillsdale, N.J: L. Erlbaum Associates.
- Couch, D., & Liamputtong, P. (2008). Online dating and mating: the use of the internet to meet sexual partners. *Qualitative Health Research*, 18(2), 268-79.
- Dainton, B. (2014). *Self: Philosophy in transit*. London: Penguin.
- Dowsett, G., Williams, H., Ventuneac, A., & Carballo-Diéguez, A. (2008). 'Taking it Like a Man': Masculinity and Barebacking Online. *Sexualities*, 11(1-2), 121-141.
- Field, A.P. (2013). *Discovering statistics using IBM SPSS statistics: And sex and drugs and rock 'n' roll*. Los Angeles: Sage.
- Fernández-Dávila, P., & Zaragoza Lorca, K. (2011). Trust and sexual interaction: The significance of the Internet on the sex life and sexual risk behaviors of gay and bisexual men in Spain. *International Journal of Sexual Health*, 23(2), 120-138.
- Finn, S.E. (1986). Stability of personality self-ratings over 30 years: evidence for an age/cohort interaction. *Journal of Personality and Social Psychology*, 50(4), 813-8.
- Grov, C., Parsons, J. T., & Bimbi, D. S. (2010). Sexual compulsivity and sexual risk in gay and bisexual men. *Archives of Sexual Behavior*, 39(4), 940-949.
- Heidegger, M. (1977). *The question concerning technology, and other essays*. New York: Harper & Row.
- Hardey, M. (2004). Mediated Relationships. *Information, Communication & Society*, 7(2), 207-222.
- Heino, R., Ellison, N., & Gibbs, J. (2010). Relationshopping: Investigating the market metaphor in online dating. *Journal of Social and Personal Relationships*, 27(4), 427-447.
- Hull, P., Mao, L., Kao, S.C., Edwards, B., Prestage, G., Zablotska, I., et al. (2013). *Gay Community Periodic Survey: Sydney 2013*. Sydney: National Centre in HIV Social Research, University of New South Wales.

- Kinsey, A.C., Pomeroy, W.B., & Martin, C.E. (1948). *Sexual behavior in the human male*. Philadelphia: W.B. Saunders Co.
- Ko, N.Y., Koe, S., Lee, H.C., Yen, C.F., Ko, W.C., & Hsu, S.T. (2012). Online sex-seeking, substance use, and risky behaviors in Taiwan: results from the 2010 Asia Internet MSM Sex Survey. *Archives of Sexual Behavior*, 41(5), 1273-82.
- Lanier, J. (2010). *You are not a gadget*. New York: Alfred A. Knopf.
- Lawson, H., & Leck, K. (2006). Dynamics of Internet Dating. *Social Science Computer Review*, 24(2), 189-208.
- McLuhan, M. (1964). *Understanding media: The extensions of man*. New York: McGraw-Hill.
- Marcuse, H., & Kellner, D. (1998). *Collected papers of Herbert Marcuse*. London: Routledge.
- Meerkerk, G.J., Van, D.E.R.J., & Garretsen, H.F. (2006). Predicting compulsive Internet use: it's all about sex!. *Cyberpsychology & Behavior: the Impact of the Internet, Multimedia and Virtual Reality on Behavior and Society*, 9(1), 95-103.
- Mitchell, W.J. (2003). *Me++: The cyborg self and the networked city*. Cambridge, Mass: MIT Press.
- Noonan, R. (2007). The psychology of sex: A mirror from the Internet. In J. Gackenbach (Ed.). *Psychology and the Internet: Intrapersonal, interpersonal and transpersonal implications*. (pp.93-139). Amsterdam [etc.: Elsevier.
- Parsons, J., Kelly, B., Bimbi, D., DiMaria, L., Wainberg, M., & Morgenstern, J. (2008). Explanations for the Origins of Sexual Compulsivity Among Gay and Bisexual Men. *Archives of Sexual Behavior*, 37(5), 817-826.
- Postman, N. (1992). *Technopoly: The Surrender of Culture to Technology*. New York: Vintage Books.
- Quiroz, P. A. (2013). From Finding the Perfect Love Online to Satellite Dating and 'Loving-the-One-You're Near': A Look at Grindr, Skout, Plenty of Fish, Meet Moi, Zoosk and Assisted Serendipity. *Humanity & Society*, 37(2), 181-185.

- Rheingold, H. (2000). *The virtual community: homesteading on the electronic frontier* (Rev. ed.). Cambridge, Mass.: MIT Press.
- Rodogno, R. (2012). Personal Identity Online. *Philosophy & Technology*, 25(3), 309-328.
- Tomas, D. (1991). Old rituals for new spaces: Rites de passage and William Gibson's cultural model of cyberspace. In M. Benedikt (ed.) *Cyberspace: First steps* (pp.31-48). Cambridge, Mass: MIT Press.
- Turkle, S. (2011). *Alone together: Why we expect more from technology and less from each other*. New York: Basic Books.
- Turkle, S. (1995). *Life on the screen: Identity in the age of the Internet*. New York: Simon & Schuster.
- Virilio, P. (1997). *Open sky*. London: Verso.
- Yurchisin, J., Watchravesringkan, K., & McCabe, D.B. (2005). An exploration of identity re-creation in the context of internet dating. *Social Behavior and Personality*, 33(8), 735-750.

Discussion and conclusions

The Internet has become a pervasive presence in the contemporary world, opening up possibilities old and new. In the process it is also becoming embedded with meanings that appeal to ancient and renewed concerns and passions. The popularity of cyberspace as a whole, as well as the traction of some of the tools that it offers, such as those of social, sexual and romantic networking, are suggestive of a deep connection of the medium with the interests, needs and desires of many people around the globe. This research focuses on a specific aspect of this experience: To understand if and how using sexual networking and dating websites affects the behaviour and perceptions of the MSM who use them. It was inspired by and based on research that investigated the use of Internet sites by New York City MSM looking for partners for bareback sex (Carballo-Diéguez et al., 2006; Carballo-Diéguez et al., 2009), and therefore initially focussed on studying risk practices associated with meeting sexual partners online among a sample of Portuguese MSM. However, the initial exploratory study suggested that such practices were infrequent amongst the Portuguese men who took part (Nodin, Leal & Carballo-Diéguez, in press). This led to a repositioning of the research, to a slightly wider conceptual field than originally planned, which is that of the perceived self-change of MSM who use the Internet to meet sexual partners.

The research was then organised into three further studies, one qualitative (Nodin, Carballo-Diéguez & Leal, 2013) and two quantitative (Nodin, Leal & Carballo-Diéguez, submitted a; Nodin, Leal & Carballo-Diéguez, submitted b) that along with the exploratory study form the core of this dissertation. A number of additional studies were also conducted (Appendices 6-10) to explore theories and concepts (Nodin, 2007, 2009), methodologies and results from other samples (Nodin, Valera, Ventuneac, et al., 2008) and parallel areas of interest to the main research (Nodin, Carballo-Diéguez & Leal, 2009; Nodin, Leal & Carballo-Diéguez, 2008).

The purpose of **Study 1** of this dissertation (Nodin, Carballo-Diéguez & Leal, 2013) was to explore if men perceived self-changes associated with their online sexual experience (OSE) and, if so, what these were. Its research questions were: Has OSE affected MSM's

perception of themselves and of others? Is it possible that some of these perceptions actually equate to real changes, the coming into being of new realities and behaviours?

The results strongly suggested that OSE does indeed impact on these men's perceptions of themselves and of others. The participants' online experiences were varied and seem to have led some of the men into important paths of self-discovery and personal improvement that they did not think were possible; for others the Internet facilitated the exploration of unknown personal and sexual potential. OSE also seems to have informed a varied view of other men and of people in general, as well as of sex. And for a few participants, their online sexual digressions had no perceived impact at all.

Overall, men in the study tended to positively evaluate their altered self-perception. For instance, OSE may have enhanced men's interpersonal skills, allowing them to have better and more authentic communication with others on- and offline. However, this positive aspect of self-change contrasted with the perception that men developed of others following their OSE. Many described losing trust in people due to the dissimulation that they claimed reigns online. Furthermore, this increased suspiciousness seemed to have contaminated offline interactions as well affecting expectations of others more generally.

These findings then informed the development of an instrument to investigate men's perceptions and preferences of using the Internet to meet sexual partners, the SUIS, which was developed to allow the standardised assessment of those experiences (Nodin, Leal & Carballo-Diéguez, submitted a). **Study 2** reported the development and assessment of the psychometric properties of the SUIS.

The SUIS is particularly important as it addresses a gap in the field. The number of existing instruments for evaluating the relationship between sexuality and the Internet is very limited; most of those developed have not been standardised and the majority focus on problematic aspects of the relationship. Furthermore, the SUIS is specific to MSM's experiences of using the Internet, having been developed from the experiences and concerns of men themselves.

Study 2 was also relevant in the context of the larger research project, as using a systematic approach allowed the identification of factors or dimensions which reframed and shed more light on the issues and themes identified during the qualitative phase (Nodin, Carballo-Diéguez & Leal, 2013). The factor analysis of the scale produced dimensions of men's online experiences that were not identified by the previous study. For example, *Sexual self-exposure online*, which refers to a preference for or liking of the act of exposing oneself online sexually or of appreciating that other men take pleasure in viewing their images on the Internet. However, the factor analysis also confirmed the coherence of the core dimensions of the research, namely those pertaining to the perception of positive and negative impacts of

the Internet on the self. This allowed for a more in-depth exploration of this experience, in **Study 3**.

The goal of **Study 3** (Nodin, Leal & Carballo-Diéguez, submitted b) was to ascertain whether specific aspects of the online sexual networking experience and site-user characteristics affected perceived impact upon the self, as measured by the standardised SUIS. More specifically, it explored whether, for individuals who use the Internet to meet sexual partners, the perceived self-change associated with that use (as measured by subscales 1 *Positive impact of using the Internet*, and 2 *Negative impact of using the Internet* of the SUIS) differed depending on the length of time experiencing that practice, on number of sexual partners met online, on frequency of online sexual networking, on age, on relationship status and on sexual orientation.

From the ANOVA analyses out of the results, it appeared that men with less time of experience of meeting others online, younger men and single men had significantly higher levels of perceived self-change associated with using the Internet to meet sexual partners than more experienced, older and partnered men. The number of online partners, frequency of using the Internet to meet sexual partners and sexual orientation had no apparent impact on self-perception as measured by the SUIS. The lack of influence of these variables on self-perception was somewhat counter-intuitive, particularly in the case of those relating to the intensity of the MSM's online experience. It would be expected that, to a certain extent, having met many sexual partners online, and doing so often, would have an effect on perceived self-change, i.e., that the quantity of that experience would translate more strongly into an altered sense of self. We suggest that the lack of findings for these variables might have been due to a normalisation of the experience of meeting partners online, thus rendering certain aspects of the practice less pre-eminent in regard to their impact on perceived self-change.

The findings from this study provided more results related to a negative impact of online sexual networking than to a positive impact, possibly reflecting a higher awareness of and concerns surrounding the deleterious consequences of using the Internet to meet sexual partners among participants. However, that does not seem to stop MSM from embracing communications technologies enthusiastically, suggesting that these must be adding something to their lived experience and, hence, also to their sense of selfhood.

It should be underlined that all of the research, encompassing all four studies presented here, focused on perceived self-changes and not palpable or "objectively" measurable behavioural changes, as these would be harder to assess using the methods employed. However, considering the definition of the self as a "compelling sense of one's unique existence" (Reber, 1995, p.699) the perceptions that men in the studies had of change associated with their Internet-mediated sexual experiences may be integrated into

their ongoing sense of self, thus redefining their self-concept. This might happen via a number of processes. For instance, the men might develop a positive sexual identity by engaging with other MSM online, and therefore “demarginalising” their sexual self and merging it with their offline ones (McKenna & Bargh, 1998; McKenna et al., 2001). Indeed some of the results from **Study 1** are suggestive of this; for instance, when men describe having become more accepting of their sexual orientation after starting to use the Internet to meet sexual partners. They might also experience more steady and longer lasting changes to the self as a consequence of practices of creating, updating and using their profiles on dating and sexual networking websites and of actively “filtering” through potential partners in that context (Couch & Liamputtong, 2008; Davis et al., 2006), in what has been described as “a kind of information-technology ‘bricolage’ or DIY [do it yourself] practice” (Davis et al., 2006, p.462). There is also some evidence of the process of filtering from the qualitative phase sample, particularly in the **Exploratory Study** conducted about sexual risk definitions and concepts (Nodin, Leal & Carballo-Diéguez, in press). In this study, MSM described assessing the perceived risk level of the men they found online based on the descriptive information they read in their profiles on sexual networking websites, which then informed their decision about whether to meet them in person or not.

There have been several conceptual and empirical attempts at justifying the incorporation of online identities under a single unified identity (e.g. Hardey, 2004; Rodogno, 2012) which are often subsidiaries of narrative approaches to the construction of identity, such as that of Giddens (1991) who posited that in late-modernity the self is developed in an ongoing reflexive process fed by engagement in relationships and activities that reinforce it. The Internet and online networking platforms would form a natural part of this process, and researchers have discussed this in relation with MSM (Davis et al., 2006; Dowsett et al., 2008).

Another major theoretical framework that has been used for the understanding of identity changes online is that of Symbolic Interactionism (Blumer, 1969; Mead & Morris, 1934), particularly through the lens of Goffman’s theory of self-presentation (Goffman, 1959), according to which people will manage their presentation to others in the context of the “audiences” they face, in a permanent assessment and adaptation process to maximise their gains, whatever those might be. The Internet, and social media and dating websites in particular, are fascinating arenas in which this process also unfolds, some claim with an effect on the individual’s sense of self that goes beyond what happens online but crosses into offline personas too (Couch & Liamputtong, 2008; Davis et al., 2006; Gonzales & Hancock, 2008; Walther, 1996). The acknowledgement of this change was identified in the men in **Study 1**, for instance when they describe acquiring new and more effective communication strategies with the others they interact with online but also, and as a

consequence, offline. Thus, there seems to be some evidence of a face-to-face contamination of processes and patterns learnt during the exploration of oneself and of others while seeking partners online.

Despite focusing on a very specific aspect of the impact of a technology on a subset of the total population, i.e., that of early 21st century Portuguese MSM who use the Internet to meet sexual partners, our research engages with ancient discussions regarding the influence of new technologies on individuals and society, which is probably as old as humankind itself, but that can be traced at least as far back as Ancient Greece. Plato believed that one of the most basic human technologies, writing itself, affected the process of remembering, which until the invention of the written word was the available resource for those who, like him, dealt with conveying and spreading ideas (Plato & Jowett, 1990). Ironically, were it not for writing, we would never have known of Plato's conservative views about writing. However, having access to them, we can place him in a tradition of thinkers who have debated the possible impact of technologies on humankind, including Francis Bacon [1561–1626], Karl Marx [1818–1883], Friedrich Nietzsche [1844–1900], Sigmund Freud [1856–1939], Martin Heidegger [1889–1976], Herbert Marcuse [1898–1979], Marshall McLuhan [1911–1980], Jean Baudrillard [1929–2007], Donna Haraway [1944–], to mention but a few of those reviewed for our research.

Much of this debate has been split between those who believe that technology has a positive impact on people and society (e.g. Bacon; Haraway) and those who believe such an impact to be negative (e.g. Freud, Marcuse, Baudrillard) with some maintaining a moderately neutral perspective (e.g. Nietzsche, McLuhan). However, it should be noted that, on balance, there seems to be a predominance of support of an apprehensive view of the impact of technology. This attitude is historical but also contemporary (e.g. Lanier, 2010; Turkle, 2011; Virilio, 1986, 1995, 1997) in spite of the modern fascination and overwhelming uptake of gadgets and communication technologies and platforms.

This ambivalence located at the core of reflections about technology can be found across the results of all of our studies about MSM's perceived impact of using online sexual networking websites on the self. Therefore, the findings of **Study 1** show that the perceived impact of that practice was considered to be mostly positive, with men discussing the ways in which using those sites allowed them to be more sexually liberated and to establish channels of communication and exploration with others, even if at the same time they also perceived that experience to have changed them in undesirable ways, such as sometimes developing patterns of excessive use of those sites or gaining a sense of loss of innocence about other people, which conversely led to a suspicious outlook of people even in offline interactions.

In **Study 2**, two of the subscales of the SUIS that the factor analysis produced were clearly defined by content that could be categorised as the positive impact of the Internet

(e.g. “I consider myself to be more accomplished since I use the Internet to meet other men”; “Because of the Internet I have a more fulfilling sex life”; “Using the Internet to meet other men has helped me to better accept my homosexuality or bisexuality”) or as the negative impact of the Internet (e.g. “I’m a worse person since using the Internet to meet other men”; “The Internet makes me less satisfied sexually”; “Because of the Internet I don’t know how to meet men for sex elsewhere anymore”). Even in other subscales produced, both tendencies could be found, for instance in the clear Internet enthusiasm that straddles the subscale *Advantages of meeting men online* (e.g. “Using the Internet to meet men is perfectly normal”; “Because of the Internet I have as much sex as I want to”) or the more technophobic tone of the subscale *Mistrust of men online* (e.g. “It is risky to meet men initially contacted online”; “I don’t trust the men I meet online”).

Study 3, which used the two main attitudinal scales of the SUIIS (*Positive impact of the Internet* and *Negative impact of the Internet*) to investigate which aspects of the online sexual networking experience and site-user characteristics affected perceived impact upon the self, found more nuanced results pertaining to the negative impact than to the positive, which is suggestive of higher awareness and concerns surrounding the undesirable consequences of using the Internet to meet sexual partners.

Finally, the parallel study about the concept of cybersex also identified in the participants a recognition of the advantages of using computers and the Internet to interact sexually with other men online and an active engagement in that practice, even while sometimes revealing a sense of frustration, considering the experience to be unsatisfying and inauthentic (Nodin, Leal & Carballo-Diéguez, 2008).

Overall, the men that took part in these studies can be considered to be “cyberpessimists” as much as they can be called “cyberoptimists”, using the words coined by Pollet, Roberts and Dunbar (2011), without a clear tendency towards one side of the debate or the other. Therefore, if this research contributes to the ongoing discussion about the dichotomised effects of specific technologies on humans, it affirms that those effects are potentially multiple, complex and derived from the reality of the technology used as much as they are bound to the circumstances and expectations of the individuals who use them. Any technology (or online dating and sexual networking websites, for that matter) is not inherently good or bad, nor is what people derive from using them absolutely positive or negative. The possible effects and consequences of their use are, if anything, unpredictable.

In light of this discussion it is also of interest to recall the findings from **Study 1**, in which a minority of the men claimed not to perceive any change associated with using the Internet to network with other men for sexual purposes. More clearly, in the **Exploratory Study** about sexual risk behaviour associated with using the Internet to meet sexual partners, none of the men thought there was a link between e-dating and their sexual risk

behaviour with men met online (Nodin, Leal & Carballo-Diéguez, in press), contrary to some reports in the international literature which have linked both practices (Adam et al., 2011; Fernández-Dávila & Zaragoza Lorca, 2011; Liau et al., 2006; McKirnan et al., 2007). These *non-results*, while going against our core thesis, actually provide a finer perspective of the ways in which our participants perceived the effects of online dating upon themselves.

There are different reasons why some individuals don't seem to be affected by the influence of a technology they use. Some may not perceive an influence even if it occurred, and the technology has even so become an element of change. This possibility resonates with the ideas of Marcuse (Marcuse & Kellner, 1998) and Postman (1992) for whom modern societies have become technocracies in which technological progress has become so embedded that there is no possibility of escape or of critical thinking, therefore compromising individuality and free will. If this is the case, then these ideas raise questions about the impact of technology for those who did identify changes as well as for those who did not, and suggest that even for the former there may be an underestimation of the real impact of their use of online sexual networking websites on their selves. According to this viewpoint, the individuals' ability to elaborate and enunciate regarding the real extent of that impact is restricted by their (in)capacity to acknowledge it.

Another explanation for the lack of perceived impact of e-dating on some of the participants in the research is that individuals were aware of changes but actively resisted them. This might happen, for instance, due to underlying technoscepticism, an attitude that is embedded in our society and culture, often finding its way into science fiction, where dystopian fantasies tell tales of humankind being subdued by evil machines. Some of the men participating in the research may have felt uncomfortable with the idea of computers and the Internet being agents affecting their will and therefore denied it when asked, even when they actively continue to use those resources for the fulfilment of their sexual desires. Or, ultimately, for those few who did not perceive an influence of the Internet on themselves, there may in fact have been no impact at all.

All of these hypotheses raise interesting points that are hard if not impossible to prove beyond speculation, but thus are worthy of further research, which might contribute to our understanding of the phenomenon of Internet-mediated impact on the self and on identity.

How much of this discussion is specific to gay men and to other men who have sex with men? This question can be placed in the context of the role of MSM in the setting of a "networked society" (Castells, 1996), which comes with the unavoidable oversimplification of discussing a population group that is diffuse and non-uniform even when strictly using the "gay" identity label. MSM have been early and enthusiastic adopters of the Internet as an environment in which to socialise and seek others with whom to interact sexually, suggesting that the medium has a specific appeal to them. As happened with individuals belonging to

other sexual minorities (Rosenmann & Safir, 2006; McKenna & Bargh, 1998), MSM also find in the Internet a space to explore their sexuality in safer ways, unrestricted by the limitations they often still face in society at large, facilitating the encounter with others who share similar niche interests. This was indeed the case for some of the participants of **Study 1**, for whom using online sexual networking websites had not only been key to coming to terms with their sexuality but also to exploring specific sexual fantasies and interests (e.g. bondage or fisting). These sites and the erotic possibilities they open up seem to be creating new *technosexual* landscapes for those who decide to explore them. In doing so, these men were also recreating their identities in unforeseen ways.

Some authors have pointed out that sex is a highly technological aspect of the human condition (e.g. Bell, 2006; Goren, 2003), with all sorts of apparatus associated with it, from a vast range of contraceptives, to a panoply of devices used to intensify pleasure, to very specific interventions which can be used to target sexual dysfunction and improve fulfilment (e.g. Psychoanalysis, Sex Therapy). According to Bell (2006), sex has been codified into “repertoires of acts, positions, techniques and performances – as particular configurations of bodies, body-parts and other ‘props’ and ‘stages’” (p.393). The same is equally or even more true for gay sex (Davis et al., 2006) which has been surveyed and scrutinised due to public health concerns surrounding HIV (McNamara, 2013), medicalised by bio-chemical products to treat and prevent HIV (e.g. Nodin, Carballo-Diequez, Ventuneac, Balan & Remien, 2008), subject to the pressures of aesthetics and the pursuit of the perfect body, in turn mediated by gym machines, exercise programmes, diets and other drugs (Christophersen, Murphy & Sullivan, 2010; Wiseman & Moradi, 2010), and which is now heavily negotiated and facilitated by communication technology in its various guises.

This mediation forces those who use these technologies to conform to pre-established specifications and thereby to commodify themselves onto an online persona that reflects who they are but that cannot really encompass who they are. Simultaneously, this experience exposes them to others who, like them, present themselves as appealing products for consumption. This process is unlikely to be without consequences to users of these dating tools and may well be one of the key elements of change affecting the patterns of dating and identity production in the contemporary world (Barraket & Henry-Waring, 2008; Davis et al., 2006).

Giddens (1992) described, the advent of the “pure relationship” as a key element of the narrative construction of the self as a project, one that is not confined by the restraints of family or tradition but dictated by self-realisation and fulfilment. Could it be that we are now seeing a further shift of mating patterns into one defined by a sort of “relationshopping” (Heino et al., 2010) in which there is a constant pursuit of a new and ideal relationship that is

never attained and which therefore remains perpetually sought in the always-available and vast market of online dating?

These new psychosocial and behavioural realities are also relevant from a clinical perspective. Whereas some areas of theory and practice, such as Psychoanalysis, have been resisting a fuller reflection and incorporation of the impact of the Internet upon individuals (Litowitz, 2012) with some notable exceptions (Turkle, 2004; Zizek, 1996, 2004), cyberspace has crept into the daily lives of many people and has become a relevant dimension in which they socialise, find recognition, seek affection and sex, fall in and out of love, and start and end relationships. Defined and marked as these are by the virtual context in which they occur, these relationships are nonetheless very real for those who experience them. Therefore, clinicians need to be aware of them and be prepared to deal with them in an open way, free from biases of theory or prejudice, and preferably informed by profound reflection and by quality research.

Limitations of the research

This research has several limitations. The first relates to its very conceptual starting point, based as it was on previous research into the possible relationship between Internet use and sexual risk behaviours (Carballo-Diéguez et al., 2006; Carballo-Diéguez et al., 2009) and at a very early stage exposing an apparent lack of such a relationship on the findings of the **Exploratory Study** (Nodin, Leal, Carballo-Diéguez, in press), which forced the research to find a new focus. This was found, but only after a long and challenging process marked by digressions discernable in the somewhat diverse scope of our various research outputs. It also marked the equally eclectic conceptual framework we used for our analysis, even if it was always bound by the confines of a coherent research question and a clearly defined field of inquiry. It must be noted, however, that this conceptually inclusive approach to our research is not unusual in social sciences' studies of the psychosocial impact of the Internet (Barraket & Henry-Waring, 2008; Davis et al., 2006; Hardey, 2002, 2004; Turkle, 1995, 2004) and marks a certain postmodern inquisitive take on the equally fragmented cyberspace and the experiences it allows.

Other limitations of the study are related with the methodology. The influence on the self and on identity of using the Internet may be studied using a number of different methods, as attested by the literature reviewed, and that used here may not have been the most appropriate. Furthermore, the phenomenon being studied itself is potentially elusive and challenging to grasp. There is a possibility that the narratives captured from the men who were interviewed (**Study 1**) reflect only transient and non-stable processes of self-change associated with their experiences.

In regard to the instruments used, the interview guide's questions may have conditioned the responses that our participants provided, even if that effect was possibly modulated by the use of a flexible approach to the interview (**Exploratory Study, Study 1**) and by the development of a range of different scale items that were then focussed by the factor analysis to eliminate those items irrelevant to the men's experiences (**Study 2**). In addition, the act of inquiry about a possible connection between e-dating and self-perceived impact may have led some of the participants to develop narratives that they did not have previously, thus actively generating them during the research process. This is, however, a known effect in the social sciences and has been extensively discussed and accepted as inherent to the nature of qualitative research (Talmy, 2011), with Holstein and Gubrium (2010) clearly asserting that all interviews are not "neutral communicative grounds" but actually "active, regardless of how neutral the interviewers and how cooperative the respondents" (p.150).

Due to the geographical limits of the research, there may have been cultural and Portuguese-national specific issues which influenced the results, which means they should not be generalised to MSM in other countries, even if comparison with research conducted in other countries supports the findings (e.g. Brown et al., 2005; Davis et al., 2006). Ultimately, the results are only valid for those men who took part in the study and not for other MSM, as the research might have attracted those interested in the topic under study and who were more sensitive to it.

Conclusions and future directions

In spite of the limitations of the research, I believe that it contributes to the growing body of knowledge related to the influence of online dating and sexual networking on the sense of the self of MSM, and more broadly to ongoing discussions about the impact of technology on people's psychology and behaviour. It does so by exploring how the men who participated in the studies perceive their practices of using the Internet to meet other men to have affected themselves, with interesting and relevant findings. Indeed, in most cases, the men did perceive such an effect to exist and considered it to be positive in some ways, negative in others, and sometimes neutral or non-existent. Some of the findings seem to reflect centuries-old concerns, as well as enthusiasms, in regard to the consequences of using technological tools. It was also possible to determine some specific groups of men who are more sensitive to both negative and positive impacts of using the Internet. Therefore, as a whole, the research adds to the understanding of challenging technosocial phenomena that are widespread in the contemporary world.

Although there has been considerable interest from public health sectors and consequently from academia about MSM's problematic uses of the Internet for purposes

related to their sexuality, less research has focused on other aspects of this experience. Our studies not only contribute to a more diverse and nuanced view of an important aspect of MSM's contemporary mating practices, but they also produced a standardised scale - the SUIS - developed using a bottom-up approach, which will allow others to pursue similar lines of research and to build up more information about this phenomenon.

Although the more general line of research that was explored, that of the impact of Internet use upon people's minds and behaviours, has already generated a considerable body of scholarly output, especially considering the relative novelty of Internet use as a widespread phenomenon, there is still ample space for further inquiry. If online dating has become a popular means for people to meet their partners, the question remains how this practice will reflect or be an agent of changing mating patterns and mores in a dynamic society, but one in which establishing gratifying, loving and sexually fulfilling relationships is still a valuable goal for the majority of people.

Interacting with technologies (and with others via technologies) allows people to think about themselves and about others in ways that may lead to changes in perceptions of the self. These, in turn, may translate into more stable elements of identity but might also just turn out to be transient. This, however, is something that neither the research reviewed nor conducted was able to ascertain, which means that longitudinal studies are needed, to follow up the evolution of the effects of technology on users' minds and behaviour.

New communication technologies seem evolving at increasingly speedier rates. This will require ongoing study of how they will be used by people and of the ways they will change people's perceptions of themselves, of others and of the world around them. It will also be of interest to social sciences in general and of Clinical Psychology in particular to understand how constant access to the Internet, use of social media, smart phone applications and dating resources as normative growing-up processes will affect individuals in newer generations' senses of who they are and their sociability patterns on- and offline. If the social, religious and political implications of the Guttenberg press resonated through the centuries after its invention (Eisenstein, 1979), it is very likely that the influence of the Internet will also result in phenomena that are at this point impossible to foresee but that will be relevant for current and future generations alike.

References

- Adam, P.C., Murphy, D.A., & de Wit, J.B. (2011). When do online sexual fantasies become reality? The contribution of erotic chatting via the Internet to sexual risk-taking in gay and other men who have sex with men. *Health Education Research, 26*, 3, 506-15.
- Adams-Thies, B. (2012). Fluid bodies or bodily fluids: Bodily reconfigurations in cybersex. *Journal of Language and Sexuality, 1*, 2, 179-205.
- Al-Tayyib, A.A., Rietmeijer, C.A., McFarlane, M., & Kachur, R. (2009). Finding sex partners on the internet: What is the risk for sexually transmitted infections? *Sexually Transmitted Infections, 85*, 3, 216-220.
- Alapack, R., Blichfeldt, M. F., & Elden, A. (2005). Flirting on the Internet and the Hickey: A Hermeneutic. *Cyberpsychology & Behavior, 8*, 1, 52-61.
- Alloway, T.P., & Alloway, R. G. (2012). The impact of engagement with social networking sites (SNSs) on cognitive skills. *Computers in Human Behavior, 28*, 5, 1748-1754.
- Alloway, T.P., Horton, J., Alloway, R.G., & Dawson, C. (2013). Social networking sites and cognitive abilities: Do they make you smarter? *Computers and Education, 63*, 10-16.
- Anderson, T.L., & Emmers-Sommer, T.M. (2006). Predictors of relationship satisfaction in online romantic relationships. *Communication Studies, 57*, 2, 153-172.
- Angerer, M.L. (1999). Space does matter: On cyber and other bodies. *European Journal of Cultural Studies, 2*, 2, 209-229.
- Arthur, W.B. (2009). *The nature of technology: What it is and how it evolves*. New York: Free Press.
- Bacon, F. (1990). *The new Atlantis*. Hoboken, N.J: Bibliobytes.
- Bareket-Bojmel, L., & Shahar, G. (2011). Emotional and Interpersonal Consequences of Self-Disclosure in a Lived, Online Interaction. *Journal of Social and Clinical Psychology, 30*, 7, 732-759.
- Bargh, J. A., & McKenna, K. Y. A. (2004). The Internet and social life. *Annual Review of Psychology, 55*, 573.

- Barraket, J., & Henry-Waring, M. (2008). Getting it on(line). *Journal of Sociology*, 44, 2, 149-165.
- Bartholome, A.; Tewksbury, R.; & Alex, B. (2000). "I want a man": Patterns of attraction in all-male personal ads. *Journal of Men's Studies*, 8, 3, 309.
- Baudrillard, J. (1983). The ecstasy of communication. In Foster, H. (ed.). *The Anti-aesthetic: Essays on postmodern culture*. (pp.126-134). Port Townsend, Wash: Bay Press.
- Bell, D. (1973). *The coming of post-industrial society: A venture in social forecasting*. New York: Basic Books.
- Bell, D. (2006). Bodies, Technologies, Spaces: On 'Dogging'. *Sexualities*, 9, 4, 387-407.
- Bell, D. (2007). *Cyberculture theorists: Manuel Castells and Donna Haraway*. London: Routledge.
- Ben-Ze'ev, A. (2004). *Love online: Emotions on the Internet*. Cambridge: Cambridge University Press.
- Benedikt, M. (1991). Cyberspace: Some proposals. In M. Benedikt (ed.) *Cyberspace: First steps*, pp. 119-224. Cambridge, Mass: MIT Press.
- Benotsch, E., Kalichman, S., & Cage, M. (2002). Men who have sex partners via the Internet: prevalence, predictors, and implications for HIV prevention. *Arch. of Sexual Behavior*, 31, 2, 177-183.
- Best, K., & Delmege, S. (2012). The filtered encounter: Online dating and the problem of filtering through excessive information. *Social Semiotics*, 22, 3, 237-258.
- Blackwell, C. W. (2008). Men who have sex with men and recruit bareback sex partners on the internet: implications for STI and HIV prevention and client education. *American Journal of Men's Health*, 2, 4, 306-13.
- Blackwell, C., Birnholtz, J., & Abbott, C. (2014). Seeing and being seen: Co-situation and impression formation using Grindr, a location-aware gay dating app. *New Media & Society*, 16, 5, 719-736.
- Blumer, H. (1969). *Symbolic Interactionism; Perspective and Method*. Englewood Cliffs, NJ: Prentice-Hall.
- Boesch, C. (2003). Is culture a golden barrier between human and chimpanzee?. *Evolutionary Anthropology: Issues, News, and Reviews*, 12, 2, 82-91.
- Bolding, G., Davis, M., Hart, G., Sherr, L., & Elford, J. (2005). Gay men who look for sex on the Internet: is there more HIV/STI risk with online partners? *AIDS*, 19, 9, 961-968.
- Booker, M.K. (2001). *Monsters, mushroom clouds, and the Cold War: American science fiction and the roots of postmodernism, 1946-1964*. Westport, Conn: Greenwood Press.
- Bornstein, M.H., Lerner, R.M., & Kagan, J. (2010). Human behaviour. In *Encyclopædia Britannica*. Deluxe Edition. [DVD Rom version]. Chicago: Encyclopædia Britannica.

- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3, 2, 77-101.
- Broadbent, S. (2012). Approaches to personal communication. In H.A. Horst & D. Miller (eds.). *Digital anthropology*. (pp.127-145). London: Berg.
- Brown G, Maycock B, & Burns S. (2005). Your picture is your bait: use and meaning of cyberspace among gay men. *Journal of Sex Research*. 42, 1, 63-73.
- Buchanan, R. A. (2010). History of technology. In *Encyclopædia Britannica*. Deluxe Edition. [DVD Rom version]. Chicago: Encyclopædia Britannica.
- Burgess, A. (1963). *A clockwork orange*. New York: W.W. Norton.
- Cacioppo, J. T., Cacioppo, S., Gonzaga, G. C., Ogburn, E. L., & VanderWeele, T. J. (2013). Marital satisfaction and break-ups differ across on-line and off-line meeting venues. *Proceedings of the National Academy of Sciences*, 110, 25, 10135-10140.
- Campbell, J. E. (2004). *Getting it on online: Cyberspace, gay male sexuality, and embodied identity*. New York: Harrington Park Press.
- Carballo-Diéguez, A., Dowsett, G.W., Ventuneac, A., Remien, R.H., Balan, I., Dolezal, C., et al. (2006). Cybercartography of popular internet sites used by New York City men who have sex with men interested in bareback sex. *AIDS Education and Prevention*, 18, 6, 475-89.
- Carballo-Diéguez, A., Ventuneac, A., Bauermeister, J., Dowsett, G. W., Dolezal, C., Remien, R. H., Balan, I., ... Rowe, M. (2009). Is 'bareback' a useful construct in primary HIV-prevention? Definitions, identity and research. *Culture, Health & Sexuality*, 11, 1, 51-65.
- Carey, J. (1992). *Communication as culture: Essays on media and society*. New York: Routledge.
- Carr, N. G. (2010). *The shallows: What the Internet is doing to our brains*. New York: W.W. Norton.
- Carvalho, A., & Gomes, F. A. (2003). Cybersex in Portuguese chatrooms: a study of sexual behaviors related to online sex. *Journal of Sex & Marital Therapy*, 29, 5, 345-60.
- Castells, M. (1996). *The rise of the network society*. Malden, Mass: Blackwell.
- Chen, W. (2013). Internet Use, Online Communication, and Ties in Americans' Networks. *Social Science Computer Review*, 31, 4, 404-423.
- Christophersen, K., Murphy, M.A., & Sullivan, M. (2010). Evaluating body image disparity among gay and straight men. *International Journal of the Humanities*, 8, 7, 139-154.
- Clark, A. (2003). *Natural-Born Cyborgs: Minds, Technologies, and the Future of Human Intelligence*. Oxford and New York: Oxford University Press.
- Clark, A., & Chalmers, D. (1998). The extended mind. *Analysis*, 58, 1, 7-19.

- Clarke, A. C. (1973). *Profiles of the future: An inquiry into the limits of the possible*. Revised ed. New York: Harper and Row.
- Clerkin, E.M., Smith, A.R., & Hames, J.L. (2013). The interpersonal effects of Facebook reassurance seeking. *Journal of Affective Disorders*, 151, 2, 525-30.
- Clynes, M.E., & Kline, N.S. (1960). Cyborgs and space, *Astronautics, American Rocket Society*, 26–27, 74–75.
- Coleman, E., Horvath, K.J., Miner, M., Ross, M.W., Oakes, M., Rosser, B.R., & Men's INternet Sex (MINTS-II) Team. (2010). Compulsive sexual behavior and risk for unsafe sex among internet using men who have sex with men. *Archives of Sexual Behavior*, 39, 5, 1045-53.
- Coleman, S. (2013). *The Bohemian Love Diaries: A memoir*. Guilford, Connecticut : Lyons Press.
- Cooper, A., Griffin-Shelley, E., Delmonico, D., & Mathy, R. (2001). Online sexual problems: assessment and predictive variables. *Sexual Addiction & Compulsivity*, 8,3/4, 267-285.
- Cooper, A., Putnam, D. E., Planchon, L. A., & Boies, S. C. (1999). Online Sexual Compulsivity: Getting Tangled in the Net. *Sexual Addiction & Compulsivity*. 6 (2), 79-104.
- Cooper, A. (1998). Sexuality and the Internet: surfing into the new millennium. *Cyberpsychology and Behavior*, 1, 187-194.
- Corley, M. D., & Hook, J. N. (2012). Women, Female Sex and Love Addicts, and Use of the Internet. *Sexual Addiction & Compulsivity*, 19, 53-76.
- Cotter, (2013). *Book Review: Karl Marx on Technology and Alienation*. Available <http://blogs.lse.ac.uk/lsereviewofbooks/2013/01/23/book-review-karl-marx-on-technology-and-alienation/>, retrieved 20/10/2013.
- Couch, D., & Liamputtong, P. (2008). Online dating and mating: the use of the internet to meet sexual partners. *Qualitative Health Research*, 18, 2, 268-79.
- Coupland, J. (1996). Dating advertisements: Discourses of the commodified self. *Discourse & Society*, 7,2, 187-207.
- Cronenberg, D., Hámori, A., Lantos, R. (Producers) & Cronenberg, D. (Director). (1999). *eXistenZ*. [Motion Picture]. Canada, United Kingdom, France: Canadian Television Fund, Harold Greenberg Fund, The Movie Network, Natural Nylon, Téléfilm Canada, Serendipity Point Films & UGC.
- Dainton, B. (2014). *Self: Philosophy in transit*. London: Penguin.
- Daly, J., Gibson, D., Hurd, J.A. (Producers) & Cameron, J. (Director). (1984). *Terminator*. [Motion picture]. United States & UK: Hemdale Film, Pacific Western, Euro Film Funding & Cinema 84.

- Daneback, K., Ross, M. W., & Månsson, S. (2006). Characteristics and behaviors of sexual compulsives who use the Internet for sexual purposes. *Sexual Addiction & Compulsivity*, 13, 1, 53-67.
- Davidson, A. G. (1991) Looking for love in the age of AIDS: the language of gay personals, 1978-1988. *The Journal of Sex Research*, 28, 125-137.
- Davis, L. (2013). *Love @ first click: The ultimate guide to online dating*. New York: Atria Paperback.
- Davis, M., Hart, G., Bolding, G., Sherr, L., & Elford, J. (2006). E-dating, identity and HIV prevention: theorising sexualities, risk and network society. *Sociology of Health and Illness*. 28 (4), 457-478.
- Debray, R. (1996). *Media manifestos: On the technological transmission of cultural forms*. London: Verso.
- Dery, M. (1996). *Escape velocity: Cyberculture at the end of the century*. New York: Grove Press.
- Downing, M. (2010). Internet Advertisements for Public Sexual Encounters Among Men Who Have Sex With Men: Are Safe Behaviors Communicated?. *American Journal of Men's Health*, 5, 5, 386-394.
- Dowsett, G. (1999). Bodyplay Corporeality in a discursive silence. In Parker, R. G., & Aggleton, P. (eds). *Culture, society and sexuality A reader*. (pp. 29-45). Social aspects of AIDS. London: UCL Press.
- Dowsett, G., Williams, H., Ventuneac, A., & Carballo-Diéguez, A. (2008). 'Taking it Like a Man': Masculinity and Barebacking Online. *Sexualities*, 11, 1-2.
- Dyer-Witheford, N. (1999). *Cyber-Marx: Cycles and circuits of struggle in high-technology capitalism*. Urbana: University of Illinois Press.
- Eisenstein, E.L. (1979). *The printing press as an agent of change: Communications and cultural transformations in early modern Europe*. Cambridge, Eng.: Cambridge University Press.
- Ellison, M., Jonze, S., Landay, V. (Producers) & Jonze, S. (Director). (2013). *Her*. [Motion Picture]. USA: Annapurna Pictures.
- Ellison, N. B., Hancock, J. T., & Toma, C. L. (2012). Profile as promise: A framework for conceptualizing veracity in online dating self-presentations. *New Media & Society*, 14, 1, 45-62.
- Ellison, N. B., Steinfield, C., & Lampe, C. (2011). Connection strategies: Social capital implications of Facebook-enabled communication practices. *New Media & Society*, 13, 6, 873-892.

- Ellison, N., Heino, R., & Gibbs, J. (2006). Managing impressions online: Self-presentation processes in the online dating environment. *Journal of Computer-Mediated Communication*, 11, 2, 415-441.
- Elmer-DeWitt, P. (1995). Welcome to cyberspace. What is it? Where is it? And how to get there? *Time, Special supplement to Time issue dated May 8, 1995*, 2-9.
- Erikson, E. H. (1964). *Childhood and society*. New York: Norton.
- European Centre for Disease Prevention and Control [ECDPC] and World Health Organization [WHO]. (2013). *HIV/AIDS surveillance in Europe 2012*. Stockholm: European Centre for Disease Prevention and Control.
- Fein, E., & Schneider, S. (2002). *The rules for online dating: Capturing the heart of Mr. Right in cyberspace*. New York: Pocket Books.
- Felsberg, U. (Producer) & Wenders, W. (Director). (1991). *Until the end of the world*. [Motion Picture]. Germany, France & Australia: Argos Films, Road Movies Filmproduktion, Village Roadshow Pictures, Warner Bros., & Wim Wenders Stiftung.
- Fernández-Dávila, P., & Zaragoza Lorca, K. (2011). Trust and sexual interaction: The significance of the Internet on the sex life and sexual risk behaviors of gay and bisexual men in Spain. *International Journal of Sexual Health*, 23, 2, 120-138.
- Festinger, L., Pepitone, A., & Newcomb, T. (1952). Some consequences of deindividuation in a group. *Journal of Abnormal Psychology*, 47, 2, 382-9.
- Finkel, E.J., Eastwick, P.W., Karney, B.R., Reis, H.T., & Sprecher, S. (2012). Online Dating A Critical Analysis From the Perspective of Psychological Science. *Psychological Science in the Public Interest*, 13, 1, 3-66.
- Fletcher, G., & Light, B. (2007). Going offline: An exploratory cultural artefact analysis of an internet dating site's development trajectories. *International Journal of Information Management*, 27, 6, 422-431.
- Frankland, A., & National Centre in HIV Social Research (Australia) (2008). *Gay community periodic survey: Melbourne 2008*. Sydney, N.S.W.: National Centre in HIV Social Research.
- Freud, S., & Dickson, A. (1985). *Civilization, society and religion: Group psychology, civilization and its discontents and other works*. Harmondsworth: Penguin.
- Fukuyama, F. (2002). *Our posthuman future: Political consequences of the biotechnology revolution*. London: Profile Books.
- Gentile, B., Twenge, J. M., Freeman, E. C., & Campbell, W. K. (2012). The effect of social networking websites on positive self-views: An experimental investigation. *Computers in Human Behavior*, 28, 5, 1929-1933.
- Gibson, W. (1984). *Neuromancer*. Ace Books, New York.

- Giddens, A. (1991). *Modernity and self-identity: Self and society in the late modern age*. Stanford, Calif: Stanford University Press.
- Giddens, A. (1992). *The transformation of intimacy: Sexuality, love, and eroticism in modern societies*. Stanford, Calif: Stanford University Press.
- Goffman, E. (1959). *The presentation of self in everyday life*. Garden City, N.Y: Doubleday.
- Gonzales, A.L., & Hancock, J.T. (2011). Mirror, mirror on my Facebook wall: Effects of exposure to Facebook on self-esteem. *Cyberpsychology, Behavior, and Social Networking*, 14,1-2, 79-83.
- Goren, E. (2003). America's Love Affair With Technology: The Transformation of Sexuality and the Self Over the 20th Century. *Psychoanalytic Psychology*, 20, 3, 487-508.
- Gowlett, J.A.J. (2009). Artefacts of apes, humans, and others: towards comparative assessment and analysis. *Journal of Human Evolution*, 57, 4, 401-410.
- Grosskopf, N.A., Harris, J.K., Wallace, B.C., & Nanin, J.E. (2011). Online sex-seeking behaviors of men who have sex with men in New York City. *American Journal of Men's Health*, 5, 5, 378-385.
- Grosskopf, N.A., LeVasseur, M.T., & Glaser, D.B. (2014). Use of the Internet and Mobile-Based "Apps" for Sex-Seeking Among Men Who Have Sex With Men in New York City. *American Journal of Men's Health*, 1557988314527311.
- Grossman, L. (2006). Time person of the year: you. *Time*, December 25, 2006 / January 1, 2007, 28-29.
- Grossman, L. (2010). Mark Zuckerberg: Person of the Year. *Time*. Retrieved http://content.time.com/time/specials/packages/article/0,28804,2036683_2037183,00.html
- Grossman, L., & Vella, M. (2014). iNeed?. *Time*, September 22, 2014, 28-33.
- Grov, C. (2006). Barebacking websites: electronic environments for reducing or inducing HIV risk. *AIDS Care*, 18, 8, 990-7.
- Guadagno, R.E., Okdie, B.M., & Kruse, S.A. (2012). Dating deception: Gender, online dating, and exaggerated self-presentation. *Computers in Human Behavior*, 28, 2, 642-647.
- Haraway, D.J. (1991). *Simians, cyborgs, and women. The reinvention of nature*. London: Free Association Books.
- Hardey, M. (2002). Life beyond the screen: embodiment and identity through the internet. *The Sociological Review*, 50, 4, 570-585.
- Hardey, M. (2004). Mediated Relationships. *Information, Communication & Society*, 7, 2, 207-222.

- Hart, G.J., & Elford, J. (2010). Sexual risk behaviour of men who have sex with men: Emerging patterns and new challenges. *Current Opinion in Infectious Diseases*, 23, 1, 39-44.
- Hearn, J. (2008). Sexualities Future, Present, Past... Towards Transsectionalities. *Sexualities*, 11, 1/2, 37-45.
- Heidegger, M. (1977). *The question concerning technology, and other essays*. New York: Harper & Row.
- Heim, M. (1991). Old rituals for new spaces: Rites de passage and William Gibson's cultural model of cyberspace. In M. Benedikt (ed.) *Cyberspace: First steps* (pp. 59-80). Cambridge, Mass: MIT Press.
- Heino, R., Ellison, N., & Gibbs, J. (2010). Relationshopping: Investigating the market metaphor in online dating. *Journal of Social and Personal Relationships*, 27, 4, 427-447.
- Hian, L.B., Chuan, S.L., Trevor, T.M.K., & Detenber, B.H. (2006). Getting to Know You: Exploring the Development of Relational Intimacy in Computer-mediated Communication. *Journal of Computer-Mediated Communication*, 9, 3, 0-0.
- Hitsch, G.J., Hortaçsu, A., & Ariely, D. (2010). What makes you click? Mate preferences in online dating. *Quantitative Marketing and Economics*, 8, 4, 393-427.
- Hoffman, D. (2013). *Spin your web: How to brand yourself for successful online dating*. USA: Waterfront Digital Press.
- Holstein, J.A., & Gubrium, J.F. (2010). Animating interview narratives. In D. Silverman (Ed.). *Qualitative research: Theory, method and practice*. (pp.149-167). London: SAGE.
- Horrocks, C. (2000). *Marshall McLuhan and virtuality*. Cambridge: Icon.
- Hughes, R. (1995). Take this revolution... *Time, Special supplement to Time issue dated May 8, 1995*, 70-71.
- Hurley, M. (2007). *Final project report to NSW Health. HIV/AIDS health promotion demonstration project. Activating the Internet: using new technologies to conduct health promotion with gay men*. Melbourne: La Trobe University.
- Hutchens, M.J., Cicchirillo, V.J., & Hmielowski, J.D. (2014). How could you think that?!?: Understanding intentions to engage in political flaming. *New Media & Society*, 1461444814522947.
- Huxley, A. (1946). *Brave new world*. New York: Harper & Bros.
- Isaacson, W. (2011). *Steve Jobs*. New York: Simon & Schuster.
- ITU (2013). *Key ICT indicators for developed and developing countries and the world (totals and penetration rates)*. In <http://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx>, accessed 08/11/2013

- Jaffe, H.W., Valdiserri, R.O., & De Cock, K.M. (2007). The reemerging HIV/AIDS epidemic in men who have sex with men. *JAMA*, *298*, 2412-4.
- Jenness, S. M., Neaigus, A., Hagan, H., Wendel, T., Gelpi-Acosta, C., & Murrill, C.S. (2010). Reconsidering the internet as an HIV/STD risk for men who have sex with men. *AIDS and Behavior*, *14*, 6, 1353-61.
- Jiang, L., Bazarova, N.N., & Hancock, J.T. (2011). The Disclosure–Intimacy Link in Computer-Mediated Communication: An Attributional Extension of the Hyperpersonal Model. *Human Communication Research*, *37*, 1, 58-77.
- Joinson, A.N. (2007). Desinhibition and the Internet. In J. Gackenbach (Ed.) *Psychology and the Internet. Intrapersonal, interpersonal, and transpersonal implications*, 2nd ed. (pp.75-92). London: Elsevier.
- Joinson, A.N., & Paine, C.B. (2010). Self-disclosure, privacy and the Internet. In A.N. Joison, K.Y.A. McKenna, T. Postmes, T., and U.-R. Reips (Eds). *The Oxford handbook of Internet psychology*. Oxford [u.a.: Oxford Univ. Press.
- Jones, S. E. (2006). *Against technology: From the Luddites to Neo-Luddism*. New York: Routledge.
- Junco, R. (2012). Too much face and not enough books: The relationship between multiple indices of Facebook use and academic performance. *Computers in Human Behavior*, *28*, 1, 187-198.
- Kellner, D. (1997) Critical theory and British cultural studies: the missed articulation, in J. McGuigan (ed.) *Cultural Methodologies*. (pp. 12-41). London: Sage.
- Kelly, K. (2010). *What technology wants*. New York: Viking.
- Kennedy, K., Spielberg, S., Curtis, B. (Producers) & Spielberg, S. (Director). (2001). *Artificial intelligence*. [Motion Picture]. USA: Amblin Entertainment & Stanley Kubrick Productions.
- Kiesler, S., Siegel, J.A.L., & McGuire, T.W. (1984). Social psychological aspects of computer-mediated communication. *American Psychologist*, *39*, 1123-1134.
- Kinsey, A.C., Pomeroy, W.B., & Martin, C.E. (1948). *Sexual behavior in the human male*. Philadelphia: W.B. Saunders Co.
- Kirschner, P.A., & Karpinski, A.C. (2010). Facebook® and academic performance. *Computers in Human Behavior*, *26*, 6, 1237-1245.
- Kittler, F. A. (2006). *Gramophone, Film, Typewriter*. Stanford, Calif: Stanford Univ. Press.
- Klausner, J., Wolf, W., Fisher-Ponce, L., & Katz, M. (2000). Tracing a syphilis outbreak through cyberspace. *JAMA*, *284*, 447-449.
- Klein, H. (2008). Self-Identification as a “Top” Versus a “Bottom” and HIV Risk Preferences among Men Who Specifically Seek Unprotected Sex Partners Via the Internet. In

- http://apha.confex.com/apha/136am/techprogram/paper_169296.htm Accessed April 18, 2009.
- Kraus, S. W., & Russell, B. (2008). Early sexual experiences: the role of Internet access and sexually explicit material. *Cyberpsychology & Behavior*, 11, 2, 162-8.
- Kraut, R., Kiesler, S., Boneva, B., Cummings, J., Helgeson, V., & Crawford, A. (2002). Internet Paradox Revisited. *Journal of Social Issues*, 58, 1, 49-74.
- Kraut, R., Patterson, M., Lundmark, V., Kiesler, S., Mukopadhyay, T., & Scherlis, W. (1998). Internet paradox. A social technology that reduces social involvement and psychological well-being?. *The American Psychologist*, 53, 9, 1017-31.
- Kubrick, S. (Producer & Director). (1968). *2001: A space odyssey*. [Motion Picture]. USA & UK: Metro-Goldwyn-Mayer.
- Kurzweill, R. (2005). *The singularity is near: When humans transcend biology*. New York: Viking.
- Kurzweill, R. (2006). Reinventing Humanity: The Future of Machine-Human Intelligence. *Futurist*, 40, 2, 39-46.
- Laner, M.R., & Kamel, G.W. (1977). Media mating I: Newspaper "personals" ads of homosexual men. *J Homosex.*, 3, 2, 149-162.
- Lanier, J. (2010). *You are not a gadget. A manifesto*. New York: Alfred A. Knopf.
- LaRose, R., Connolly, R., Lee, H., Li, K., & Hales, K. D. (2014). Connection Overload? A Cross Cultural Study of the Consequences of Social Media Connection. *Information Systems Management*, 31, 1, 59-73.
- Lawson, H., & Leck, K. (2006). Dynamics of Internet Dating. *Social Science Computer Review*, 24, 2, 189-208.
- Le Vu, S.; Velter, A.; Meyer, L.; Peytavin, G.; Guinard, J.; Pillonel, J.; et al. (2012). Biomarker-based HIV incidence in a community sample of men who have sex with men in Paris, France. *PloS One*, 7.
- Leap, W. (1999). *Public sex/gay space. Between men--between women*. New York: Columbia University Press.
- Lehrer, J. (2010). Our cluttered minds. In *The New York Times*. Retrieved 17/04/2014 from http://www.nytimes.com/2010/06/06/books/review/Lehrer-t.html?_r=0
- Lenton, A.P., Fasolo, B., & Todd, P.M. (2010). Who is in your shopping cart? Expected and experienced effects of choice abundance in the online dating context. In N. Kock (Ed.) *Evolutionary Psychology and Information Systems Research* (pp. 149-167). New York: Springer.
- Lévy, P. (1997). *Collective intelligence: Mankind's emerging world in cyberspace*. New York: Plenum Trade.

- Liau, A., Millett, G., & Marks, G. (2006) Meta-analytic examination of online sex-seeking and sexual risk behavior among men who have sex with men. *Sexually Transmitted Diseases*, 33, 9, 576-84.
- Lilford, R.J., & Chilton, P. J. (2011). Browsing the internet. Does the internet limit or extend the human mind? Probably both. *BMJ (clinical Research Ed.)*, 343.
- Litowitz, B.E. (2012). Psychoanalysis and the Internet: Postscript. *Psychoanalytic Inquiry*, 32, 5, 506-512.
- Locke, J., & Laslett, P. (1988). *Two treatises of government*. Cambridge texts in the history of political thought. (1st ed. 1689). Cambridge [England]: Cambridge University Press.
- Luddite. (2010). In *Encyclopædia Britannica*. Deluxe Edition. [DVD Rom version]. Chicago: Encyclopædia Britannica.
- Lyotard, J.-F. (1991). *The inhuman: Reflections on time*. Stanford, Calif: Stanford University Press.
- Mahoney, D. (2010). Actually, society needs dystopian sci-fi more than ever. In *Wired*. Retrieved 28/09/2014 from <http://www.wired.co.uk/news/archive/2014-08/18/dystopian-sci-fi-isnt-bad>
- Mantovani, F. (2001). Networked seduction: A test-bed for the study of strategic communication on the Internet. *CyberPsychology & Behavior*, 4, 1, 147-154.
- Marcuse, H. (1964). *One-dimensional man: Studies in the ideology of advanced industrial society*. Boston: Beacon Press.
- Marcuse, H., & Kellner, D. (1998). *Collected papers of Herbert Marcuse*. London: Routledge.
- Mark, L., Davis, J., Dow, T., Godfrey, W. (Producers) & Proyas, A. (Director). (2004). *I, Robot*. [Motion Picture]. USA: Davis Entertainment & Overbrook Entertainment.
- Marx, K., Engels, F., Moore, S., & Marx, K. (1952). *Capital*. Chicago: Encyclopaedia Britannica.
- McFarlane, M., & Kachur, R. (2003). From the Keyboard to the Couch: Issues for Clinicians in the Age of the Internet. *The Journal of Sex Research*, 40, 2, 223-225.
- McFarlane, M., Bull, S., & Rietmeijer, C. (2000). The Internet as a newly emerging risk environment for sexually transmitted diseases. *JAMA*, 284, 443-446.
- McKena, K. Y., Green, A. S., & Smith, P. K. (2001). Demarginalizing the Sexual Self. *The Journal of Sex Research*, 38, 4, 302.
- McKenna, K. Y., & Bargh, J. A. (1998). Coming out in the age of the Internet: Identity" demarginalization" through virtual group participation. *Journal of Personality and Social Psychology*, 75, 3, 681-694.
- McKirnan, D., Houston, E., & Tolou-Shams, M. (2007). Is the Web the culprit? Cognitive escape and Internet sexual risk among gay and bisexual men. *AIDS and Behavior*, 11, 1, 151-160.

- McLuhan, M. (1962). *The Gutenberg galaxy: The making of typographic man*. Toronto: University of Toronto Press.
- McLuhan, M. (1964). *Understanding media: The extensions of man*. New York: McGraw-Hill.
- McLuhan, M. (1967). *The medium is the message: In inventory of effects*. Harmondsworth: Penguin Books.
- McNamara, M. (2013). Cumming to terms; Bareback porn, homonormativity, and queer survival in the time of HIV/AIDS. In B. Fahs, M. Dudy & S. Stage (Eds.) *The moral panics of sexuality*. (pp.226-244). New York: Palgrave Macmillan.
- Mead, G. H., & In Morris, C. W. (1934). *Mind, self & society from the standpoint of a social behaviorist*. Chicago, Ill: University of Chicago Press.
- Meerkerk, G.J., Van Den Eijnden, R.J., & Garretsen, H.F. (2006). Predicting compulsive Internet use: it's all about sex! *Cyberpsychology & Behavior : the Impact of the Internet, Multimedia and Virtual Reality on Behavior and Society*. 9, 1, 95-103.
- Menza, T.W., Kerani, R.P., Handsfield, H.H., & Golden, M.R. (2011). Stable Sexual Risk Behavior in a Rapidly Changing Risk Environment: Findings from Population-Based Surveys of Men Who Have Sex with Men in Seattle, Washington, 2003–2006. *AIDS and Behavior*, 15, 2, 319-329.
- Mettey, A., Crosby, R., DiClemente, R.J., & Holtgrave, D.R. (2003). Associations between internet sex seeking and STI associated risk behaviours among men who have sex with men. *Sexually Transmitted Infections*. 79 (6), 466-8.
- Michaelian, K., & Sutton, J. (2013). Distributed Cognition and Memory Research: History and Current Directions. *Review of Philosophy and Psychology*, 4, 1, 1-24.
- Misra, S., & Stokols, D. (2012). Psychological and Health Outcomes of Perceived Information Overload. *Environment and Behavior*, 44, 6, 737-759.
- Mitcham, C. (1994). *Thinking through technology: The path between engineering and philosophy*. Chicago: University of Chicago Press.
- Mitchell, W. J. (2003). *Me++: the cyborg self and the networked city*. MIT Press, Cambridge, Mass.
- Mowlabocus, S. (2010). *Gaydar culture: Gay men, technology and embodiment in the digital age*. Farnham, Surrey, England: Ashgate.
- Nach, H., & Lejeune, A. (2010). Coping with information technology challenges to identity: A theoretical framework. *Computers in Human Behavior*, 26, 4, 618-629.
- Nodin, N. (2007). A vida sexual dos anúncios pessoais: Uma revisão de literatura [The sex life of personal ads: A literature review]. *Análise Psicológica*, 3, 25, 351-361.
- Nodin, N. (2009). The internet, our cyborg mind. In G. Bradley., & P. Kommers (Eds.), *In Proceedings of ICT, Society and Human Beings 2009 and Web Based Communities*

- 2009 (pp. 233-236). Portugal: International Association for Development of the Information Society. ISBN: 978-972-8924-82-9.
- Nodin, N., Carballo- Diéguez, A., & Leal, I. P. (2009). The laws of online attraction – The good the bad and the ugly. Oral presentation at the *Gender, media and the public sphere Conference*, Coimbra, Portugal; October 2009.
- Nodin, N., Carballo- Diéguez, A., & Leal, I. P. (2011). MSM's experience of using the internet to seek sexual partners-results from a quantitative study. *Journal of Sexual Medicine*, 8, s3, 135.
- Nodin, N., Carballo-Diéguez, A., & Leal, I. M. (2013). Sexual use of the internet: Perceived impact on MSM's views of self and others. *New Media & Society*, 16, 5, 719–736.
- Nodin, N., Carballo- Diéguez, A., Ventuneac, A. M., Balan, I. C., & Remien, R. (2008). Knowledge and acceptability of alternative HIV prevention bio-medical products among MSM who bareback. *AIDS Care*, 20, 1, 106-115.
- Nodin, N., Leal, I., & Carballo-Diéguez, A. (2008). “Através da máquina é mais fácil” – Definições e reacções ao conceito de cibersexo [“Through the machine it is easier” – definitions and reactions to the concept of cibersex]. *Proceedings of Ibero-American Conference IADIS, WWW/Internet 2008, Lisbon, Portugal*. 129-135. ISBN: 978–972–8924–72-0.
- Nodin, N., Leal, I.P., & Carballo-Diéguez, A. (*in press*). HIV knowledge and related sexual practices among Portuguese men who have sex with men. *Cadernos de Saúde Pública*.
- Nodin, N., Leal, I.P., & Carballo-Diéguez, A. (submitted a). Validation of a scale assessing perceptions, processes and preferences of using the Internet to meet sexual partners among men who have sex with men.
- Nodin, N., Leal, I.P., & Carballo-Diéguez, A. (submitted b). Meeting sexual partners online: A study of MSM's perceptions of self-change using the Sexual Use of the Internet Scale (SUIS).
- Nodin, N., Valera, P., Ventuneac, A. M., Maynard, E., & Carballo-Diéguez, A. (2011). The internet profiles of men who have sex with men within bareback websites. *Culture, Health & Sexuality*, 13, 9, 1015-1029.
- Noonan, R. (2007). The psychology of sex: A mirror from the Internet. In J. Gackenbach (Ed.). *Psychology and the Internet: Intrapersonal, interpersonal and transpersonal implications*. (pp.93-139). Amsterdam [etc.: Elsevier.
- Novak, M. (1991). Liquid architectures in cyberspace. In M. Benedikt (ed.) *Cyberspace: First steps* (pp. 225-272). Cambridge, Mass: MIT Press.
- Nusselder, A. (2009). *Interface fantasy: A Lacanian cyborg ontology*. Cambridge, Mass: MIT Press.

- O'Reilly, T. (2005). *What Is Web 2.0. Design Patterns and Business Models for the Next Generation of Software*. Retrieved from <http://oreilly.com/web2/archive/what-is-web-20.html>. Accessed 30/06/13.
- Olson, C. A. (2013). Focused search and retrieval: The impact of technology on our brains. *Journal of Continuing Education in the Health Professions*, 32, 1, 1-3.
- Orwell, G. (1949). *1984: A novel*. New York: Harcourt, Brace.
- Parsons, J., Kelly, B., Bimbi, D., DiMaria, L., Wainberg, M., & Morgenstern, J. (2008). Explanations for the origins of sexual compulsivity among gay and bisexual men. *Archives of Sexual Behavior*, 37, 5, 817-826.
- Paul, J. A., Baker, H. M., & Cochran, J. D. (2012). Effect of online social networking on student academic performance. *Computers in Human Behavior*, 28, 6, 2117-2127.
- Penn, D. C., Holyoak, K. J., & Povinelli, D. J. (2008). Darwin's mistake: explaining the discontinuity between human and nonhuman minds. *The Behavioral and Brain Sciences*, 31, 2, 109-30.
- Perry, M., Accordino, M., & Hewes, R. (2007). An investigation of Internet use, sexual and nonsexual sensation seeking, and sexual compulsivity among college students. *Sexual Addiction & Compulsivity*, 14, 4, 321-335.
- Pew Research (2014). *Social Networking Fact Sheet*. Accessed 15/05/2014 from <http://www.pewinternet.org/fact-sheets/social-networking-fact-sheet/>.
- Phua, V.C. (2002). Sex and sexuality in men's personal advertisements. *Men and Masculinities*, 5, 2, 178-191.
- Phua, V.C., Hopper, J., & Vazquez, O. (2002). Men's concerns with sex in personal advertisements. *Culture, Health & Sexuality*, 4,3, 355-363.
- Pinch, T.J., & Bijker, W.E. (1984). The social construction of facts and artefacts: Or how the sociology of science and the sociology of technology might benefit from each other. *Social Studies of Science*, 14, 3, 399-441.
- Pitts, M., Smith, A., Mitchell, A., & Patel, S. (2007). *Private Lives Report*. Melbourne: Australian Research Center in Sex, Health and Society.
- Plato, & Jowett, B. (1990). *Phaedrus*. Champaign, Ill: Project Gutenberg.
- Pollet, T. V., Roberts, S. G., & Dunbar, R. I. (2011). Use of social network sites and instant messaging does not lead to increased offline social network size, or to emotionally closer relationships with offline network members. *Cyberpsychology, Behavior and Social Networking*, 14, 4, 253-8.
- Pommer, M. (Producer) & Lang, F. (Director). (1927). *Metropolis*. [Motion Picture]. Germany: UFA & Paramount Pictures (Distribution).

- Pool, R. (2003). How society shapes technology. In A.H. Teich (ed.) *Technology and the future* (pp.13-22). Belmont: Wadsworth/Thomson Learning.
- Postman, N. (1992). *Technopoly: The Surrender of Culture to Technology*. New York: Vintage Books.
- Postmes, T., Spears, R., & Lea, M. (1999). Social identity, normative content, and "deindividuation" in computer-mediated groups. In N. Ellmers; R. Spears; & B. Doosje (eds), *Social identity* (pp.164-183). Malden, Mass: Blackwell.
- Prentice-Dunn, S., & Rogers, R. W. (1982). Effects of public and private self-awareness on deindividuation and aggression. *Journal of Personality and Social Psychology*, 43, 3, 503-513.
- Quiroz, P. A. (2013). From Finding the Perfect Love Online to Satellite Dating and 'Loving-the-One-You're Near': A Look at Grindr, Skout, Plenty of Fish, Meet Moi, Zoosk and Assisted Serendipity. *Humanity & Society*, 37, 2, 181-185.
- Reber, A. S. (1995). *The Penguin dictionary of psychology*. London: Penguin books.
- Remien, R.H., Sandfort, T.G., Chiasson, M.A., Hirshfield, S., Humberstone, M., Wong, T. (2006). Self-reported behavioral change since using the Internet to find sex partners: An online study among MSM in the US and Canada. Paper presented at the *XVI International AIDS Conference*, Toronto, Canada, 13-18 August 2006.
- Rheingold, H. (2000). *The virtual community: homesteading on the electronic frontier* (Rev. ed.). Cambridge, MA: MIT Press.
- Rheingold, H. (2003). *Smart mobs: The next social revolution*. Cambridge, MA: Perseus Pub.
- Rice, E., Winetrobe, H., Rhoades, H., Barman-Adhikari, A., Gibbs, J., Carranza, A., Dent, D., ... Holloway, I. (2012). Sex risk among young men who have sex with men who use Grindr, a smartphone geosocial networking application. *Journal of Aids and Clinical Research*, 3.
- Rodogno, R. (2012). Personal Identity Online. *Philosophy & Technology*, 25, 3, 309-328.
- Romano, E.M. (2000). *La cultura digital. Navegantes de Internet, personalidades interactivas y agrupamentos virtuales*. Buenos Aires: Lugar Editora.
- Rosenmann A, & Safir MP. (2006). Forced online: push factors of internet sexuality: A preliminary study of online paraphilic empowerment. *Journal of Homosexuality*. 51, 3, 71-92.
- Rosser, M.W., Rosser, S.B.R., Coleman, E., & Mazin, R. (2006). Misrepresentation on the Internet and in real life about sex and HIV: A study of Latino men who have sex with men. *Culture, Health & Sexuality*, 8, 2, 133-144.
- Rosser, B.R.S., Grey, J.A., Wilkerson, J.M., Iantaffi, A., Brady, S.S., Smolenski, D.J., & Horvath, K.J. (2012). A commentary on the role of sexually explicit media (SEM)

- in the transmission and prevention of HIV among men who have sex with men (MSM). *AIDS and Behavior*, 16, 6, 1373-1381.
- Salomon, G. (1993). *Distributed cognitions*. New York: Cambridge University Press.
- Shelley, M. W. (1994). *Frankenstein, or, The modern Prometheus*. London: Penguin Books.
- Schmidt, A. (Producer) & Verhoeven, P. (Director). (1987). *Robocop*. [Motion picture]. USA: Orion Pictures.
- Schmidt, E., & Cohen, J. (2013). *The new digital age: Reshaping the future of people, nations and business*. New York: Alfred A. Knopf.
- Seel, P.B. (2012). *Digital universe: The global telecommunication revolution*. Malden, MA: Wiley-Blackwell.
- Silver, J. (Producer), Wachowski, L., & Wachowski, A. (Directors). (1999). *The matrix*. [Motion Picture]. USA & Australia: Village Roadshow Pictures, Silver Pictures & Groucho II Film Partnership.
- Sim, S. (2001). *Lyotard and the inhuman*. Postmodern encounters. Icon, Duxford.
- Slater, D. (2014). *A million first dates: Solving the puzzle of online dating*. New York : Current
- Sparrow, B., Liu, J., & Wegner, D. M. (2011). Google Effects on Memory: Cognitive Consequences of Having Information at Our Fingertips. *Science*, 333, 6043, 776-778.
- Spears, R., Lea, M., Postmes, T., & Wolbert, A. (2011). A SIDE look at computer-mediated interaction. In Z. Birchmeier, B. Dietz-Uhler, & G. Stasser (Eds.) *Strategic uses of social technology: An interactive perspective of social psychology*. (pp.16-39). New York: Cambridge University Press.
- Steiner, P. (1993). On the Internet, nobody knows you're a dog. Cartoon in *The New Yorker*, 69, 20, p.61.
- Stock, G. (2003). *Redesigning humans: Choosing our genes, changing our future*. Boston: Houghton Mifflin.
- Stone, A.R. (1991). Will the real body please stand up? Boundary stories about virtual cultures. In M. Benedikt (ed.) *Cyberspace: First steps* (pp. 81-118). Cambridge, Mass: MIT Press.
- Stout, D., & Chaminade, T. (2007). The evolutionary neuroscience of tool making. *Neuropsychologia*, 45, 5, 1091-1100.
- Strassberg, D.S., & Holty, S. (2003). An experimental study of women's Internet personal ads. *Archives of Sexual Behaviour*, 32, 3, 253-260.
- Suler, J. (2005). The online disinhibition effect. *International Journal of Applied Psychoanalytic Studies*, 2, 2, 184-188.
- Talmy, S. (2011). The Interview as Collaborative Achievement: Interaction, Identity, and Ideology in a Speech Event. *Applied Linguistics*, 32, 1, 25-42.

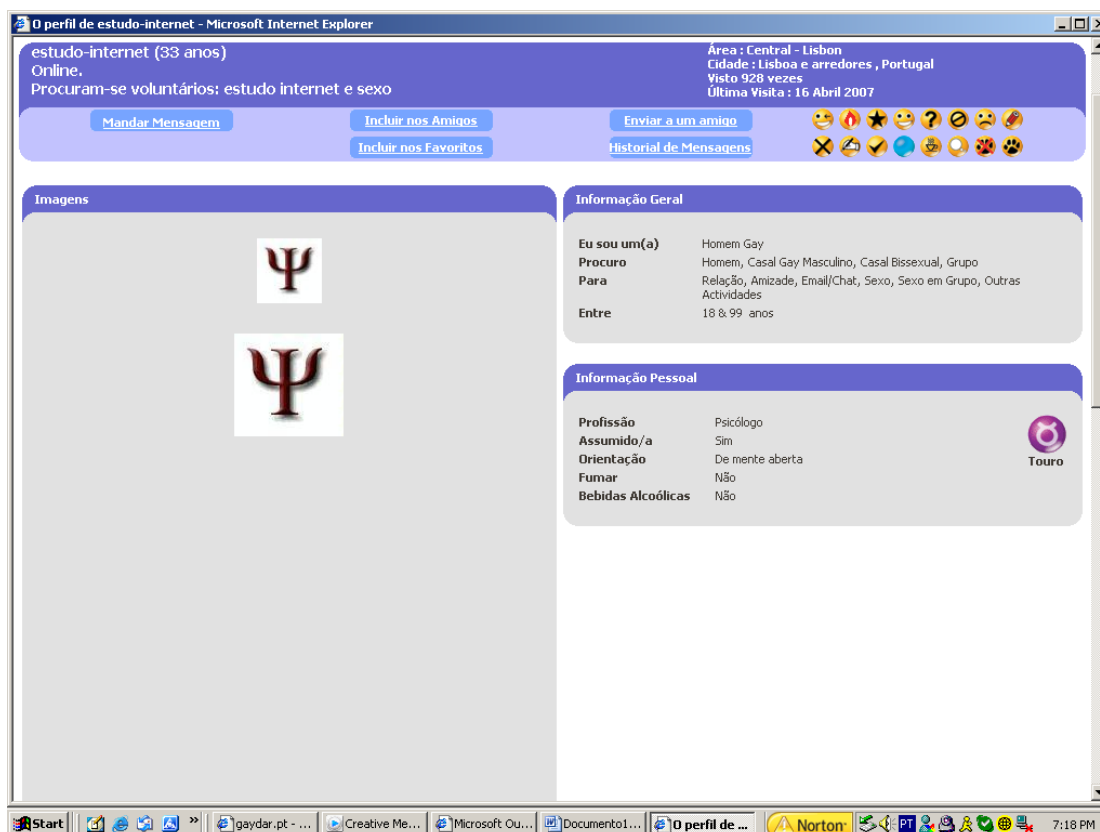
- Tausk, V. (1933). On the origin of the 'influencing machine' in schizophrenia. *Psychoanalytic Review*, 87, 455-461.
- Technology. (n.d.). In *Wikipedia, The Free Encyclopedia*. Retrieved 19:54, April 13, 2014, from <http://en.wikipedia.org/w/index.php?title=Technology&oldid=603396439>
- Tewksbury, R. (2003). Bareback sex and the quest for HIV: assessing the relationship in Internet personal advertisements of men who have sex with men. *Deviant Behavior*, 24, 5, 467-482.
- Tewksbury, R. (2006). "Click here for HIV": An Analysis of Internet-Based Bug Chasers and Bug Givers. *Deviant Behavior*, 27, 4, 379-395.
- Thompson, K. C. (2013). *Smarter than you think: How technology is changing our minds for the better*. London: William Collins
- Tikkanen, R., & Ross, M. (2003). Technological tearoom trade: characteristics of Swedish men visiting gay Internet chat rooms. *AIDS Ed Prev*, 15, 2, 122-132.
- Toma, C. L., & Hancock, J. T. (2012). What lies beneath: The linguistic traces of deception in online dating profiles. *Journal of Communication*, 62, 1, 78-97.
- Toma, C. L., Hancock, J. T., & Ellison, N. B. (2008). Separating fact from fiction: an examination of deceptive self-presentation in online dating profiles. *Personality & Social Psychology Bulletin*, 34, 8, 1023-36.
- Tomas, D. (1991). Old rituals for new spaces: Rites de passage and William Gibson's cultural model of cyberspace. In M. Benedikt (ed.) *Cyberspace: First steps*, pp.31-48. Cambridge, Mass: MIT Press.
- Turkle, S. (1995). *Life on the screen: Identity in the age of the Internet*. New York: Simon & Schuster.
- Turkle, S. (1996). *Who am we?* Retrieved 15/05/2014 from <http://archive.wired.com/wired/archive/4.01/turkle.html>.
- Turkle, S. (2004). Whither Psychoanalysis in computer culture? *Psychoanal. Psychol.*, 21, 16-30.
- Turkle, S. (2011). *Alone together: Why we expect more from technology and less from each other*. New York: Basic Books.
- Tylim, I. (2012). The techno-body and the future of Psychoanalysis. *Psychoanalytic Inquiry*, 32, 5, 468-479.
- Valkenburg, P. M., & Peter, J. (2008). Adolescents' Identity Experiments on the Internet Consequences for Social Competence and Self-Concept Unity. *Communication Research*, 35, 2, 208-231.
- Valkenburg, P. M., & Peter, J. (2009). Social consequences of the internet for adolescents a decade of research. *Current Directions in Psychological Science*, 18, 1, 1-5.

- Valkenburg, P. M., Peter, J., & Schouten, A. P. (2006). Friend networking sites and their relationship to adolescents' well-being and social self-esteem. *Cyberpsychology & Behavior*, 9, 5, 584-90.
- van der Leum, G. (1995). Twilight zone of the id, *Time, Special supplement to Time issue dated May 8*, Mar. 01, 1995, p.32-33.
- van Doorn, N. (2011). Digital spaces, material traces: How matter comes to matter in online performances of gender, sexuality and embodiment. *Media, Culture and Society*, 33, 4, 531-547.
- Varshney, L. R. (2012). The Google effect in doctoral theses. *Scientometrics*, 92, 3, 785-793.
- Villaamil, F., & Jociles, M. (2011). Risk and community: The impact of HIV among gays in Madrid. The case of sex clubs. *Sexualities*, 14, 580-596.
- Virilio, P. (1986). *Speed and politics: An essay on dromology*. New York, NY, USA: Columbia University.
- Virilio, P. (1995). Red Alert in Cyberspace!. *Radical Philosophy*, 74, 2.
- Virilio, P. (1997). *Open sky*. London: Verso.
- Walther, J. B. (1996). Computer-mediated communication impersonal, interpersonal, and hyperpersonal interaction. *Communication research*, 23, 1, 3-43.
- Webb, A. (2013). *Data, a love story: How I gamed online dating to meet my match*. New York: Dutton.
- Wendling, A. E. (2009). *Karl Marx on technology and alienation*. Basingstoke [England: Palgrave Macmillan.
- Wetmore, J. M. (2007). Amish technology: Reinforcing values and building community. *Technology and Society Magazine, IEEE*, 26, 2, 10-21.
- Whitty, M. T., & Carr, A. N. (2003). Cyberspace as Potential Space: Considering the Web as a Playground to Cyber-Flirt. *Human Relations*, 56, 7, 869-891.
- Whitty, M., & Gavin, J. (2001). Age/sex/location: Uncovering the social cues in the development of online relationships. *Cyberpsychology & Behavior*, 4, 5, 623-630.
- Wilcox, K., & Stephen, A. T. (2013). Are close friends the enemy? Online social networks, self-esteem, and self-control. *Journal of Consumer Research*, 40, 1, 90-103.
- Winner, L. (2002). Are humans obsolete? *The Hedgehog Review*, 4, 3, 25-44.
- Wiseman, M. C., & Moradi, B. (2010). Body image and eating disorder symptoms in sexual minority men: A test and extension of objectification theory. *Journal of Counseling Psychology*, 57, 2, 154-66.
- Wysocki, D. (1998). Let your fingers do the talking: Sex on an adult chat-line. *Sexualities*, 4, 425-452.
- Yurchisin, J., Watchravesringkan, K., & Brown, M. D. (2005). An exploration of identity re-creation in the context of internet dating. *Social Behavior and Personality*, 33, 8, 735.

- Zhao, S., Grasmuck, S., & Martin, J. (2008). Identity construction on Facebook: Digital empowerment in anchored relationships. *Computers in Human Behavior*, 24, 5, 1816-1836.
- Zimbardo, P.G. (1969). The human choice: Individuation, reason, and order vs. deindividuation, impulse, and chaos. In W.J. Arnold & D. Levine (Eds.). *Nebraska symposium on motivation* (pp.237-307). Lincoln: University of Nebraska Press.
- Zizek, (2004). What can Psychoanalysis tell us about cyberspace? *Psychoanalytical Review*, 91, 6, 801-830.
- Zizek, S. (1996). *Cyberspace, or the virtuality of the real*. *Journal of the Centre for Freudian Analysis and Research*, 7(Summer). Accessed online on 22/03/2014, http://www.jcfa.org/past_papers/Cyberspace%20and%20the%20Virtuality%20of%20the%20Real%20-%20Slavoj%20Zizek.pdf

Appendices

Appendix 1 – Screen shot of recruitment profile and recruitment text



Volunteers for a scientific investigation

Hi

My name is Nuno Nodin, I'm a clinical psychologist and university teacher. I'm currently developing a scientific investigation about sexuality and the Internet. Its goal is to understand the reasons why men are using the Internet to find relationships or sex and in which ways they are doing it.

I'm looking for volunteers that are willing to participate on an interview taking place in Lisbon. If you're interested in collaborating with this research please contact me with a message via this website. All data will be kept confidential.

Thanks!

Nuno Nodin

Appendix 2 – Screening questionnaire (qualitative phase)

1. Que idade tem? (+18)

2. Considera-se homem, mulher ou transgender? (homem)

3. Em que país é que nasceu?

(Se fora de Portugal)

3.1. Há quanto tempo vive em Portugal? (pelo menos 1 ano)

4. Vive na zona da Grande Lisboa? (sim)

5. Alguma vez teve relações sexuais com alguém que tenha conhecido na internet? (sim)

6. Considera-se heterossexual, homossexual ou bissexual?

Email para confirmação da entrevista:

Proveniente de:

Appendix 3 – Interview guide (English translation)

	Topic	Question	Probe
Study participation	Motivation	Why did you decide to participate in this study?	What in this study appealed to you?
	Internet use	How would you describe your internet use?	Why did you begin to use it in the first place? For how long have you been using it? How long are you online on a regular week? What are your motives for using the Internet? Where do you usually go online?
Internet	Sexual use of the internet	Do you know the term “cybersex”?	How do you define it? Does it always evolve an interaction between two persons? Does it always evolve an immediate interaction between two persons? Does it always evolve masturbation? Does it always evolve orgasm? Does it always evolve a meeting with someone else?
		How do you use the internet for sexual purposes?	How long ago did you start using the Internet with sexual purposes (including for porn)? Why did you start to use it for that purpose? What do you look for online sexually? How do you feel about your sexual use of the internet?
	Personality and sexual use of the internet	What personal features do you think lead you to look for sex online?	Do you think the internet has features that somehow have to do with you? What features may those be? Do you think the internet had any influence in the way you relate to people? Do you think your sex-seeking behaviors online are different from those you have elsewhere? Has the internet brought you any type of difficulties or problems?
	Preferred sites	Which websites do you use for sexual purposes?	How did you select the websites in which you have a profile? Which ones do you use the most? Why? What are its positive sides? What about its negative ones? Are they free or paid sites?

		Tell me about your profiles	<p>How did you choose your nickname?</p> <p>What information did you decide to include in your profile and why?</p> <p>Do you think your profile shows who you are? Why?</p> <p>Do you have photos in your profile? Why?</p> <p>If you do, how did you choose them?</p> <p>What do you think people think when they see them?</p>
	Interaction with potential sexual partners (pre-face-to-face meetings)	How has your online hooking up experience has been so far?	<p>For how long have you been looking for sexual partners online?</p> <p>Why did you start looking?</p> <p>What are you looking for?</p> <p>How do you compare the Internet with other places where potential sex partners can be found (bars, street, etc.)?</p> <p>How much time do you spend looking for sexual partners online?</p> <p>How do you feel about the time you spend online looking for sex per week?</p> <p>Do you usually start a contact or do you wait to be contacted?</p> <p>How do you select the people you contact for sex?</p> <p>How do you usually approach the persons you're interested in?</p> <p>How does the typical pre face-to-face interaction takes place?</p> <p>What are the positive and negative aspects of your experience meeting sexual partners online?</p> <p>What about the negatives?</p>
face to face Interaction	Interaction with potential sex partners (face-to-face meeting)	After chatting with someone by email or telephone, how does the meeting go?	<p>Do you have any special concerns when meeting someone this way?</p> <p>How many people have you met using the Internet?</p> <p>With how many partners met online did you actually have sex with?</p> <p>How does the typical face-to-face meeting with someone met online occurs (before sex)?</p> <p>What is usually discussed?</p> <p>What in this meeting may or may not lead to sex?</p> <p>What do you do when the person you meet does not interest you?</p>
	Sexual interaction	How do you describe the sexual interactions that you had with people that you met online?	<p>Are they any different from the sex that you had with people that you have met in other places?</p> <p>Are the sexual practices the same or other? If so which ones?</p> <p>How is communication with the other person?</p> <p>Are there any other meetings following the first one?</p> <p>What happens in following meetings?</p>

		<p>Now we'll discuss some issues concerning safe sex specifically with people whom you met online</p>	<p>Is it easier or harder to practice safe sex in this context? Of all the people that you met online and had sex with, with how many did you use the condom? Why? Do you usually discuss yours or your partners' serostatus in this context? Do you usually use alcohol or drugs in these contexts? How do you compare these situations to those that happen with people you've met in other places?</p>
	Case study	<p>Tell me in detail how was your last sexual encounter with someone that you met online</p>	<p>How long ago was it? How did the interaction start? What happen after that start? How was communication between both after that? Where did that meeting took place and why? What was your reaction/first thoughts when you saw him/her? What were the signals that you had that made you think it would end in sex? How would you describe the sex you had? Why? Did you practice safe sex? In what moment was safe sex discussed (if they were at all)? How did you feel after that? Did you ever contacted or meet with that same person again?</p>

Appendix 4 – Demographic questionnaire (qualitative phase)

1. Qual a sua idade actual? _____ anos

2. Em que país é que nasceu? _____

2.1. Há quanto tempo vive em Portugal (se não nasceu cá)? _____ anos

3. Qual o grau de escolaridade mais elevado que concluiu?

Ensino básico: 1 2 3 4 5 6 7 8 9

Ensino secundário: 10 11 12

Curso superior: incompleto completo

Mestrado: incompleto completo

Doutoramento: incompleto completo

4. Qual a sua ocupação?

Estudante

Desempregado

Reformado

Trabalhador-estudante **Actividade profissional:** _____

Trabalhador por conta própria **Actividade profissional:** _____

Trabalhador por conta de outrém **Actividade profissional:** _____

5. Considera-se:

Branco

Negro

Asiático

Outro: _____

6. Qual o seu estatuto marital em relação a mulheres?

- Nunca se casou
- Casado
- União de facto
- Divorciado
- Separado
- Viúvo

7. Actualmente mantém uma relação afectiva?

- Não
- Sim

7.1. Se sim, a pessoa com quem mantém essa relação é:

- Mulher
- Homem
- Transgender

8. Quantas parceiras sexuais (mulheres) teve nos últimos 6 meses? _____**9. Quantos parceiros sexuais (homens) teve nos últimos 6 meses? _____****10. No que respeita à sua orientação sexual, considera-se:**

- Heterossexual
- Homossexual
- Bissexual

11. Alguma vez fez o teste do VIH (vírus da sida)?

- Não
- Sim

11.1. Se sim, o resultado do seu último teste foi:

- Negativo
- Positivo
- Não sei

Appendix 5 – Online Survey

Questionário sobre sexualidade e Internet

Bem-vindo!

Este questionário destina-se a a ser respondido exclusivamente por homens, maiores de 18 anos, Portugueses ou que vivam em Portugal. Aborda questões relacionadas com sexualidade e uso da Internet.

Enquadra-se no âmbito de uma investigação da responsabilidade do psicólogo Nuno Nodin, sob a supervisão de Isabel Leal do Instituto Superior de Psicologia Aplicada em Lisboa e de Alex Carballo-Diéguez da Columbia University em Nova Iorque.

O questionário é anónimo e demora cerca de 25 minutos a preencher. A maioria das perguntas são de resposta obrigatória, excepto as marcadas com um asterisco (*) às quais pode optar por não responder.

Se interromper o preenchimento do questionário, da próxima vez que aceder a este sítio voltará à última página que preencheu sem perder os dados que já introduziu, desde que use o mesmo computador. Não necessita, portanto, de o preencher todo de uma só vez.

Todos os dados recolhidos são confidenciais.

Obrigado!

Consentimento informado

A investigação “Sexualidade e Internet” encontra-se a ser desenvolvida no âmbito da UIPES- Unidade de Investigação em Psicologia e Saúde I&D, do Instituto Superior de Psicologia Aplicada (www.ispa.pt). Poderá confirmar a existência desta investigação, bem como a afiliação do investigador principal da investigação junto destas instituições através dos contactos:

UIPES- Unidade de Investigação em Psicologia e Saúde, I&D
Rua Jardim do Tabaco, 34
1149-041 Lisboa
Telefone: (+351) 21 881 17 00
Fax: (+351) 21 886 09 54
E-mail: uipes@ispa.pt

Por favor leia atentamente:

- Não existem riscos para a sua saúde física ou mental associados à sua participação nesta investigação;
- Não existem ganhos materiais ou não materiais com a sua participação nesta investigação, pelo que a sua participação é voluntária;
- Não lhe serão pedidas informações como sejam o seu nome ou os seus contactos

personais; todos os restantes dados recolhidos servirão apenas para efeitos de análise estatística dos dados;

- Os dados recolhidos são confidenciais e anónimos e serão identificados apenas com um número de código e nunca serão associados à sua pessoa;
- Em qualquer momento poderá desistir da sua participação, bastando para o efeito não terminar de preencher o questionário; registos incompletos serão apagados aquando do tratamento dos dados;
- Quaisquer dúvidas que tenha sobre esta investigação poderão ser enviadas antes, durante ou depois da sua participação para o email estudo-internet@clix.pt.

Li e compreendi a informação que acima me foi apresentada e aceito voluntariamente participar nesta investigação. Ao seleccionar o botão "Aceito", em baixo, dou a minha autorização em que as minhas respostas sejam utilizadas para efeitos da investigação "Sexualidade e Internet" desde que a informação utilizada seja anónima e não surja nenhuma informação que me identifique.

A minha resposta em baixo (sim ou não) serve os efeitos de uma assinatura electrónica e tem efeito após seleccionar o botão "Seguinte".

Aceito participar nesta investigação?

Sim

Não

TEXTO PARA QUEM TERMINA:

Muito obrigado pela sua participação. Agradecemos que divulgue este questionário junto de outros interessados.

Se tiver alguma dúvida ou quiser colocar-nos uma questão sobre esta investigação, por favor envie-nos um email para estudo-internet@clix.pt.

A. Dados sociodemográficos

1. Qual a sua data de nascimento?

2. Qual a sua idade (hoje)?

3. Considera-se:

Homem

Mulher – TERMINA

Transgender / Transgénero / Transsexual – TERMINA

Outro – Qual: – TERMINA

4. Em que país é que vive actualmente?

Portugal
 Brasil
 Angola
 Moçambique
 Guiné-Bissau
 Cabo Verde
 São Tomé e Príncipe
 Ucrânia
 Reino Unido
 Outro país Europeu
 Outro país (resto do mundo)

5. Há quanto tempo é que vive nesse país?

_ anos
 _ meses

6. Em que país é que nasceu?

Portugal
 Brasil
 Angola
 Moçambique
 Guiné-Bissau
 Cabo Verde
 São Tomé e Príncipe
 Ucrânia
 Reino Unido
 Outro país Europeu
 Outro país (resto do mundo)

7. Como é que caracteriza o local em que vive:

Cidade grande
 Cidade pequena
 Vila ou aldeia
 Zona rural

8. Se vive em Portugal, qual o código postal da sua residência?*

9. Qual o grau de escolaridade mais elevado que concluiu?

Escola: 1 2 3 4 5 6 7 8 9 10 11 12°

Curso superior: incompleto completo

Mestrado: incompleto completo

Doutoramento: incompleto completo

10. Qual a sua ocupação? (Assinale todas as respostas correctas)

Estudante

Desempregado

Reformado

Trabalhador por conta própria Actividade profissional:

Trabalhador por conta de outrem Actividade profissional:

10.1. Qual o seu rendimento médio anual?*

Menos de € 5.000

Entre € 5.000 e € 25.000

Entre € 25.000 e € 50.000

Entre € 50.000 e € 100.000
 Mais de € 100.000

11. Considera-se:

Branco

Negro

Mulato

Asiático

Outro: _____

B. Comportamento sexual e relacionamentos

12. Qual o seu estatuto marital com uma mulher:

Nunca se casou

Casado

União de facto

Divorciado

Separado

Viúvo

13. Actualmente mantém uma relação afectiva?

Não – PASSA PARA 14

Sim

13.1. A pessoa com quem mantém essa relação é:

Mulher

Homem

Transgender / Transgenero / Transsexual

13.2. Há quanto tempo mantém essa relação?

_ anos

_ meses

14. Já alguma vez teve relações sexuais (penetração da vagina ou do ânus com o pénis)?

Não – TERMINA

Sim

15. Costuma utilizar alguma estratégia para reduzir o seu risco de contrair o VIH (vírus da SIDA) ou outras infecções que podem ser transmitidas durante as relações sexuais?

Não – PASSA PARA 16

Sim

15.1. Que estratégias utiliza para reduzir o risco de contrair VIH? (opções: Sempre – Quase sempre – Metade das vezes – Quase nunca – Nunca – NA)

15.1.1. Uso o preservativo durante sexo vaginal

15.1.2. Uso o preservativo durante sexo anal

15.1.3. Uso o preservativo durante sexo oral

15.1.4. Nunca pratico sexo anal

15.1.5. Nunca pratico sexo vaginal

15.1.6. Nunca pratico sexo oral

15.1.7. Avalio o aspecto físico do meu parceiro ou parceira

15.1.8. Pergunto sempre à minha parceira ou parceiro se é saudável

15.1.9. Peço para o meu parceiro ou parceira me mostrar o resultado do seu último teste para o VIH

15.1.10. Peço ao meu parceiro para retirar o pénis antes da ejaculação

15.1.11. Outro:

15.1.12. Outro:

16. Alguma vez fez o teste do VIH (vírus da sida)?

Não – PASSA PARA 17

Sim

16.1. Há quanto tempo fez o seu último teste do VIH?

_ Anos

_ Meses

16.2. O resultado do seu último teste foi:

Negativo

Positivo

Indeterminado

Não sei

17. Considera-se:

Heterossexual

Homossexual / Gay

Bissexual

Outro:

18. Sente-se sexualmente atraído:

Apenas por homens

Principalmente por homens

Por homens e mulheres de forma igual

Principalmente por mulheres

Apenas por mulheres

19. Com quantas mulheres é que teve relações sexuais no último ano? – SE IGUAL A ZERO, PASSA PARA 21

19.1. Dessas, quantas conheceu através da Internet? – SE IGUAL A ZERO PASSA PARA 20

19.2. Das que conheceu através da Internet, a quantas pagou em dinheiro, droga ou outros bens em troca de sexo?

20. Com quantas mulheres é que teve relações sexuais nos últimos três meses? – SE IGUAL A ZERO, PASSA PARA 21

20.1. Dessas, quantas conheceu através da Internet? – SE IGUAL A ZERO PASSA PARA 21

20.2. Das que conheceu através da Internet, a quantas pagou em dinheiro, droga ou outros bens para ter sexo?

21. Com quantos homens é que teve relações sexuais no último ano? – SE IGUAL A ZERO TERMINA

21.1. Desses, quantos conheceu através da Internet? – SE IGUAL A ZERO TERMINA

21.2. Dos que conheceu através da Internet, a quantos pagou em dinheiro, droga ou outros bens em troca de sexo?

22. Com quantos homens é que teve relações sexuais nos últimos três meses? – SE IGUAL A ZERO, PASSA PARA 23

22.1. Desses, quantos conheceu através da Internet? – SE IGUAL A ZERO, PASSA PARA 23

22.2. Dos que conheceu através da Internet, a quantos pagou em dinheiro, droga ou outros bens em troca de sexo?

C. Internet

23. Há quanto tempo começou a utilizar a Internet em termos gerais (para trabalho, email, procura de informação, etc.)?

_ anos
_ meses

24. Há quanto tempo é que começou a utilizar a Internet para conhecer outros homens?

_ anos
_ meses

25. Que sites na Internet é que usa para conhecer homens para sexo ou relacionamentos? Assinale todos os que usa.

Adult Friend Finder

Bearwww

Disponível

Dudesnude

Facebook

Gay engates

Gay namoros

Gay.com

Gaydar

Gayromeo

Hi5

Manhunt

PortugalGay

Silverdaddies

Terravista

Outro:

26. Porque é que começou a utilizar a Internet para conhecer outros homens?

Assinale todos os motivos que se apliquem.

Porque amigos insistiram

Porque os meus amigos já usavam

Foi por acaso

Procurava uma alternativa a outros locais de engate

Procurava encontrar sexo facilmente

Não me sentia à vontade em bares ou discotecas

Outro:

27. Passado quanto tempo depois de ter começado a usar a Internet para conhecer outros homens é que teve o seu primeiro encontro sexual?

Menos de 24 horas

Entre dois e sete dias

Entre duas e quatro semanas

Mais de um mês

28. Quais os principais motivos pelos quais usa sites gays na Internet?

Assinale todos os motivos que se apliquem.

Para encontrar um namorado

Para encontrar parceiros sexuais regulares (*fuck buddies*)

Para encontrar parceiros sexuais ocasionais/pontuais

Para fazer novos amigos (não sexuais)

Para ver perfis ou fotografias apenas

Para encontrar parceiros para cibersexo/sexo virtual**

Para encontrar homens para conversar em chats

Outro:

29. O que é que encontrou até agora nos sites gays na Internet que utiliza?

Assinale todos os que já encontrou.

Namorado/s

Parceiro/s sexuais regulares (*fuck buddies*)

Parceiro/s sexuais ocasionais/pontuais

Amigos (não sexuais)

Parceiros para cibersexo/sexo virtual

Conversa em chats apenas

Outro:

30. Com que frequência é que consulta esses sites?

Todos os dias

Várias vezes por semana

Cerca de uma vez por semana

Menos do que uma vez por semana

Menos do que uma vez por mes

Nunca

31. Em que locais é que se costuma encontrar pela primeira vez com alguém que conheceu na Internet?

Assinale todos os que se apliquem.

Em minha casa

Na casa dele

Num local público

Outro:

32. Costuma falar sobre preservativos ou sexo seguro com homens que conhece através da Internet?

Nunca

Sim, na conversa (chat) inicial

Sim, quando falo ao telefone com alguém antes do encontro

Sim, quando me encontro com alguém

Sim, depois do sexo

Como tenho essa informação no meu perfil, não sinto necessidade de falar

** Interação sexual com outra/s pessoa/s utilizando o computador e a Internet (através de chats, câmaras, etc.) durante a qual as pessoas envolvidas podem ou não masturbar-se.

33. Em que outros locais, além da Internet, é que procura parceiros sexuais?

Assinale todos os que se aplicarem.

Bares ou discotecas gay

Na rua

Em locais de engate (jardins, estações de serviço, etc.)

Em saunas ou clubes privados

No teletexto da televisão

Através de anúncios no jornal

Outro:

D. Perfis online

Em vários sites de encontros na Internet é necessário criar um perfil com informação pessoal e fotografias. Esses perfis servem para dar a conhecer a outros utilizadores do site quem se é.

Habitualmente é necessário criar um nome de utilizador para esses perfis (também chamados *nicknames* ou *screen names*) que pode ou não coincidir com o nome verdadeiro da pessoa que cria o perfil.

34. Alguma vez criou um perfil desse tipo com o objectivo de conhecer outros homens para sexo ou relacionamentos?

Não – PASSA PARA E

Sim

Esta secção não é de preenchimento obrigatório. Contem 7 (sete) questões sobre o perfil que mais utiliza para conhecer outros homens. Nenhuma pergunta põe em causa a confidencialidade ou o anonimato dos seus dados.

35. Quer preencher esta secção?

Não – PASSA PARA E

Sim

36. O principal nome de utilizador (*nickname*) que utilizo na Internet para conhecer outros homens baseia-se:*

(assinale todas as que se aplicarem)

No meu nome

Nas minhas preferências sexuais (activo, passivo, SM, etc.)

Nas minhas características físicas (tipo de corpo, tamanho do pénis, etc.)

Nos meus dados pessoais (idade, local de residência, etc.)

No que estou a procura num parceiro

Em algo com significado emocional para mim

O meu nickname foi escolhido ao acaso

Outro:

37. A/s fotografia/s que tenho no perfil que uso para conhecer homens:*

(assinale todas as que se aplicarem)

Não tenho fotos no meu perfil – PASSA PARA 39

Mostram o meu rosto de forma clara

Mostram partes do meu rosto ou o meu rosto mas sem me identificar

Mostram o meu corpo vestido

Mostram o meu corpo nu sem expor o meu pénis
 Mostram o meu corpo nu expondo o meu pénis flácido
 Mostram o meu corpo nu expondo o meu pénis em erecção
 Mostram-me envolvido em actos sexuais com outros homens
 São de paisagens, objectos ou outras pessoas
 São abstractas
 Outras:

38. O que pretendo com as imagens que escolhi para o meu perfil é: *
 (assinale todas as que se aplicarem)
 Revelar algo sobre a minha personalidade
 Atrair parceiros sexuais
 Dar a cara
 Chocar
 Outra:

39. Não tenho fotografias no meu perfil porque: *
 (assinale todas as que se aplicarem)
 Acho que as minhas fotografias não iriam ser atractivas
 Ainda não tive a possibilidade de colocar nenhuma, mas ainda o vou fazer
 Acho que não são necessárias tendo em conta os meus objectivos
 Tenho receio que alguém me reconheça
 Prefiro enviar fotos privadas a quem eu entender
 Não quero chamar atenção ou ser contactado
 Outra:

40. O que pretendo com a descrição pessoal que escrevi para o meu perfil: *
 (assinale todas as que se aplicarem)
 Revelar algo sobre a minha personalidade
 Atrair parceiros sexuais
 Assumir uma personalidade que não é a minha
 Ser muito claro sobre o que estou a procura
 Chocar
 Parecer ser uma pessoa divertida
 Outra razão:

41. Alguns perfis, com o objectivo de atrair mais interesse, incluem informação que não é completamente correcta. No que respeita ao seu perfil, alguma das seguintes informações é incorrecta? *

- Idade
- Altura
- Peso
- Tipo de corpo
- Tamanho do pénis
- Orientação sexual (gay/homossexual, bissexual, etc.)
- Preferência sexual (versátil, passivo ou activo)
- Uso de drogas ou álcool
- Estatuto em relação ao VIH
- Sexo seguro

E. Escala sobre Internet e sexo

Na última parte deste questionário apresentamos-lhe uma série de frases. Deverá responder, à frente de cada uma, se concorda ou não com elas no que respeita à sua

opinião e experiência pessoais. A sua resposta pode ir de “Discordo completamente” até “Concordo completamente”, numa escala de cinco pontos.

(itens para escala tipo Likert: Discordo completamente – Concordo completamente)

42. Utilizar a Internet para conhecer outros homens é fácil
43. Utilizar a Internet para conhecer homens é algo perfeitamente normal
44. Desperdiço muito tempo à procura de parceiros sexuais na Internet
45. Sinto-me mais confiante em mim mesmo desde que uso a Internet para encontrar parceiros sexuais
46. Por causa da Internet tenho tanto sexo quanto quero ter
47. Na Internet é mais fácil dizer o que estou à procura ao nível sexual
48. Não encontro resposta para as minhas necessidades sexuais na Internet
49. Gosto de pensar que outros homens se masturbam a ver as minhas fotografias na Internet
50. Nunca se sabe quais as intenções dos homens com quem se tecla na Internet
51. Já não consigo passar sem utilizar a Internet para encontrar parceiros sexuais
52. A Internet permite criar relações mais fortes do que as que se estabelecem noutros locais
53. Sinto-me sexualmente satisfeito com os homens que tenho conhecido na Internet
54. Na Internet é fácil seleccionar quais os homens que realmente me interessa conhecer
55. Por causa da Internet já não sei como conhecer homens para sexo noutros locais
56. É prático utilizar a Internet para conhecer outros homens
57. Já várias vezes fiquei desiludido com os homens que conheci através da Internet
58. Na Internet sinto-me mais em controlo do que noutros locais no que respeita a conhecer outros homens
59. Utilizar a Internet para conhecer parceiros sexuais foi uma das melhores coisas que me aconteceu
60. Para mim, o meu perfil na Internet é uma extensão de mim próprio
61. Não confio nos homens que conheço através da Internet
62. Gosto que outros homens vejam as fotos que tenho no meu perfil
63. Não encontro o que procuro ao nível sexual com os homens que conheço através da Internet
64. Encontrar namorados através da Internet não é tão fácil como parece
65. Tenho prazer em exhibir o meu corpo na Internet
66. Através da Internet eu não consigo distinguir as pessoas que me interessa conhecer daquelas que não me interessa
67. Prefiro conhecer homens para sexo através da Internet do que numa sauna
68. Por causa da Internet tenho uma vida sexual mais satisfatória
69. Penso que sou uma pessoa mais aberta agora por utilizar a Internet para encontrar parceiros sexuais
70. Adoro sentir-me como um objecto sexual na Internet
71. A Internet faz com que me sinta menos satisfeito ao nível sexual
72. Através da Internet conheci homens com gostos sexuais ajustados aos meus
73. Gosto de me despír frente a câmara na Internet para outros homens verem
74. Prefiro conhecer homens para sexo através da Internet do que na rua
75. Na Internet sinto-me como se estivesse exposto num talho
76. Considero-me mais realizado por utilizar a Internet para conhecer outros homens
77. Prefiro conhecer homens para sexo através da Internet do que através de amigos ou conhecidos
78. Utilizar a Internet para conhecer parceiros sexuais teve um impacto negativo na forma como me vejo a mim próprio
79. Na Internet é mais fácil falar sobre sexo seguro com os meus potenciais parceiros sexuais

80. Sinto-me melhor comigo próprio desde que comecei a utilizar a Internet para conhecer outros homens
81. Prefiro não revelar informação pessoal aos homens que conheço através da Internet
82. Acho de mau gosto que outros homens se possam masturbar a ver as minhas fotografias na Internet
83. Prefiro conhecer homens para sexo através da Internet do que num bar
84. Considero-me uma pessoa mais feliz desde que uso a Internet para conhecer outros homens
85. A Internet permitiu-me conhecer homens que de outra forma não teria conhecido
86. Não gosto de ser visto como um objecto sexual na Internet
87. Através da Internet é mais fácil encontrar homens com preferências sexuais semelhantes às minhas
88. Sou uma pessoa pior desde que uso a Internet para conhecer outros homens
89. Na Internet consigo expressar-me de forma mais autêntica
90. Conhecer outros homens através da Internet é mais seguro do que noutros locais
91. Usar a Internet para conhecer homens ajudou-me a aceitar melhor a minha homossexualidade ou bissexualidade
92. É uma ilusão pensar que é possível encontrar namorados na Internet
93. A Internet permitiu a realização das minhas fantasias sexuais
94. Por causa da Internet sou agora mais desconfiado em relação aos homens do que era antes
95. Sou mais eu mesmo quando estou a teclar com alguém na Internet do que face-a-face
96. É arriscado conhecer homens que se contactaram através da Internet
97. Antes de utilizar a Internet não me sentia tão sexualmente realizado como agora
98. As relações que estabeleci através da Internet com outros homens são menos sólidas do que as que estabeleci noutros locais
99. A Internet permitiu-me ter melhores experiências com outros homens ao nível sexual
100. Não me sinto seguro quando me encontro com homens que conheci através da Internet
101. A Internet fez com que me tornasse numa pessoa sexualmente mais activa
102. Prefiro conhecer homens para sexo através da Internet do que numa discoteca
103. Gosto de expor o meu corpo na Internet
104. Os homens tendem a mentir mais na Internet do que quando os conheço noutros locais
105. A Internet permite-me ser mais desinibido sexualmente
106. Não tenho qualquer problema em expor-me na Internet para deleite de outros homens

- TERMINAR

Muito obrigado pela sua participação. Agradecemos que divulgue este questionário junto de outros interessados.

Se tiver alguma dúvida ou quiser colocar-nos uma questão sobre esta investigação, por favor envie-nos um email para estudo-internet@clix.pt.

Appendix 6 – Parallel Article 1: The sex life of personal ads: A literature review

Nodin, N. (2007). A vida sexual dos anúncios pessoais: Uma revisão de literatura [The sex life of personal ads: A literature review]. *Análise Psicológica*, 3, 25, 351-361.

A vida sexual dos anúncios pessoais: Uma revisão da literatura

NUNO NODIN (*)

“Procuro alguém para tomar conta do meu coração. Não necessita de experiência anterior, apenas carinho, compreensão e dedicação exclusiva. Tem que ter um pouquinho de ciúmes, alegria contagiante, abraço apertado e muita, muita paixão. Dou ticket-afecto e vale-felicidade. Pagamento de infinitos beijinhos por mês.”

(Anúncio publicado num jornal e circulado por via electrónica)

ÀS COMPRAS NA SECÇÃO DE ANÚNCIOS PESSOAIS

As pessoas utilizam diversas formas e contextos para encontrar outras com o objectivo de estabelecer relacionamentos amorosos e sexuais. Uma dessas formas é a colocação de anúncios pessoais em meios de comunicação social de forma a obter larga visibilidade e assim também aumentar as probabilidades de resposta.

Ao longo das últimas décadas, ainda que não de modo consistente, tem sido realizada alguma investigação no âmbito das ciências sociais que

utiliza os anúncios como fonte de material. Tipicamente estes estudos procedem à recolha de um número significativo de anúncios, utilizando critérios como sejam o meio onde estes são colocados (jornais, revistas, anúncios telefónicos, Internet, etc.), a população visada (homens, mulheres, homossexuais, heterossexuais) e o período de tempo em que deverão ser recolhidos (uma semana, um mês, ao longo do ano, em determinados meses ao longo de diversos anos, etc.), utilizando ou não uma metodologia aleatória na sua recolha, ao que sucede uma análise de conteúdo do material e eventual estudo estatístico das categorias de análise desenvolvidas e das variáveis foco de interesse.

Na sua grande maioria estas investigações procuram estudar diferenças ao nível do género encontradas entre homens e mulheres, bem como entre homossexuais e heterossexuais. Alguma desta investigação tem-se debruçado sobre os anúncios da população homossexual apenas, em particular no que se refere a interesses sexuais e a dimensões de risco sexual, tal como podem ser avaliadas neste contexto. O presente artigo pretende rever esta literatura de forma a caracterizar os resultados encontrados nesta linha de investigação.

Ao longo do artigo, serão utilizados os termos homens homossexuais, homens que têm sexo com homens (HSH) e gays como equivalentes, assim como heterossexuais e homens que têm sexo com mulheres (HSM) o serão, e lésbicas e mulheres

(*) Doutorando em Psicologia Clínica ISPA/UN. Bolsa FCT SFRH/BD/17396/2004. E-mail: nunonodin@netcabo.pt

homossexuais também, reflectindo as diferentes designações com que tais populações têm sido descritas na literatura científica ao longo dos últimos 30 anos.

UTILIZAR OU NÃO UTILIZAR ANÚNCIOS PESSOAIS, EIS A QUESTÃO

A utilização de anúncios pessoais como fonte de material para investigação científica apresenta vantagens, assim como alguns problemas que convém enumerar. Lynn e Bolig (1985) descreveram três características positivas deste recurso: (1) os indivíduos não sabem que estão a ser investigados; (2) o contexto em que os anúncios são colocados é naturalístico, assim evitando-se as influências do laboratório sobre os resultados da investigação; e (3) a amostra assim recolhida acaba por ser mais representativa da população geral do que a população universitária que tradicionalmente tem sido utilizada em muita investigação comportamental. Na mesma linha, Montini e Ovrebø (1990) referem que utilizar anúncios, em particular na investigação relativa a temáticas de foro sexual, é vantajoso porque se trata de um processo duplamente cego, evitando-se portanto os problemas associados a este tipo de temas quando a investigação é efectuada face-a-face.

No que se refere, porém, à questão da representatividade da amostra (Lynn & Bolig, 1985), há que ter em consideração que não necessariamente os indivíduos que utilizam anúncios para conhecer potenciais parceiros amorosos ou sexuais poderão ser considerados representativos da população geral. Uma investigação realizada em Inglaterra (Goodwin, 1990) que avaliou as características de homens e mulheres que utilizavam agências de encontros com o mesmo objectivo, verificou que esses indivíduos apresentavam níveis de formação académica e de sucesso profissional superior ao da população geral. Além disso, apresentavam uma lacuna ao nível da sua capacidade em utilizar redes de apoio social para encontrar parceiros, motivo pelo qual recorriam a agências para o efeito. Como refere Bartholome et al. (2000), “personal ads represent a minority, atypical, and slightly deviant mode of courtship” (op. cit, p. 311).

Apesar disso, há que considerar que esta realidade, nos últimos anos e com a crescente popularidade da Internet, sofreu modificações. Uma

delas foi a significativa migração dos anúncios pessoais para o contexto virtual, mas simultaneamente uma relativa vulgarização deste fenómeno, passando a ser muito mais frequente a utilização da Internet e de sítios especializados para oferecer e procurar relações de diverso tipo. É de referir, no entanto, que já anteriormente à explosão da utilização da Internet que, pelo menos nos EUA nos finais dos anos de 1980, se havia verificado um significativo aumento dos anúncios pessoais colocados em jornais (Hamers, Bueller & Peterman, 1997; Merskin & Huberlie, 1996).

Strassberg e Holty (2003) descreveram quatro vantagens da Internet para a colocação de anúncios pessoais na perspectiva do anunciante e de quem queira responder: (1) Estes anúncios são gratuitos ou apresentam muito baixo custo; (2) podem alcançar um público bastante alargado; (3) possibilitam a colocação de fotografias [alguma da comunicação social tradicional já o permitia, mas com considerável acréscimo de dispendio e não de uma forma tão simples como na Internet]; e (4) permite um maior anonimato de ambas as partes.

Todos estes aspectos, com a excepção do terceiro, podem também constituir-se como vantagens para um investigador que deseje utilizar a Internet como fonte de material para pesquisas sobre sexualidade. Além disso, pelo menos no que respeita a homens que têm sexo com homens, parece não existir uma diferença significativa entre aqueles que utilizam a imprensa tradicional para colocar anúncios pessoais e os que recorrem à Internet para o mesmo efeito (Phua, 2002).

As características básicas que levam muitas pessoas a utilizar a Internet com objectivos sexuais foram descritas por Cooper (1998), que as designou de “motor triplo”: o anonimato, o baixo custo e a fácil acessibilidade. A Internet levou também uma hiper-especialização, não apenas associada à orientação sexual, que já ocorria noutros contextos, mas também ao nível de interesses sexuais particulares, existindo uma miríade de sítios dedicados a temáticas como o *swing*, o *cross-dress*, o *sado-masochismo*, entre muitos outros. Neles, indivíduos com preferências sexuais particulares podem divulgar os seus gostos e interesses sem grande receio de rejeição ou ostracismo, bem como procurar outros com perfis semelhantes para partilha de ideias e encontros. Este fenómeno foi designado de “*push factor*” (Rosenmann & Safir, 2006), reforçando o papel que a discriminação que alguns

indivíduos sofrem no mundo “real” pode ter, *empurrando-os* para a Internet onde encontram reconhecimento, aceitação e empoderamento.

Uma questão que na Internet perdeu o peso que tinha nos anúncios colocados na comunicação social tradicional foi a da utilização de acrónimos de forma a tornar os anúncios menos longos e portanto menos dispendiosos para o anunciante. É, ainda hoje, vulgar encontrar anúncios em jornais ou revistas com informações como “22a”, indicando a idade, ou “h/m” indicando que o anunciante não tem preferência pelo sexo de quem possa responder. No mundo anglo-saxónico, apesar de tudo, não necessariamente se deixaram de utilizar acrónimos, em particular em anúncios de gays, em que continua a ser frequente a utilização de acrónimos para designar características do anunciante ou actividades procuradas. Seria possível, por exemplo, encontrar o seguinte anúncio “*DTE Uc BAM iso GWM 4 NS PnP & BB*” que significa “Down to earth Uncut [não circuncidado] Bisexual asian male In search of Gay white male for No strings [sem compromisso] Party and play [actividade sexual associada a drogas] and Barebacking [sexo não protegido]”.

Neste exemplo propositadamente exagerado também se torna evidente que o investigador que se debruce sobre anúncios associados a algum grupo que utilize os seus próprios códigos terá a necessidade de se familiarizar com os mesmos antes de proceder à análise dos seus dados, sob o risco, se não o fizer, de elaborar interpretações incorrectas ou incompletas. Tal continua a ser verdade para qualquer investigação que utilize anúncios provenientes da comunicação social tradicional.

Por último, outra vantagem a assinalar da utilização de anúncios em investigação científica é a possibilidade que oferecem de avaliar a evolução da linguagem neles utilizada e seus significados, ao longo do tempo (Davidson, 1991). Basta recorrer a arquivos da comunicação social, muitos dos quais actualmente disponíveis na Internet, para, sem grande despesa associada, poder realizar uma análise retrospectiva da evolução dos conteúdos de anúncios ao longo de determinado período de tempo numa dada população. Algumas investigações tiraram partido desta possibilidade, em particular as que procuraram monitorizar a linguagem associada a comportamentos de risco relativo ao

VIH (Davidson, 1991; Hamers, Bueller & Peterman, 1997).

MULHERES, HOMENS E ANÚNCIOS

Uma grande área de investigação no contexto da qual têm sido utilizados anúncios pessoais como fonte de material é a dos processos de procura de parceiros e de atracção amorosa na sua relação com o género. Duas perspectivas teóricas têm sido utilizadas nestes trabalhos: os modelos da psicobiologia evolutiva (Gangestad, 2000; Hill & Reeve, 2004) e o modelo das trocas sociais (Foa, 1976; Foa & Foa, 1974; Hirschman, 1987).

A primeira baseia-se nas ideias de Darwin, em particular nas de selecção intrasexual e interssexual (Darwin, 1871, cit. por Bartholome et al., 2000). A selecção *intrasexual* presume que os membros de um sexo irão competir uns com os outros por parceiros do sexo oposto. A selecção *interssexual* pressupõe que os membros de um sexo tendem a ter determinadas preferências na escolha de um parceiro. À luz da teoria evolutiva, estas características serão as que indicam uma maior probabilidade de permitir descendência, ou seja, indicadores de fecundidade nas mulheres e de bons recursos (físicos e económicos) nos homens.

O modelo evolutivo aplicado à escolha de parceiros sexuais pressupõe assim que esta escolha seja realizada com base numa decisão de alguma forma egoísta (ainda que inconsciente) que tem em vista a obtenção do maior benefício possível de uma relação. As mulheres seriam escolhidas tendo em consideração o seu aspecto físico, sendo a atractividade considerada um sinal de boa capacidade reprodutiva, enquanto que os homens seriam escolhidos em função do seu estatuto, avaliado como aumentando as probabilidades de sobrevivência dos filhos.

O modelo das trocas sociais (Foa, 1976; Foa & Foa, 1974), por sua vez presume que os indivíduos procuram escolher o melhor parceiro possível, oferecendo para o efeito aquelas que consideram ser as suas qualidades. Tratar-se-á, assim, de uma verdadeira troca, baseada no valor aproximado que cada indivíduo tem no mercado das relações interpessoais, valor este composto por variáveis como a beleza física, as características de personalidade, o estatuto, entre outras. De acordo com este modelo, os indivíduos tenderão a estabelecer

relacionamentos com outros que apresentem um valor aproximado ao seu próprio. A forma como este modelo descreve a procura de parceiros levou Cameron, Oskamp e Sparks (1977), não sem uma ponta de ironia, a equiparar a secção de anúncios pessoais dos jornais às cotações da bolsa de Nova Iorque.

Como é perceptível, ambos os modelos não são mutuamente exclusivos e podem inclusive complementar-se, proporcionando o modelo evolutivo uma explicação socio-biológica para o modelo das trocas sociais (Kenrick et al., 1993). A investigação realizada suporta ambos os modelos, ainda que o das trocas sociais tenha sido mais utilizado para prever e explicar diferenças encontradas entre homens e mulheres a este nível.

A generalidade dos estudos que recorrem a anúncios para avaliar dimensões de género no processo de corte, inclusivamente os pioneiros, parecem consubstanciar quer um quer outro modelo (Cameron, Oskamp & Sparks, 1977; Deaux & Hanna, 1984; Harrison & Said, 1977; Willis & Carlson, 2004). Verificou-se que os homens tendem a oferecer segurança financeira e a procurar atractividade física e idade jovem, enquanto que nas mulheres a tendência vai no sentido da procura de estabilidade financeira e estatuto e da oferta de beleza física.

No único estudo realizado em Portugal utilizando esta metodologia e com objectivos similares, Neto (2005) encontrou resultados equiparáveis, com algumas *nuanças*. Na sua amostra, e tal como conjecturado, mais homens do que mulheres ofereciam estabilidade financeira e as mulheres tendiam a procurar essa estabilidade, bem como sinceridade e características instrumentais, consideradas tipicamente masculinas (tais como independência, assertividade e capacidade de decisão). Porém e paradoxalmente, eram também elas que mais ofereciam características deste tipo. Os homens apresentavam uma maior probabilidade de procurar mulheres mais novas, enquanto que as mulheres tendiam a procurar homens mais velhos. Assim, apesar de na generalidade esta investigação ir ao encontro de outras que anteriormente foram realizadas na mesma área, verificaram-se zonas de discordância que o autor atribui a factores de diversidade intercultural.

Outro estudo em que as expectativas baseadas nestas teorias foram apenas parcialmente verificadas foi o realizado por Koestner e Wheeler em

1988. As previsões gerais do modelo das trocas sociais confirmaram-se: os homens mais frequentemente ofereciam estatuto profissional e procuravam atractividade, enquanto que as mulheres mais frequentemente apresentavam a atitude recíproca, oferecendo características de atracção física e procurando em potenciais parceiros estatuto profissional. Além disso, os homens tendiam a oferecer com mais frequência altura elevada e a procurar baixo peso, enquanto que as mulheres também aqui ofereciam a postura recíproca.

Porém, outros resultados deste estudo que podem de alguma forma ser considerados atípicos encontram-se nas características de personalidade que estes indivíduos procuravam nos outros. Assim, os homens tendiam a oferecer traços expressivos (tais como a bondade, a sensibilidade e a expressão emocional) e a procurar traços instrumentais, verificando-se nas mulheres o padrão recíproco. Apesar destes resultados irem ao encontro da teoria das trocas sociais, eles são contrários aos previstos nas teorias de género, uma vez que evidenciam nos indivíduos de cada género o sublinhar de características tradicionalmente associadas ao outro e a procura nos potenciais parceiros de traços que em geral são esperados no seu próprio género.

Os autores procuraram explicar este resultado indicando que os anunciadores terão provavelmente noções de género não-tradicionais tendo em conta os jornais dos quais foram retirados os anúncios utilizados na investigação. Defendem, além disso, que de forma a aumentar o seu potencial atractivo, os indivíduos tenderiam a apresentar-se levando em linha de conta o factor de deseabilidade social (não sendo, portanto, “autênticas” na sua caracterização de si próprias e do que desejam nos outros, mas descrevendo o que pensam que os outros valorizam).

Alguns autores interessaram-se, não pelo conteúdo dos próprios anúncios, mas pelo tipo de respostas que estes poderiam receber. Estudos experimentais foram assim desenhados de forma a averiguar o número e o conteúdo das respostas recebidas por determinado tipo de anúncios. Sitton e Blanchard (1995) colocaram dois anúncios, um descrevendo uma mulher com excesso de peso (8 respostas) e outro uma mulher em processo de recuperação de uma dependência química (30 respostas). Noutro estudo do mesmo tipo (Goode, 1996) foram colocados quatro anúncios fictícios que descreviam uma bonita empregada de mesa

(668 respostas), uma advogada de aspecto normal (240 respostas), um advogado de aspecto normal (64 respostas) e um belo condutor de táxi (15 respostas). Os resultados destas investigações parecem indicar que, enquanto que os respondentes aos anúncios femininos claramente são atraídos pelo aspecto físico das supostas anunciantes, as mulheres que responderam aos anúncios masculinos parecem estar mais à procura de estatuto.

Já recorrendo à Internet para a colocação de anúncios fictícios de forma a analisar as respostas obtidas, Strassberg e Holty (2003), à semelhança de estudos citados anteriormente, verificaram um padrão contrário do que previram. Estes autores colocaram quatro anúncios diferentes, todos eles femininos, um realçando a beleza física, outro o sucesso e a ambição, outro a sensualidade e, por último, um de controlo, não evidenciando nenhuma característica particular. Contrariamente às hipóteses colocadas e aos modelos evolucionista e das trocas sociais, foi o anúncio que enaltecia a ambição e o sucesso profissional que, de longe, alcançou um maior número de respostas (185), seguido do que realçava a atracção física da suposta anunciante (129), do anúncio de controlo (103), e por último do que destacava a sensualidade (90).

É possível, através de uma análise exterior, verificar que começa a surgir um padrão nos resultados “atípicos” destas investigações que, regra geral, revela uma postura diferente do esperado em função das tradicionais relações entre homens e mulheres. Muito possivelmente estes resultados são na verdade sintomáticos de uma real alteração destes padrões na sociedade, mais do que uma aberração ou fruto de um enviesamento das investigações. De facto, cada vez mais as mulheres ocupam lugares de referência e destaque a nível social e profissional, ainda que não necessariamente da forma que seria desejável (Vicente, 1998) sendo de esperar que o mercado das relações interpessoais e da procura de parceiros, nomeadamente através da colocação de anúncios, reflecta essa mesma situação.

Uma nota final nesta secção para referir uma investigação (Rajecki, Bledsoe & Rasmussen, 1991) que apresenta os resultados de um inquérito enviado a indivíduos que colocaram anúncios pessoais. Devolveram o inquérito 40,6% daqueles a quem o mesmo foi enviado. Verificou-se que foram muitas mais as mulheres a receber respostas aos seus anúncios do que homens e que a idade se encontrava

associada à probabilidade de receber respostas (mulheres mais novas e homens mais velhos receberam mais respostas). Mais de metade de homens (62%) e mulheres (65%) encontraram-se com pelo menos um dos respondentes.

HOMEM PROCURA HOMEM: E ENTÃO?

Pouco tempo depois de se ter iniciado a investigação sobre questões de género recorrendo a anúncios pessoais, alguns investigadores questionaram-se sobre qual seria o padrão encontrado em anúncios de indivíduos homossexuais. Assim surgiram os primeiros estudos deste tipo que procuraram estudar esta população, alguns dos quais comparando-a com a heterossexual. Tais análises permitem um olhar diferenciado sobre as investigações apresentadas até agora, uma vez que as tradicionais expectativas associadas às relações entre homens e mulheres não se colocam aqui.

Laner e Kamel (1977) levaram a cabo aquele que parece ser o primeiro destes estudos, no qual procuraram testar três hipóteses: (1) que as características físicas e de personalidade positivas seriam realçadas e que as negativas seriam minimizadas nos anúncios de homossexuais; (2) que os homossexuais masculinos, comparados com homens e mulheres heterossexuais, mais frequentemente seriam directos em relação ao tipo de relacionamento pretendido; e (3) que os anúncios de homossexuais apresentariam sinais de virilização, ou seja, de valorização de elementos que reforçassem a sua masculinidade. Apesar de não terem incluído no seu estudo a análise de anúncios de heterossexuais, recorreram aos resultados de outra investigação (Cameron, Oskamp & Sparks, 1977) como termo de comparação.

Todas as suas hipóteses foram confirmadas pelos resultados. A segunda hipótese em particular foi aquela que evidenciou maiores diferenças entre os grupos estudados, sendo que 94% dos anúncios de homossexuais indicavam o objectivo da relação procurada, enquanto que apenas 61% dos homens e 56% das mulheres heterossexuais o fizeram. Em cerca de metade dos anúncios de homens gays que indicavam o tipo de relação que procuravam, essa relação era do tipo sexual.

De resto, o facto de os homens homossexuais realçarem as suas características positivas e de omitirem as negativas, tal como previsto, vai ao

encontro do defendido pelo modelo das trocas sociais e do encontrado na investigação de Cameron et al. (1977) com a população heterossexual. Confirma-se assim que os indivíduos, independentemente da sua orientação sexual procuram aumentar as probabilidades de conhecer outros, oferecendo nos seus anúncios elementos que considerem desejáveis em detrimento de outros considerados menos favoráveis. Além disso, verificou-se que as características consideradas típicas de homens e mulheres encontram, em anúncios de homossexuais masculinos e femininos, uma expressão mais óbvia.

Uma outra investigação que comparou anúncios de gays e lésbicas (Hatala & Prehodka, 1996) concluiu que os homens demonstravam um maior interesse na atracção física de potenciais parceiros, enquanto que as mulheres tendiam a dar mais atenção a características de personalidade. Por outro lado, verificou-se também que as mulheres mais do que os homens se descreviam em termos de características pessoais e que os homens eram mais explícitos sobre o facto de procurarem parceiros sexuais. Assim, os autores desta investigação concluíram que é o género, mais do que a orientação sexual que influenciava a procura de parceiros, o que vai no sentido de investigações anteriores que indicavam que os anúncios pessoais de mulheres lésbicas tendem a ser mais semelhantes aos de mulheres heterossexuais do que aos de homens de qualquer orientação sexual (Laner, 1978).

Esta, porém, poderá ser uma leitura grosseira que não leva em linha de conta aspectos mais finos da forma como indivíduos heterossexuais e homossexuais procuram parceiros e do que valorizam a esse nível. Foi exactamente no sentido de avaliar essas questões que Phua (2002) desenhou uma investigação utilizando anúncios disponíveis na Internet de HSH e HSM. Um dos seus resultados mais evidentes foi o facto de os homens homossexuais referirem com frequência nos seus anúncios características que realçassem a sua masculinidade, enquanto que os heterossexuais raramente o faziam. Tal levou o autor a afirmar que aparentemente o próprio acto de procurar mulheres tende a reafirmar a masculinidade do anunciante, enquanto que os homossexuais parecem necessitar de a sublinhar.

Por outro lado, verificou também que os homossexuais frequentemente demonstravam um repúdio por homens com características femininas, e que era comum procurarem parceiros que tivessem

um comportamento heterossexual (*straight acting*), querendo com isto significar homens que não sejam identificados ao olhar como sendo gays. Estes resultados vão ao encontro de pesquisa realizada anteriormente (Davidson, 1991), em que homens gays revelaram nos seus anúncios uma rejeição dos padrões estereotipados da homossexualidade.

Bartholome et al. (2000), por sua vez, na análise realizada a anúncios de voz acessíveis através de telefone no Canadá, confirmaram a grande ênfase que homens gays colocam em dimensões físicas e sexuais, quer no que respeita ao que oferecem, como em relação ao que procuram. Quarenta e cinco por cento dos 167 anúncios analisados continham referências directas aos genitais, 40% a posições sexuais, 38% a actos sexuais e 81%, respectivamente, a características corporais e à idade. Estes resultados confirmam assim estudos já citados (Hatala & Prehodka, 1996; Laner e Kamel, 1977) bem como outros (Phua et al., 2002; Tewksbury, 2003) que revelam que homens que procuram outros através de anúncios pessoais têm maiores probabilidades de procurarem sexo, ou pelo menos de serem mais explícitos sobre esse seu objectivo, e também de incluírem nos seus anúncios várias informações sobre aspectos relacionados com a actividade sexual.

ANÚNCIOS PESSOAIS NA ERA VIH

Alguns estudos têm-se debruçado sobre as indicações relativas à saúde e aos comportamentos seguros e de risco em relação ao VIH que se encontram em anúncios pessoais. Estas investigações, apesar de não serem em número significativo, são importantes porque se tem verificado, numa linha de investigação recente mas paralela à aqui revista, uma relação significativa entre a utilização da Internet para estabelecer encontros sexuais e diversos indicadores de risco (Benotsch et al., 2002; Elford et al., 2001; McKirnan et al., 2006; Tikkanen & Ross, 2003). Alguns desses indicadores são incidências mais elevadas de infecções sexualmente transmissíveis (Elford et al., 2001; Lau et al., 2003; McKirnan et al., 2006; Rhodes, 2002), menor probabilidade de realização do teste de detecção do VIH (Tikkanen & Ross, 2003) e menor percepção de risco de contrair VIH através do sexo oral (Lau et al., 2003).

A literatura sobre a inclusão de indicadores de risco e preocupações com a saúde mencionadas

em contexto de anúncios pessoais é, de resto e na generalidade, também independente da que cobre as temáticas relativas ao género que revimos em secções anteriores, com excepções pontuais, e centra-se essencialmente sobre a população homossexual.

Uma das primeiras investigações que se debruçou sobre esta questão (Davidson, 1991), utilizou anúncios de homens gays publicados em jornais ao longo do período de descoberta e profusão do fenómeno VIH/SIDA, procurando averiguar a existência de padrões. Verificou um aumento significativo da utilização de linguagem relacionada com a saúde física (1978 – 2,44%; 1982 – 6,46%; 1985 – 25,12%; 1988 – 36,40%), bem como da procura de relações de exclusividade sexual (1978 – 2,44%; 1982 – 4,76%; 1985 – 11,11%; 1988 – 13,41%). Para o autor, estes resultados revelam o impacto significativo do aparecimento do VIH nos padrões de relacionamento de homossexuais.

Um outro estudo retrospectivo e longitudinal (Hamers, Bueller & Peterman, 1997) procurou monitorizar a evolução da linguagem relacionada com o VIH ao longo de 8 anos consecutivos (1986-1993). Foram utilizados 17.059 anúncios colocados em jornais de quatro grandes cidades norte-americanas por indivíduos de ambos os sexos que procuravam relacionamentos quer com mulheres quer com homens.

No período analisado, verificou-se um aumento em seis vezes dos anúncios que incluíam alguma menção ao VIH, e em 20 vezes dos que referiam preferência por parceiros não infectados (“*disease free*”), ainda que este fenómeno fosse, pelo menos no primeiro caso, em grande medida atribuível aos anúncios de homens que procuravam sexo com homens.

Este estudo constatou ainda, na linha do verificado por Davidson (1991), uma associação significativa entre a menção do estatuto serológico e a procura de uma relação monogâmica ou de longa duração. De notar, no entanto, que apesar destes resultados significativos do estudo, a percentagem total de referências ao VIH nos anúncios analisados foi de apenas 1,8% (8% para HSH e menos de 1,6% para os restantes) e a percentagem da menção de “*disease free*” de 3,3% (MSM – 6,9%; HSM – 3%; HSH – 2,4%; MSH – 1,6%). Ou seja, ao contrário do que se poderia esperar e apesar de um aumento significativo de indicações

associadas ao VIH neste período, constatou-se que esse se tratou de um fenómeno marginal.

Diferenças entre gays e não gays foram também encontradas numa outra investigação norte-americana (Phua, Hopper & Vazquez, 2002) que utilizou apenas anúncios de homens (HSH e HSM) na sua análise. Verificou-se que HSH apresentavam uma probabilidade duas vezes superior de mencionar factores relacionados com a saúde nos seus anúncios quando comparados com HSM. Além disso, eram os homens que indicavam procurar actividade sexual através dos seus anúncios (essencialmente HSH) os que mais indicavam questões relacionadas com a saúde nos seus anúncios.

Uma das leituras possíveis destes resultados é que, em termos relativos, parece que indivíduos heterossexuais não apresentam significativa percepção de vulnerabilidade face ao VIH, o que por sua vez vai ao encontro da investigação realizada sobre essa temática (Ferguson & Frankis, 2001). Tal poderá dever-se à sistemática associação que ocorreu por um período excessivamente prolongado de tempo, entre a infecção pelo VIH e os chamados “grupos de risco”, incluindo o dos homossexuais masculinos. Esta associação poderá ter tido como efeito colateral o aumento da percepção de invulnerabilidade entre heterossexuais (Guerra, 1998).

Por outro lado, é inviável, partindo dos resultados relativos ao conteúdo de anúncios pessoais, aferir os reais comportamentos de risco ou de saúde dos seus anunciantes (Phua et al., 2002), mantendo-se a possibilidade de, apesar das preocupações constantes nos anúncios, muitos indivíduos acabarem por ter comportamentos de risco nas suas práticas sexuais. De resto, em anos mais recentes e por um conjunto diverso de motivos, tem-se verificado, em particular entre HSH, o acréscimo de indivíduos que activamente procuram ter relações sexuais sem utilizar o preservativo em situações em que o risco de infecção pelo VIH não se encontra excluído. A este fenómeno, sobretudo estudado no mundo anglo-saxónico, foi dado o nome de *barebacking* (literalmente, de costas nuas; da expressão inglesa utilizada para andar a cavalo sem sela) (Carballo-Diéguez & Bauermeister, 2004; Crossley, 2004; Halkitis et al., 2005).

Devido ao facto de muitos indivíduos que praticam *barebacking* utilizarem a Internet para encontrar parceiros sexuais e também por se tratar de um comportamento bizarro tendo em consideração

os riscos conscientes para a saúde que acarreta, Tewksbury (2003) desenvolveu uma investigação sobre esta temática. Nela procedeu à análise de anúncios de *barebackers* colocados num sítio na Internet especializado neste tipo de práticas.

Os resultados deste estudo revelaram que a maioria dos homens cujos anúncios foram estudados (todos os novos anúncios colocados num sítio especializado da Internet no espaço de uma semana; n=880) indicavam ser seronegativos para o VIH (70,6%). Cerca de um em cinco (19,3%) indicavam ser seropositivos e menos ainda não apresentavam qualquer informação a esse propósito (10,1%). Apenas 4,8% indicavam procurar parceiros infectados e 57,1% procuravam parceiros não infectados.

A resposta à grande questão que se coloca a propósito destes homens (Será que de facto, através destas práticas, eles estão à procura da infecção pelo VIH?) parece ser claramente negativa. São menos de 1% os homens não infectados que indicam procurar contacto sexual com parceiros seropositivos e menos de 2% os seropositivos que indicam procurar parceiros seronegativos. Porém, como o autor faz questão de realçar, é significativa a percentagem daqueles que não indicam preferência pelo estatuto do parceiro (71,9% dos HIV+; 17,4% dos VIH-). Estes poderão ser indivíduos que, apesar de não explícita ou activamente procurarem infecção, poderão de facto estar a ter comportamentos de risco nas suas actividades sexuais.

Ao contrário do que o senso comum e a comunicação social têm vindo a evidenciar desde o início da publicitação de comportamentos de *barebacking* (e.g. Goode, 2001), os resultados desta investigação parecem indicar que esse comportamento em essência não se prende com a procura activa de infecção pelo VIH, mas eventualmente mais com outros factores, tais como a procura de intimidade e de prazer (Carballo-Dieguéz et al., 2006) ou a erotização do risco sexual (Junge, 2002). Além disso, muitos homens que optam por não utilizar preservativos, pelos motivos mencionados ou outros, recorrem frequentemente a uma outra estratégia de prevenção do contágio pelo VIH que é a escolha de parceiros do mesmo estatuto serológico (*serosorting*, em Inglês) (Cox, Beauchemin & Allard, 2004; Clatts, Goldsamt & Yi, 2005; Parsons et al., 2006). Apesar de não tão eficaz quanto à utilização de preservativos no acto sexual, esta escolha estratégica de parceiros é considerada por muitos como uma forma alternativa de prevenção.

A utilização de anúncios pessoais em investigação científica tem aproximadamente 30 anos de existência, ainda que não de forma contínua. As primeiras investigações foram publicadas na segunda metade da década de 1970, com alguns artigos dispersos pela década de 1980 e outros tantos concentrados em inícios de 1990, apenas voltando a surgir um novo conjunto sólido de publicações depois de 2000.

A maioria destes artigos dedica-se ao estudo dos padrões relacionados com o género em homens e mulheres, em particular no que respeita ao que os anunciantes oferecem e ao que procuram ao nível de potenciais parceiros, utilizando como pano de fundo o modelo das trocas sociais de Foa (1976). Este nível de análise foi alargado também à população homossexual, permitindo delinear diferenças entre homossexuais e heterossexuais. Mais tarde dedicou-se ainda à análise de indicadores de risco sexual relativo ao VIH nos anúncios colocados na imprensa tradicional e na Internet.

A generalização da utilização da Internet levou ao aumento exponencial da colocação de anúncios com diversos fins, em particular os pessoais, relacionais e sexuais. Na perspectiva do investigador, este fenómeno proporcionou um aumento considerável da acessibilidade aos anúncios e do número de fontes de material disponíveis.

Das diferenças entre homens e mulheres heterossexuais, evidenciou-se um padrão em que mulheres tendem a oferecer atractividade física e idade jovem e a procurar estabilidade financeira e estatuto, e em que homens procuram atracção física e oferecem estabilidade financeira e idade superior (Cameron, Oskamp & Sparks, 1977; Deaux & Hanna, 1984; Goode, 1996; Harrison & Said, 1977; Koestner & Wheeler, 1988; Neto, 2005; Rajcecki, Bledsoe & Rasmussen, 1991; Sitton & Blanchard, 1995; Willis & Carlson, 2004).

Porém, existem indicadores de uma mudança ao nível dos tradicionais papéis e expectativas de género em investigações mais recentes. Estes indicadores têm vindo a evidenciar que mulheres tendem a oferecer e a ser valorizadas pelas suas características de sucesso profissional (Strassberg & Holty, 2003) e os homens pelas suas capacidades de expressão emocional (Koestner & Wheeler, 1988).

As investigações com anúncios de indivíduos

homossexuais masculinos demonstraram que estes têm maior tendência a indicar as suas preferências ao nível relacional quando comparados com heterossexuais (Laner & Kamel, 1977), e também que mais frequentemente indicam procurar relacionamentos sexuais (*ibidem*; Hatala & Prehodka, 1996). Em conformidade, tendem a providenciar e a solicitar informações sobre dimensões físicas e preferências sexuais (Bartholome et al., 2000; Hatala & Prehodka, 1996; Tewksbury, 2003). Verificou-se ainda uma necessidade pronunciada por parte destes indivíduos de pedir e oferecer virilidade nos seus anúncios (Bartholome et al., 2000; Davidson, 1991; Phua, 2002)

Da população homossexual feminina, verificou-se uma valorização de características de personalidade em detrimento das físicas (Hatala & Prehodka, 1996; Laner, 1978).

Na sua grande maioria e diagonalmente às dimensões de género e orientação sexual, estas investigações vão ao encontro do esperado pelo modelo de trocas sociais (Foa, 1976; Hirschman, 1987) e parcialmente também do previsto pelos modelos da psicobiologia evolutiva (Kenrick et al., 1993).

Finalmente, no que respeita a indicadores de risco em relação ao VIH, verificou-se uma evolução nítida nas referências a comportamentos seguros e ao estatuto serológico ao longo da evolução da epidemia, com um aumento, ainda que modesto dessas referências (Davidson, 1991; Hamers, Bueller & Peterman, 1997). Estas encontraram-se essencialmente em anúncios de homens homossexuais (Davidson, 1991; Phua, Hopper & Vazquez, 2002). Mesmo homens que activamente procuram actividade sexual sem utilização do preservativo, nem por isso se verificou procurem infectar-se com o VIH (Tewksbury, 2003).

Pode, assim, concluir-se que os anúncios pessoais constituem um recurso facilmente acessível e rico ao nível de diversos indicadores de relevo e áreas de interesse para as ciências sociais e humanas. Existem vantagens, bem como limitações relacionadas com este recurso e respectiva metodologia de investigação associada, que deverão ser tidas em consideração na análise dos resultados e elaboração das respectivas elações, mas não constituir-se como impeditivos para a utilização de anúncios como fonte de material.

REFERÊNCIAS BIBLIOGRÁFICAS

- Bartholome, A., Tewksbury, R., & Alex, B. (2000). "I want a man": Patterns of attraction in all-male personal ads. *Journal of Men's Studies*, 8 (3), 309.
- Benotsch, E. G., Kalichman, S., & Cage, M. (2002). Men who have sex partners via the internet: prevalence, predictors, and implications for HIV prevention. *Arch. of Sexual Behavior*, 31 (2), 177-183.
- Cameron, C., Oskamp, S., & Sparks, W. (1977). Courtship american style: Family ads. *Family Coordinator*, 26, 27-30.
- Carballo-Dieguez, A., Miner, M., Dolezal, C., Rosser, B. R., & Jacoby, S. (2006). Sexual negotiation, HIV-status disclosure, and sexual risk behavior among Latino men who use the internet to seek sex with other men. *Arch Sex Behav.*, 35 (4), 473-481.
- Carballo-Dieguez, A., & Bauermeister, J. (2004). "Barebacking": intentional condomless anal sex in HIV-risk contexts. Reasons for and against it. *Journal of Homosexuality*, 47 (1), 1-16.
- Clatts, M. C., Goldsamt, L. A., & Yi, H. (2005). An emerging HIV risk environment: a preliminary epidemiological profile of an MSM POZ Party in New York City. *Sexually Transmitted Infections*, 81 (5), 373-376.
- Cooper, A. (1998). Sexuality and the internet: surfing into the new millennium. *Cyberpsychology and Behavior*, 1, 187-194.
- Cox, J., Beauchemin, J., & Allard, R. (2004). HIV status of sexual partners is more important than antiretroviral treatment related perceptions for risk taking by HIV positive MSM in Montreal, Canada. *Sex Transm Infect*, 80 (6), 518-23.
- Crossley, M. L. (2004). Making sense of 'barebacking': gay men's narratives, unsafe sex and the 'resistance habitus'. *British Journal of Social Psychology*, 43 (2), 225-244.
- Davidson, A. G. (1991). Looking for love in the age of AIDS: the language of gay personals, 1978-1988. *The Journal of Sex Research*, 28 (1), 125-137.
- Deaux, K., & Hanna, R. (1984). Courtship in the personal column: the influence of gender and sexual orientation. *Sex Roles*, 11, 363-375.
- Elford, J., Bolding, G., & Sherr, L. (2001). Seeking sex on the internet and sexual risk behaviour among gay men using London Gyms. *AIDS*, 15 (11), 1409-1415.
- Ferguson, E., & Frankis, J. (2001). Sex and sexual orientation: the effect of group membership on individuals' judgments about self and others' HIV risk. *Journal of Homosexuality*, 41 (2), 119-143.
- Foa, U. G., & Foa, E. B. (1974). *Societal Structures of the Mind*. Springfield, IL: Charles C. Thomas.
- Foa, U. G., & Foa, E. B. (1976). Resource theory of social exchanges. In J. S. Thiabut, J. Spence, & R. Carson (Eds.), *Contemporary Topics in Social Psychology*. Morristown, NJ: General Learning Press.
- Gangestad, S. W. (2000). Human Sexual Selection, Good Genes, and Special Design. *Annals of the New York Academy of Sciences*, 907 (1), 50-61.

- Goode, E. (1996). Gender and courtship entitlement: Responses to personal ads. *Sex Roles, 34*, 144-169.
- Goode, E. (2001). With Fears Fading, More Gays Spurn Old Preventive Message. *New York Times*, A1, A30, August 19, 1.
- Goodwin, R. (1990). Dating agency members: are they different? *Journal of Social and Personal Relationships, 7*, 423-430.
- Guerra, M. P. (1998). *SIDA: Implicações psicológicas*. Lisboa: Fim de Século.
- Halkitis, P. N., Wilton, L., Wolitski, R. J., Parsons, J. T., Hoff, C. C., & Bimbi, D. S. (2005). Barebacking identity among HIV-positive gay and bisexual men: demographic, psychological, and behavioral correlates. *AIDS, 19* (1), 27-35.
- Hamers, F. F., Bueller, H. A., & Peterman, T. A. (1997). Communication of HIV serostatus between potential sex partners in personal ads. *AIDS Education and Prevention, 9* (1), 42-48.
- Harrison, A. A., & Saeed, L. (1977). Let's make a deal: an analysis of revelations and stipulations in lonely hearts advertisements. *Journal of Personality and Social Psychology, 35*, 257-264.
- Hatala, M. N., & Prehodka, J. (1996). Content analysis of gay and lesbian personal advertisements. *Psychological Reports, 78*, 371-374.
- Hill, S., & Reeve, H. K. (2004). Mating games: the evolution of human mating transactions. *Behavioral Ecology, 15* (5), 748-756.
- Hirshman, E. C. (1987). People as products: analysis of a complex marketing exchange. *Journal of Marketing, 51*, 98-108.
- Junge, B. (2002). Gay men, anal sex, and condoms: Cultural constructions of risk in the discourses of bareback sex. In E. Lewin, & W. Leap (Eds.), *Out in theory: The emergence of lesbian and gay anthropology*. Urbana: University of Illinois Press.
- Kenrick, D., Groth, G., Trost, M., & Sadalla, E. K. (1993). Integrating evolutionary and social exchange perspectives on relationships: effects of gender, self-appraisal, and involvement on mate selection criteria. *Journal of Personality and Social Psychology, 64*, 951-969.
- Koestner, R., & Wheeler, L. (1988). Self-presentation in personal advertisements: the influence of explicit notions of attraction and role expectations. *Journal of Social and Personal Relationships, 5*, 149-160.
- Laner, M. R., & Kamel, G. W. (1977). Media mating I: Newspaper "personals" ads of homosexual men. *Journal of Homosexuality, 3* (2), 149-162.
- Laner, M. R. (1978). Media mating II. "Personals" advertisements of lesbian women. *Journal of Homosexuality, 4* (1), 41-61.
- Lau, J. T. F., Kim, J. H., Lau, M., & Tsui, H. Y. (2003). Prevalence and risk behaviors of Chinese men who seek same-sex partners via the internet in Hong Kong. *AIDS Education and Prevention, 15* (6), 516-528.
- Lynn, W. M., & Bolig, R. (1985). Personal advertisements: sources of data about relationships. *Journal of Social and Personal Relationships, 2*, 377-383.
- McKirnan, D., Houston, E., & Tolou-Shams, M. (2006). Is the Web the culprit? Cognitive escape and Internet sexual risk among gay and bisexual men. *AIDS Behav., 11* (1), 151-160.
- Merskin, D. L., & Huberlie, M. (1996). Companionship in the classifieds: the adoption of personal advertisements by daily newspapers. *Journalism and Mass Communication Quarterly, 73*, 219-229.
- Montini, T., & Ovrebø, B. (1990). Personal Relationship Ads: An Informational Balancing Act. *Sociological Perspectives, 33* (3), 327-339.
- Neto, F. (2005). Sex differences in Portuguese lonely hearts advertisements. *Perceptual and Motor Skills, 101*, 393-400.
- Parsons, J. T., Severino, J., Nanin, J., Punzalan, J. C., von Sternberg, K., Missildine, W., & Frost, D. (2006). Positive, negative, unknown: assumptions of HIV status among HIV-positive men who have sex with men. *AIDS Educ Prev, 18* (2), 139-149.
- Phua, V. C. (2002). Sex and sexuality in men's personal advertisements. *Men and Masculinities, 5* (2), 178-191.
- Phua, V. C., Hopper, J., & Vazquez, O. (2002). Men's concerns with sex in personal advertisements. *Culture, Health and Sexuality, 4* (3), 355-363.
- Rajecki, D. W., Bledsoe, S. B., & Rasmussen, J. L. (1991). Successful Personal Ads: Gender Differences and Similarities in Offers, Stipulations, and Outcomes. *Basic and Applied Social Science, 12* (4), 457-469.
- Rhodes, S. D., DiClemente, R. J., Cecil, H., Hergenrather, K. C., & Yee, L. J. (2002). Risk among men who have sex with men in the United States: A comparison of an internet sample and a conventional outreach sample. *AIDS Education and Prevention, 14* (1), 41-50.
- Rosenmann, A., & Safir, M. P. (2006). Forced online: push factors of internet sexuality: A preliminary study of online paraphilic empowerment. *Journal of Homosexuality, 51* (3), 71-92.
- Sitton, S., & Blanchard, S. (1995). Men's preferences in romantic partners: Obesity vs addiction. *Psychological Reports, 77*, 1185-1186.
- Strassberg, D. S., & Holty, S. (2003). An experimental study of women's Internet personal ads. *Archives of Sexual Behaviour, 32* (3), 253-260.
- Tewksbury, R. (2003). Bareback sex and the quest for HIV: assessing the relationship in internet personal advertisements of men who have sex with men. *Deviant Behavior, 24*, 467-482.
- Tikkanen, R., & Ross, M. W. (2003). Technological tearoom trade: characteristics of Swedish men visiting gay internet chat rooms. *AIDS Education and Prevention, 15* (2), 122-132.
- Vicente, A. (1998). *As mulheres em Portugal na Transição do milénio*. Lisboa: Multinova.

Willis, F. N., & Carlson, R. A. (2004). Singles ads: Gender, social class, and time. *Sex Roles, 29* (5-6), 387-404.

Palavras-chave: Anúncios, género, sexualidade, Internet, homossexualidade.

RESUMO

O presente artigo efectua uma revisão da investigação científica que recorre aos anúncios pessoais publicados na comunicação social, na Internet e noutros meios de comunicação como fonte de material de análise. Os estudos revistos podem ser divididos de forma não discreta em três categorias: (1) a análise dos padrões de corte entre homens e mulheres, (2) a análise dos padrões de género e sexualidade cruzados com a orientação sexual e (3) a análise de indicadores de risco e de comportamentos protectores em relação ao VIH, em particular na população homossexual masculina. São ainda discutidas as vantagens e desvantagens de utilizar anúncios pessoais em investigação científica e o impacto da popularidade da Internet sobre este fenómeno.

ABSTRACT

The current review covers the scientific literature that uses personal advertisements published in the press, on the internet and in other media as a source of data. The reviewed studies can be separated into three non-discreet categories: (1) the analysis of courtship patterns in men and women, (2) the analysis of gender and sexuality patterns in their relation with sexual orientation, and (3) the analysis of HIV sexual risk and protective behaviours, in particular among gay men. Advantages and limitations of the use of personal ads within the context of scientific research are discussed, as well as the impact of increased popularity of the Internet upon this phenomenon.

Key words: Personal advertisements, gender, sexuality, Internet, homosexuality.

Appendix 7 – Parallel Article 2: The Internet, our cyborg mind

Nodin, N. (2009). The Internet, our cyborg mind. In G. Bradley., & P. Kommers (Eds.), *In Proceedings of ICT, Society and Human Beings 2009 and Web Based Communities 2009* (pp. 233-236). Portugal: International Association for Development of the Information Society. ISBN: 978-972-8924-82-9.

THE INTERNET, OUR CYBORG MIND

Nuno Nodin

Instituto Superior de Psicologia Aplicada, Lisbon, Portugal

ABSTRACT

This theoretical article examines some of the ways by which Humanity has been affected and how it has affected technology. Using the concept of prosthetics and briefly overviewing some key authors' reflections that illuminate our discussion, this article specifically focuses on how the Internet has been integrated into our thought processes. Our analysis uses Donna Haraway's metaphor of the cyborg to illustrate this phenomenon. Following up on other authors, we further suggest that human subjectivity is undergoing a shifting process due to its' coupling with computers and with the Internet, in a process that questions the very notions of self and identity, as well as that of human nature.

KEYWORDS

Internet, cyborg theory, haraway, technology

1. OF MAN AND TECHNOLOGY

It is impossible to conceive of the evolution of Humankind without considering its intimate relationship with technology. More than a collection of artifacts that make life easier, technology has been an active element of humanity's development through time. In fact, some claim that technology has developed, as Man has, within a symbiotic relationship through which both have gained and grown (Hein, 1991). According to Mark Pesce (1993), new technologies, throughout man's evolution gave way to new abilities and therefore "introduced a change in the content and structure of human culture. To state that these extensions by themselves produced these shifts in culture is to oversimplify; a complex relationship of feedback loops between humans, their artifacts, culture, and systems of communication together create these changes. (op. cit., online)

Neil Postman (1994), on a similar note, considered technology to have an ecological impact upon society. For this author, the introduction of a new technology totally changed the social and cultural landscape of the context where it is introduced. Echoing on this view, but applying it to the individual, Pesce (1993) stated that "[a]ny technological amputation [meaning use of a new technology] always has a consequent effect in the structure of the self, as the reconfiguration of the senses produced by self-amputation introduces a new gestalt, or world view" (online).

Man-made objects have progressively replaced biological functions with artificial ones, thus alleviating the body of effort and simultaneously extending Man's abilities. Wooden sticks have always been used to assist the elderly and the physically impaired walking, glasses and contact lenses have been improving people's sight for a long time, dialysis machines help overcome kidney malfunctioning, and so on and so forth. At same time, telephones, television and webcams have enhanced our communication abilities, short-circuiting time and space in ways never before imagined. The more advanced the technology, the more sophisticated the functions people are able to perform, thus extending their capacities.

Although the notion of prosthetics as applied to the substitution of limbs or teeth for man-made replacements was developed in the 16th century, that date doesn't actually mark the start of the use of physical add-ons to the people who needed them for medical reasons, as those have been present since ancient times (Coffey, online).

Man has therefore been aware for a long time that artifacts could assist overcome physical shortcomings. Consequently, on a conceptual level, many thinkers have endorsed and developed the idea that physical objects and technology can be conceived as extensions of people in many different ways. One of the first thinkers to somehow make that connection was John Locke (1689). In his discussion over property rights, he suggested that by mixing objects with labor these objects gain the same rights as those of the body of the laborer.

[E]very man has a property in his own person: this no body has any right to but himself. The labour of his body, and the work of his hands, we may say, are properly his. Whatsoever then he removes out of the state that nature hath provided, and left it in, he hath mixed his labour with, and joined to it something that is his own, and thereby makes it his property. ("Of labour", Locke, 1689)

Similar suggestions were made by Karl Marx also within the context of his reflection over labor, as well as by Freud in *Civilization and its Discontents* (1929) where the Viennese doctor wrote that "[t]he idea of men's receiving an intimation of their connection with the world around them through an intimate feeling which is from the onset directed to that purpose sounds so strange and fits in so badly with the fabric of our psychology that one is justified in attempting to discover a psycho-analytic – that is a generic – explanation of such a feeling" (p. 65). This is what this author sets himself to do in that book.

Following up on these particular topics raised by Freud and others, modern scholars have taken a step further and questioned the traditional division between psychological functions and the rest of the world in ways never envisioned before. The idea of an outsourcing mind, for instance, has been put forward by many scholars, challenging the traditional views that the mind is bounded by the skull. Gregory Bateson (1972), for instance, discussed how a blind man's stick could be considered a functional extension of his mental system, as it is not possible to conceive that man's psychomotricity without the elements that are an integral part of his walking.

More recently, others (Dennett, 1996; Clark & Chalmers, 1998) have also suggested that cognitive processes' use of external resources in fact proves that cognition is not limited to the brain.

If, as we confront some task, a part of the world functions as a process which, were it done in the head, we would have no hesitation in recognizing as part of the cognitive process, then part of the world is (so we claim) part of the cognitive process. (Clark & Chalmers, 1998, p.8).

This theory of mind, named Active Externalism (Clark & Chalmers, 1998) extends the concept of prosthetics to the realm of the psychological. For the purposes of the current paper we would like to underline the idea, shared by these authors, that the boundaries between internal and external mental processes is not as clear as traditionally thought.

Notions of prosthetics and of extended minds raise many questions about our bodies and about ourselves. Where does one's body ends and the outside world commence? What happens to men and women when pieces of the physical world are integrated into the body? Do we become less human and more machine? That is when the concept of the cyborg becomes helpful.

The word cyborg was coined by Manfred Clynes and Nathan Kline (1960) in relation to the possible use of self-regulating technological systems to help men survive in space. Five years later, Clynes wrote in the introduction of a book by D. S. Halacy (1965) of a new frontier, that of the "relationship between 'inner space' to 'outer space' – a bridge... between mind and matter" (op. cit., p.7). That is the frontier that the cyborg inhabits.

More visible in science fiction than in real life, the half man, half machine creature portrayed in films like "The Terminator" (1984) or "Robocop" (1987), was recycled on a refreshing and inspiring, albeit ironic way, by Donna Haraway in her "Cyborg Manifesto" (1994). She defined the cyborg as a "cybernetic organism, a hybrid of machine and organism, a creature of social reality as well as a creature of fiction" (p.83).

Haraway's project is, in essence, a feminist one. She uses the idea of cyborg as a way to move past binary views of gender and away from seminal Western discourses, such as those of Christianity or Psychoanalysis, that conceive of women as inferior to men. For her, with the cyborg "[t]he dichotomies between mind and body, animal and human, organism and machine, public and private, nature and culture, men and women, primitive and civilized are all in question ideologically." (p.86).

With it, she also dismisses the love-hate relationship that Man has always had with technology. In fact, while machines were seen during the Modern Age inaugurated with the Industrial Revolution as the solution to many of Man's problems, at the same time fear of alienation from machines has always been present. This has been reflected, for instance, in science fiction films such as "Metropolis" (1927), "2001: A Space Odyssey" (1968), "The Matrix" (1999), or "I, Robot" (2004) where sentient computers and machines control or are used to control and dominate humans.

Haraway looks beyond those dystopian fantasies and embraces the machine as part of Man, as a source of pleasure and as an object of desire. In her words, "[t]he machine is not an it to be animated, worshipped, and dominated. The machine is us, our processes, an aspect of our embodiment." (Haraway, 1994, p.108).

Haraway's strong metaphor of the machine-organism hybrid and her questioning of boundaries has become an inspiring one following up on what others before her suggested. It has been used by many others

to think differently about the relationship between Man and technology, not only from a purely physical point of view, such as the one Haraway mainly envisioned, but also from a psychological one. Ruff-Stahl (2005), for instance, used it to explain problem solving while piloting military airplanes. Others have applied it to how the Internet is affecting different dimensions of our selves (Bortle, 2005; Hamman, 1996). The cyborg metaphor does, in fact, fit nicely in explaining the ways cyberspace has been integrated into our mental space.

A visionary in his own time, J.C.R. Licklider (1960) put forward the idea of a man-computer symbiosis. For him, "[t]he hope is that, in not too many years, human brains and computing machines will be coupled together very tightly and that the resulting partnership will think as no human brain has ever thought" (Licklider, 1960, p.4). In many ways we can see that symbiosis taking place in our lives today, even without us being physically connected with the Internet, as in the futuristic vision set by William Gibson's sci-fi novel *Neuromancer* (1984), or with game consoles as in the film *eXistenZ* (1999). Set in a not distant future these tales, both of the dystopian type dismissed by Haraway, picture a world where machines plug directly into human brains, thus submersing the user in a new reality that becomes as real as that of the tangible physical world.

Another author to discuss media as extension of self, also many years before the wide availability of the Internet, was Marshall McLuhan in particular in his book *Understanding Media: Extensions of Man* (1964). There he suggested that Humanity has approached the final phase of extensions by or through the technological simulation of consciousness, in particular through television.

Today (...) we have extended our central nervous system itself in a global embrace, abolishing both space and time as far as our planet is concerned. Rapidly, we approach the final phase of the extensions of man - the technological simulation of consciousness, when the creative process of knowing will be collectively and corporately extended to the whole of human society, much as we have already extended our senses and nerves by various media. (McLuhan, 1964, p. 3-4)

McLuhan's thinking about media offers a far wider (and sometimes contradictory) perspective on this topic than is possible to include in this particular discussion. However, his account of how electronic media provides a sort of extended consciousness is easily applicable to the realm of the Internet, an electronically mediated space exponentially larger than television.

Some have put forward that indeed "skulls and skin do not bound mental systems, and through computer networking these systems can now extend indefinitely" (Mitchell, 2003, p.36). The concept of the cyborg again comes to mind, a being that not necessarily needs technology incorporated into the body to rightfully become a cyborg because technology is already integrated in the brain. Computer screens, mice and keyboards simply provide the interface where flesh meets machine.

The Internet and cyberspace include both dimensions of the cyborg selves we have discussed thus far. If the physical devices that allow us to be connected, such as palm pilots, cell phones and personal computers, can be understood and are often experienced by people as extensions of themselves (Turkle, 2004), the Internet may on several accounts also be conceived as an extension of our psyche. For instance, we now use the web as an extension of our memory, accessing the information it contains in ways we previously used our own mind. Email, instant messaging systems and blogs allow us to contact others much more efficiently than ever before. With it, we continue to do what we were best programmed to do – to communicate with others – but much more and better than by simply using our organs of senses and of communication. By using the Internet we become not necessarily better or worst but certainly different.

In the context of what has been discussed so far, one of the most striking questions that we can ask is: What sort of beings are we becoming with this symbiotic relationship with the Internet? If History is made of continuous loops between Man, who builds machines, and machines, who in turn transform the nature of Man, what sort of artifacts do we become in the process? Haraway suggested the rise of a new identity: "[t]he cyborg is a kind of disassembled and reassembled, postmodern collective and personal self." (Haraway, 1994, p.102), a perspective echoed by Sherry Turkle (1995) when discussing the multiplication of the self in a myriad of online identities. For Mitchell (2003), "it isn't simply that our sensors and effectors command more territory, that our webs of interconnectivity are larger and more dynamic, or that our cell phones and pagers are always with us; we are experiencing a fundamental shift in subjectivity" (p.62).

The question of how we are shifting towards a post-human or inhuman identity (Sim, 2001) may well be dated, as that identity is already us. However, it is one that hasn't been sufficiently discussed, argued, disrupted or integrated, even as we are living it. That may well derive from the fear of alienation from machines we have carried for great many years, while at the same time we are drawn to them in ways that often defy explanation (Nodin et al., 2008). These questions will be more and more crucial as new

technologies emerge and continue to force rethinking the nature of our humanity, while at the same time they will become part of it.

AKNOLEGEMENTS

The author would like to thank Prof. Alex Carballo-Diéguez of the HIV Center for Clinical and Behavioral Studies, New York City, USA; Prof. Gary Dowsett of the Australian Research Center in Sex, Health and Society, Melbourne, Australia; and Prof. Isabel Leal of Instituto Superior de Psicologia Aplicada, Lisbon, Portugal, for their ongoing support and help in the development of this manuscript. This work was supported by grant SFRH/BD/17396/2004 of Fundação para a Ciência e a Tecnologia, Portugal.

REFERENCES

- Bateson, G., 1972. *Steps to an ecology of mind; collected essays in anthropology, psychiatry, evolution, and epistemology*. Chandler Pub. Co., San Francisco.
- Bortle, J. J., 2005. *Games people play: Identity and relationships in an online role-playing game*. Ph.D. dissertation, Duquesne University, United States -- Pennsylvania. Retrieved February 20, 2009, from Dissertations & Theses: Full Text database. (Publication No. AAT 3199507).
- Clark, A., and Chalmers, D., 1998. The extended mind. *Analysis -Oxford-*. 58 (1), 7-19.
- Clynes, M.E. and Kline, N.S., 1960. Cyborgs and space, *Astronautics, American Rocket Society*, 26–27, 74–75.
- Coffey, S. (online). *Prosthetics*. Accessed online on March 9, 2009, at <http://csmt.uchicago.edu/glossary2004/prosthetics.htm>
- Dennett, D. (1996). *Kinds of minds*. New York, NY: Basic Books.
- Hamman, R.B., 1996. *Cyborgasms. Cybersex amongst multiple-selves and Cyborgs in the narrow-bandwidth space of America Online chat rooms*. MA Dissertation. Department of Sociology, University of Essex, Colchester, UK.
- Haraway, D., 1994. A manifesto for cyborgs: Science, Technology, and Socialist-Feminism in the Late Twentieth Century," in Seidman, S. *The postmodern turn: new perspectives on social theory*. Cambridge, Cambridge University Press.
- Hein, M., 1991. The erotic ontology of cyberspace. In Benedict, M. (Ed): *Cyberspace: first steps*. Cambridge, MIT Press.
- Freud, S., 1962. *Civilization and its discontents*. W.W. Norton, New York. (original 1929)
- Gibson, W., 1984. *Neuromancer*. Ace Books, New York.
- Horrocks, Chris. 2000. *Marshall McLuhan and virtuality*. Postmodern encounters. Icon, Cambridge.
- Halacy, D. S. 1965. *Cyborg; evolution of the superman*. Harper & Row, New York.
- Licklider, J. C. R., 1960. Man-Computer Symbiosis. *IRE Transactions on Human Factors in Electronics*, vol. HFE-1, 4-11.
- Locke, J., and Laslett, P., 1988. *Two treatises of government*. Cambridge texts in the history of political thought. Cambridge University Press, Cambridge [England]. (Original 1689)
- McLuhan, M., 1964. *Understanding media: the extensions of man*. Routledge & K. Paul, London.
- Mitchell, W. J., 2003. *Me++: the cyborg self and the networked city*. MIT Press, Cambridge, Mass.
- Nodin, N., Leal, I., Carballo-Diéguez, A., 2008. "Através da máquina é mais fácil" – Definições e reacções ao conceito de cibersexo ["Through the machine it is easier" – definitions and reactions to the concept of cibersex]. Proceedings of Ibero-American Conference IADIS, WWW/Internet 2008, Lisbon, Portugal. 129-135.
- Pesce, M., 1993. *Final Amputation: Pathogenic Ontology in Cyberspace*. Paper presented at the Third International Conference on Cyberspace, University of Texas, Austin, May 1993. Accessed online on October 20, 2008, at <http://hyperreal.org/~mpesce/fa.html>.
- Postman, N., 1993. *Technopoly: The Surrender of Culture to Technology*. Vintage Books, New York.
- Ruff-Stahl, H.S., 2005. The intuitive cyborg. Problem solving in the post-computational age. Dissertation submitted to the Division of Media and Communications of the European Graduate School in Candidacy for the Degree of Doctor of Philosophy, Berlin.
- Sim, S., 2001. *Liotard and the inhuman*. Postmodern encounters. Icon, Duxford.
- Turkle, S., 1995. *Life on the screen: identity in the age of the Internet*. Simon & Schuster, New York.
- Turkle, S., 2004. Whither Psychoanalysis in Computer Culture?. *Psychoanal. Psychol.*, 21, 16-30.

Appendix 8 – Parallel Article 3: “Through the machine it is easier” – Definitions and reactions to the concept of cibersex

Nodin, N., Leal, I., Carballo-Diéguez, A. (2008). “Através da máquina é mais fácil” – Definições e reacções ao conceito de cibersexo [“Through the machine it is easier” – definitions and reactions to the concept of cibersex]. *Proceedings of Ibero-American Conference IADIS, WWW/Internet 2008, Lisbon, Portugal*. 129-135. ISBN: 978–972–8924–72-0.

“ATRAVÉS DA MÁQUINA É MAIS FÁCIL” – DEFINIÇÕES E REACÇÕES AO CONCEITO DE CIBERSEXO

Nuno Nodin, Isabel Leal

*Instituto Superior de Psicologia Aplicada
Rua Jardim do Tabaco, 34, 1149 - 041 Lisboa, Portugal*

Alex Carballo-Diéguez

*HIV Center for Clinical and Behavioral Studies
1051 Riverside Drive, Unit 15, New York, NY 10032, USA*

RESUMO

A Internet enquanto potente meio de comunicação criou novas possibilidades humanas, relacionais e sexuais. Uma delas foi a do estabelecimento de interações sexuais remotas entre indivíduos pelas vias textual, visual e outras. Dado o facto de se tratar de uma realidade relativamente recente, juntamente com o facto de se referir a uma área da existência humana limitada por convenções sociais, os conceitos associados a essas práticas ainda não possuem um vocabulário próprio partilhado e comumente definido. Por esse motivo, procurámos investigar quais as definições e associações atribuídas à palavra ‘cibersexo’. Para o efeito, um grupo de 36 homens que tem sexo com homens (HSH) foi questionado sobre qual a sua definição de cibersexo. As suas respostas foram submetidas a um processo de análise de conteúdo e avaliadas em termos de padrões, áreas de convergência e de divergência. Ideias comuns sobre o conceito de cibersexo são as de que se trata de uma interação sexual mediada por computador entre duas ou mais pessoas, recorrendo ou não a câmaras e culminando ou não com o orgasmo. Diversas outras práticas, tais como a utilização de pornografia ou o recurso ao telefone para interagir sexualmente com um parceiro foram também integradas nesse conceito mas não reuniram consenso entre os participantes. Foram ainda avaliadas as reacções de cariz atitudinal que os participantes revelaram sobre o cibersexo que, quando surgem, tendem a ser negativas.

PALAVRAS-CHAVE

Internet, Cibersexo, Homossexualidade, Homens, Sexualidade

1. CONCEITO DE CIBERSEXO

Muito mais do que uma potente lente sobre mundos reais e virtuais, a Internet tornou-se num importante meio de comunicação, potenciado através de instrumentos como mensagens instantâneas, salas de conversação, email ou sítios sociais e de encontros como o Facebook, o Myspace ou o Match.com. De alguma forma a Internet tem vindo cada vez mais a tornar-se num meio mais sofisticado para as pessoas fazerem aquilo que, desde sempre, foram programadas para fazer: comunicar.

A sexualidade no seu sentido lato, enquanto força motriz que leva as pessoas a procurar amor, afecto, prazer, ternura e intimidade (Organização Mundial de Saúde) é um dos aspectos essenciais da existência humana. Não é de estranhar, portanto que, desde muito cedo, a sexualidade tenha estado presente na Internet e que as pessoas utilizem os meios electrónicos ao seu dispor para activamente procurar satisfazer as suas necessidades sexuais, quaisquer que elas sejam. Al Cooper (1998) utilizou a ideia do triplo motor (*Triple A Engine*) para sumariar os principais factores que levam a uma utilização sexual da Internet: o Anonimato, a Acessibilidade e o Baixo custo [*Affordability*, em Inglês]. Se esses três elementos poderão encapsular os motivos factuais e de ordem prática pelos quais a Internet de alguma forma se tornou no bar de solteiros do século XXI, certamente que a realidade por detrás da popularidade dos meios electrónicos como recursos relacionais e sexuais será muito mais diversa e complexa.

Por outro lado, o crescimento rápido e a popularização da Internet enquanto instrumento ao dispor da sexualidade de cada um, trouxe consigo a necessidade de criar ou adaptar novas palavras e conceitos para

designar práticas que, não sendo necessariamente novas, adquirem agora novas roupagens electrónicas. Um desses conceitos, directamente traduzido do Inglês é o de cibersexo (*cybersex* no original).

O *Cambridge Advanced Learner's Dictionary* (2003) define cibersexo como “any sexual entertainment or activity that involves using the Internet”, englobando assim um conjunto bastante amplo de práticas e actividades, incluindo, mas não limitado à procura de informação ou aconselhamento sobre infecções sexualmente transmissíveis, a busca de namorados ou parceiros sexuais em sítios especializados, ou jogar jogos *online* de conteúdo erótico. A definição patente no *The Complete Dictionary of Sexology* (Francoeur, 1995) vai no mesmo sentido, ao incluir no âmbito do cibersexo todos os produtos e serviços que envolvam computadores, tais como jogos e imagens de conteúdo erótico, informação sexual e sexo virtual, entre outros. Ross (2005) discute as variadas formas como a cibersexualidade tem sido definida, sugerindo tratar-se de um espaço sexual entre a fantasia e a acção.

Outros autores optaram pela designação alternativa de *online sexual behaviors* (comportamentos sexuais na Internet), definida como a procura da gratificação dos desejos ou impulsos sexuais através do uso ou investimento de energia física, mental ou emocional na Internet (Cooper et al., 1998).

Apesar de existir uma relativa divergência nas concepções que se encontram na investigação sobre o tema, as convergências encontram-se na assumpção de que o que muitas pessoas procuram na Internet é uma estimulação sexual, mediada por computador, entre dois ou mais participantes. De acordo com Wysocki (1998), a sequência habitual para esse tipo de interacção passará por: 1) conversação em tempo real sobre fantasias sexuais com outra(s) pessoa(s); 2) detalhe sobre o que cada pessoa fará à(s) outra(s); e 3) masturbação simultânea e orgasmo frente ao computador. A Internet, nesta concepção e utilização, parece aproximar-se da definição clássica da pornografia: o livro que se lê com uma mão (Mosher, 1994).

Numa investigação que pretendeu caracterizar as salas de *chat* sexuais em Portugal, Alexandra Carvalheira (2003) verificou que os seus utilizadores se podiam classificar basicamente em dois grupos: indivíduos com poucas competências sociais e dificuldades em estabelecer contactos interpessoais para quem a utilização sexual da Internet se limita ao virtual, e indivíduos que utilizam a Internet para conhecer pessoas com interesses sexuais semelhantes para posteriormente se encontrarem em pessoa. A autora verificou que, de longe, o segundo grupo era mais numeroso do que o primeiro. No entanto, é importante referir que não necessariamente estarão esses dois grupos claramente diferenciados, uma vez que muitos indivíduos contemplam ambas as experiências e incluem-nas no seu repertório de utilização da Internet.

Partindo da ideia de que a linguagem não apenas descreve a realidade como também a constrói, decidimos investigar qual a definição que um grupo de homens que tem sexo com homens (HSH) tem do cibersexo. A escolha desta população prende-se com o facto de que se trata de um grupo que desde cedo abraçou a Internet como um meio de socialização e de procura de parceiros sexuais, o que parcialmente se pode atribuir ao seu estatuto ainda estigmatizado na sociedade. Através da Internet, HSH maximizam a sua procura de outros com interesses semelhantes, minimizando o risco de discriminação. Pensamos por esse motivo tratar-se de um grupo bem posicionado para uma análise exploratória, não apenas dos significados e atribuições que o conceito de cibersexo poderá ter no contexto Português, como também das reacções atitudinais que os mesmos revelarão face a essa ideia.

2. MÉTODOS

2.1 Recrutamento

Os participantes foram recrutados maioritariamente através da Internet, recorrendo a sítios que facilitam o encontro entre HSH para relacionamentos afectivos e sexuais, mas também através do método da bola de neve. Os voluntários que mostraram interesse em participar e forneceram o seu número de telefone foram contactados e seleccionados em função de se incluírem dentro dos critérios previamente estabelecidos: idade superior aos 18 anos, nacionalidade Portuguesa ou residência em Portugal há pelo menos um ano, e ter conhecido pelo menos uma pessoa através da Internet com quem tivesse tido relações sexuais. Todos os participantes incluídos no presente estudo foram escolhidos em função de apresentarem orientação sexual homo ou bissexual. Por questões de conveniência, a maioria dos participantes vivia na área da Grande Lisboa.

2.2 Recolha dos Dados e Análise

Após selecção, foram marcadas entrevistas individuais face-a-face com todos os voluntários num consultório privado em Lisboa. Todas as entrevistas foram efectuadas pelo primeiro autor deste artigo. A todos foi proporcionado consentimento informado. A entrevista seguiu um guião previamente testado sobre utilização da Internet em termos gerais e sobre diversas dimensões da sua utilização para efeitos sexuais. As entrevistas tiveram uma duração média de uma hora e meia e, após o seu final, foi pedido aos participantes que preenchessem um questionário, de forma a recolher informação sócio-demográfica e sexual. As entrevistas foram posteriormente transcritas, limpas de informação que pudesse identificar os entrevistados e codificadas utilizando o pacote informático de análise qualitativa de dados Nvivo 7.0 (QSR, 2006). O material codificado para efeitos deste estudo foi todo o relativo ao conceito de cibersexo, recorrendo às respostas dadas pelos entrevistados quando questionados sobre o seu conhecimento e definição pessoal desse conceito. O material assim obtido foi posteriormente analisado de forma a identificar os aspectos comuns bem como os originais e as atitudes reveladas pelos participantes em relação ao conceito de cibersexo. Foi contabilizado o número de participantes que expressamente incluiu ou excluiu da sua definição de cibersexo cada uma de um número de actividades possíveis.

3. RESULTADOS

3.1 Características da Amostra

Os 36 participantes incluídos neste estudo identificaram-se como homo (94,4%) ou bissexuais (5,6%) e apresentaram idades entre os 18 e os 62 anos ($M=34,4$; $DP=9,1$). Treze (36,1%) indicaram estar envolvidos numa relação afectiva à data da entrevista, um dos quais com uma mulher. Trinta e três (91,7%) já tinham feito o teste do VIH e, desses, dois indicaram ser seropositivos (5,6%).

3.2 Conceito de Cibersexo

Apenas um dos participantes indicou desconhecer por completo o termo “cibersexo”. Alguns referiram não estar muito familiarizados com o mesmo, mas apesar disso forneceram espontaneamente uma definição, revelando alguma familiaridade com o prefixo “ciber”, e dos seus potenciais significados quando associado com a palavra “sexo”. Na Tabela 1 sumarizam-se os aspectos incluídos, bem como alguns dos excluídos, na definição de cibersexo apresentada pelos participantes no nosso estudo.

Tabela 1. Cibersexo: Práticas e dimensões incluídas e excluídas no conceito.

	Inclui sempre	Pode ou não incluir	Nunca inclui
Interacção textual	19	10	-
Masturbação	9	15	-
Pornografia	-	12	5
Câmara	3	13	-
Orgasmo	4	7	-
Encontro face-a-face	-	4	2
Realidade virtual	1	3	-
Telefone	-	5	1

Tipicamente, a primeira definição fornecida pelos participantes quando questionados sobre o seu conceito de cibersexo (anterior a pedidos de clarificação ou especificação pelo entrevistador) remeteu para a ideia de uma interacção sexual ou para uma busca de satisfação física mediada pelo computador e pela Internet. Na sua versão mais simples e curta, um dos participantes definiu cibersexo como sendo “o sexo feito através da Internet” (#038, 45 anos). Seguem-se outras definições um pouco mais elaboradas do conceito.

Cibersexo é as pessoas estarem através da Internet, podendo usar a câmara de vídeo, masturbarem-se e a ver-se ou conversar e a estimular-se um ao outro, a simular o mais possível a relação sexual. [#020, 27 anos]

É um meio essencialmente através da, do ciberespaço ou da Internet que fornece vários recursos que permitem uma exploração das, da sexualidade e das várias facetas que a pessoa queira explorar da sua sexualidade e satisfação sexual. [#054, 24 anos]

É uma forma que as pessoas têm de não ter compromisso é... De não, não se exporem. Não querem aparecer e então é mais fácil utilizarem os meios informáticos para ter relação sexual, não sei nem se nem se chama relação sexual... [#016, 29 anos]

À semelhança deste último participante, outros também revelaram a sua incerteza sobre a possibilidade da inclusão do cibersexo no âmbito da categoria mais geral de “sexo”. Porém, a maioria não questionou essa inclusão, ainda que vários a descrevessem como uma forma menor de sexo, limitada pela interacção com a máquina. A inevitabilidade da masturbação enquanto parte integrante do cibersexo surgiu em muitas definições, reflectindo a ideia de que para existir sexo deverá haver também algum tipo de estimulação física e não meramente intelectual.

Acho é uma forma de quase mais auto-erótica do que propriamente, do que propriamente sexo virtual, suponho que seja isso, mas é uma forma de masturbação conjunta quase, acho que caracterizaria como uma forma de masturbação conjunta. [#040, 29 anos]

Da mesma forma, a experiência do orgasmo surge por vezes como um factor inevitável ou desejável para a plena concretização da experiência sexual através da Internet.

P – [T]em que haver orgasmo ou pode não haver orgasmo?

R – Tem que haver orgasmo no sentido em que pronto, fazer sexo é atingir um orgasmo e portanto, cibersexo, associado ao computador, tendo um orgasmo. [#024, 27 anos]

Normalmente as pessoas fazem isso [o cibersexo] para ter mais, pode ser mais elaborado, mas normalmente as pessoas fazem isso, normalmente um bocado para masturbação, para, masturbação no sentido do relaxar, de obter um orgasmo, pronto, para relaxar. [#046, 36 anos]

Por outro lado, as diferentes concepções que podem existir em relação ao que se pode considerar ou não como sexo também surgem reflectidas nas diferentes definições dos participantes sobre o cibersexo. Para alguns dos participantes, o cibersexo, à semelhança do sexo, não tem necessariamente que incluir o orgasmo.

Se, se, quer dizer, pode ter [orgasmo]. Se não falarmos em cibersexo, se falarmos em sexo, pode-se falar em sexo sem ter orgasmo, não é? Portanto da mesma maneira pode haver cibersexo sem orgasmos e portanto sem masturbação. [#011, 41 anos]

Não, pode não implicar masturbação. Implica forçosamente uma situação de cariz sexual, não penso que implique uma masturbação literal, ou mesmo um orgasmo literal, ou seja, pode ser mais uma situação mais de excitação de acelerar um bocadinho a pulsação e produzir uma série de hormonas (risos) cerebrais que possam produzir algum prazer e alguma excitação. [#040, 29 anos]

Uma proporção considerável de participantes incluiu, quer de forma espontânea, quer quando questionados, a utilização de câmaras ou de outro tipo de imagens dos intervenientes como parte integrante do processo de cibersexo.

Cibersexo eu acho que associo a *webcams*, não é? Associo... Cibersexo associo a *webcam*. [#054, 24 anos]

[C]reio que [o cibersexo] será ligar a *webcam* e estar a ter relações sexuais com a pessoa do outro lado, ou seja, ou a masturbação ou estar a ver só a outra pessoa, sem roupas. [#034, 31 anos]

Poderá ser verbal, pela escrita, pode ser visual utilizando as câmaras ou... E depois pode ser concretizado no final (riso) pelo o encontro não é? [#014, 30 anos]

A dimensão do encontro face-a-face, mencionada pelo último participante, apesar de não ser consensual e raramente incluída de forma espontânea nas definições fornecidas, foi igualmente referida por alguns participantes (bem como especificamente excluída por dois deles). A possibilidade de um encontro físico e sexual entre duas pessoas que se conheceram na Internet ser incluído nas definições mais latas do cibersexo revela uma certa plasticidade do conceito. Alguns participantes mencionaram ainda que interações sexuais através do telefone poderiam (ainda que não obrigatoriamente) ser consideradas como cibersexo.

Outra questão mencionada por vários dos participantes e que da mesma forma alarga o âmbito de inclusão/exclusão do conceito em análise é o da pornografia, ou seja, da utilização de materiais sexualmente explícitos com o objectivo de obter gratificação sexual. Assim, para alguns, a masturbação assistida pela pornografia disponível na Internet pode ser considerada como cibersexo. Estes são, porém, a minoria. Vários outros, quando questionados sobre o assunto, especificamente excluem o visionamento desse tipo de material do âmbito do conceito.

P – E [o cibersexo] implica, por exemplo, sempre uma relação entre duas pessoas ou pode ser só alguém que procura, por exemplo, materiais pornográficos na Internet?

R – Sim é, é... Pode ser uma coisa interactiva com outra pessoa ou somente com o que está lá já escrito nos sites. [#016, 29 anos]

P – [...] Por exemplo, se a pessoa estiver a ver pornografia, a masturbar-se na Internet, isto é cibersexo para si ou não?

R – Não... não, isso não, não, aí eu acho que não. Eu acho que tem de haver um bocado de resposta, no cibersexo tem de ser uma coisa bilateral. [#043, 31 anos]

[E]u acho o facto de consultar um site de pornografia ou ver fotos mais ou menos eróticas, não considero propriamente isso cibersexo. Os próprios adolescentes começam a fazer isso, não é, muito cedo. [#050, 43 anos]

Por último, alguns dos participantes aludiram ao facto de o termo em análise os remeter para a ideia de aparelhos mais ou menos sofisticados, do âmbito da realidade virtual ou da robótica, que possibilitam às pessoas uma experiência sexual com máquinas ou então com outras pessoas, mas numa relação mediada por máquinas.

Mas isso era uma expressão que eu já não ouvia há muito tempo, cibersexo, (...) quando eu penso em cibersexo, é uma imagem que eu tenho de 93/94, (...) e estava associado a realidade virtual, eu nunca associei cibersexo à Internet... [#011, 41 anos]

[Q]uando se fala de sexo virtual basicamente penso em duas pessoas, que têm uma conversa uma relação quase de cariz sexual via... via Internet. Agora pensando mais no cibersexo pode implicar também outro tipo de produtos, ou seja produtos que hoje em dia estão disponíveis, seja as bonecas cibernéticas ou o que quer que seja... [#040, 29 anos]

É interessante referir que, nos casos em que os participantes, além de fornecerem uma definição, também revelaram as suas opiniões pessoais sobre o cibersexo, as suas posições tenderam a ser essencialmente negativas. Regra geral, surge uma valorização do encontro físico entre duas pessoas e um olhar crítico negativo sobre a mediação ‘fria’ que a máquina proporciona, limitando assim a experiência humana do sexo.

A minha definição pode ser um bocado preconceituosa porque é assim, cibersexo para mim é sexo virtual pronto. E... e eu nesse aspecto posso-me considerar um bocado conservador que acho que determinadas coisas ou são ou não são. Ser assim-assim não é nada, pronto. E cibersexo para mim é aquelas pessoas que querem satisfazer-se sexualmente através da Internet, porque não há nenhum contacto vá lá de proximidade, basicamente é isso. [#015, 33 anos]

Eu julgo que [cibersexo] seja pela câmara a fazer... quer dizer de um lado ali... mas aquilo fica-me assim um bocado... tem pouco sabor. (riso) [#043, 31 anos]

4. DISCUSSÃO

A análise dos resultados encontrados permite-nos verificar que, à semelhança da relativa multiplicidade de concepções encontradas na incipiente literatura sobre a temática do cibersexo, também os participantes do nosso estudo apresentam diversas formas de interpretar e de pensar sobre as possibilidades sexuais oferecidas pela máquina.

Da nossa tentativa de mapear o conceito de cibersexo encontrámos como dimensões unificadoras a ideia de uma experiência sexual entre duas ou mais pessoas mediada através da Internet. Essa experiência é essencialmente textual ou genérica (independente da linguagem ou meio utilizado), ainda que possa recorrer a imagens (vídeo em tempo real ou fotografias) de forma acessória e, na maioria das vezes, assistida pela masturbação de forma a complementar ou a completar a experiência sexual que a interacção virtual proporciona.

Outro aspecto relevante, ainda que não consensual, foi a inclusão no âmbito do cibersexo da estimulação sexual não interactiva. Para alguns participantes, o visionamento de materiais sexualmente explícitos disponíveis na Internet e sua utilização para efeitos de gratificação sexual engloba-se na definição de cibersexo. Da mesma forma, o orgasmo foi considerado por alguns, mas não por todos os participantes, como central ao conceito em análise. Aspectos minoritários ou de alguma forma fracturantes encontrados nesta análise foram os da inclusão da interacção telefónica bem como do encontro face-a-face nessa definição.

Os resultados que encontrámos parecem indicar que a ideia da actividade sexual mediada por computadores é uma realidade, não apenas ao nível conceptual, como também enquanto uma de várias possibilidades que o mundo digitalizado em que vivemos oferece. De facto, apesar de nem todos os participantes indicarem ter algum tipo de experiência prévia ao nível do cibersexo, e para lá do desconforto que alguns revelaram relativamente a essa prática, raramente encontrámos algum tipo de questionamento sobre a natureza sexual da experiência cibersexual. Assim, o cibersexo parece indiscutivelmente ser considerado uma actividade sexual, independentemente das qualificações que lhe possam ser atribuídas.

É interessante reflectir sobre o que os resultados também nos dizem sobre a natureza do sexo. Mais do que uma experiência física, táctil, genital ou orgânica, o sexo contém dimensões relacionais (não necessariamente amorosas), fantasmáticas, emocionais e intelectuais que, tendo sempre estado presentes na experiência sexual humana, se tornam mais evidentes com a emergência de tecnologias como a dos computadores e da Internet e sua utilização com fins sexuais.

Por outro lado, será interessante observar que impacto é que a continuidade da utilização de tecnologias cada vez mais sofisticadas terá ao nível da sexualidade humana. As referências que alguns dos participantes fazem às possibilidades da tecnologia ao nível sexual, através do recurso à realidade virtual ou à robótica, já antevistas na ficção científica (por exemplo, em filmes como *Inteligência Artificial* [2001], com o seu robot-amante interpretado por Jude Law) estão ao virar da esquina e certamente trarão com elas novas questões, bem como renovarão outras, como as desde sempre levantadas na relação dos Homens com as máquinas.

Como Turkle (2004) sublinha, hoje em dia, tendo em conta a omnipresença dos computadores nas nossas vidas, mais do que tentar perceber o que as máquinas podem fazer por nós, é interessante questionar como é que nós nos estamos a transformar à medida que estabelecemos relações de crescente intimidade com elas. Será a Internet a nova interface do sexo? Estaremos nós também a tornar-nos um pouco mais máquina e menos humanos – ciborgues, na concepção de Donna Haraway (1991) – à medida que vamos integrando a tecnologia nas nossas vidas e na nossa forma de interagirmos com os outros, também enquanto seres sexuais? Alguns dos nossos participantes parecem demonstrar uma certa aversão ou pelo menos desconfiança em relação à mediação sexual proporcionada pela Internet. Essas reacções, porém, não impedem que muitas pessoas, inclusive os próprios participantes que as expressaram, recorram ao cibersexo para a satisfação de pelo menos parte das suas necessidades sexuais.

Entretanto, e para lá da ficção científica e do que o futuro sexual/virtual nos aguarda mais à frente, sabemos que a Internet e as experiências que ela proporciona podem ter um impacto bem real na vida de algumas pessoas. Exemplo disso é a forma como o cibersexo, para algumas pessoas, se pode constituir como um potente objecto de adição. Apesar de ser claro que a maioria das pessoas não desenvolve padrões de utilização excessiva da Internet, alguma investigação tem evidenciado que uma minoria daqueles que a utilizam enquanto ferramenta sexual acaba por colocar a sua experiência virtual acima das suas obrigações e de outros aspectos da sua vida, pondo em causa o seu bem-estar físico e mental (Cooper et al, 2002; Daneback et al, 2006).

Mais do que assumir a Internet como a causa de todos os males, num discurso tecno-determinístico alarmista muito em voga em particular na comunicação social, por exemplo, a propósito de redes pedófilas na Internet, é importante procurar perceber como é que dimensões virtuais nos podem afectar e não apenas negativamente. O cibersexo permite, por exemplo, a exploração de aspectos da sexualidade e da identidade que de outra forma dificilmente se teria a possibilidade de experimentar. Permite também que indivíduos cuja idade, limitações físicas ou características particulares que os coloquem numa posição potencialmente estigmatizada na sociedade possam ter uma vida sexual *online* e potencialmente, partindo daí, também *offline*.

Tal como um dos participantes nesta investigação sublinhou a propósito das questões do cibersexo, “Através da máquina e mais fácil” (#016, 29 anos), referindo-se à forma como a experiência virtual de exploração sexual permite uma mais fácil interacção sem os riscos da exposição, mas também aludindo ao facto de que através da Internet o diálogo, nem sempre fluido no contacto face-a-face, se torna mais facilitado.

A presente investigação e respectivos resultados deverão ser tidos apenas como um ponto de partida para uma análise sobre os significados do conceito de cibersexo, que certamente não se esgota nela. De resto, tratando-se de uma realidade em constante movimento e mudança, será necessariamente impossível esgotar num retrato apenas as diversas facetas e características desse conceito. Este trabalho reflecte assim apenas as ideias expressas pelos voluntários que optaram por falar sobre as suas percepções e experiências ao nível sexual na Internet e não é passível de generalização.

AGRADECIMENTO

Os autores desejam agradecer ao Professor Gary Dowsett, do Australian Research Centre in Sex, Health & Society da La Trobe University, Melbourne, Austrália, pelos comentários e sugestões para o presente artigo.

REFERÊNCIAS

- Cambridge Advanced Learner's Dictionary, 2003. Cambridge University Press, Nova Iorque, EUA.
- Carvalho, A.; & Gomes, F.A., 2003. Cybersex in Portuguese chatrooms: a study of sexual behaviors related to online sex. *J. of Sex and Marital Therapy*, Vol. 29, pp. 345-360.
- Copper, A., 1998. Sexuality and the Internet: Surfing into the new millennium. *Cyberpsychology and Behavior*, Vol.1, pp. 187-194.
- Cooper, A.; et al., 2002. Toward an increased understanding of user demographics in online sexual activities. *J Sex Marital Ther.*, vol.28, No.2, pp 105-29.
- Daneback, K.; Ross, M.W.;& Månsson, S., 2006. Characteristics and behaviors of sexual compulsives who use the Internet for sexual purposes, *Sexual Addiction & Compulsivity*, Vol 13, No.1, pp. 53-67.
- Francoeur, R., 1995. *The Complete Dictionary of Sexology*. Continuum, Nova Iorque, EUA.
- Haraway, D., 1991. *A Cyborg Manifesto. Science, Technology, and Socialist-Feminism in the Late Twentieth Century*, Simians, Cyborgs and Women: The Reinvention of Nature, Routledge, New York, EUA, pp.149-181.
- Mosher, D., 1994. Pornography. *Human Sexuality: An Encyclopedia*. Garland Publishing, New York & London, EUA & Reino Unido.
- Ross, M. W., 2005, Typing, doing, and being: sexuality and the internet. *The Journal of Sex Research*, vol.42, No.4, pp. 342-352.
- Turkle, S., 2004. Whither Psychoanalysis in Computer Culture? *Psychoanal. Psychol.* 21, pp.16-30.
- Wysocki, D., 1998, Let Your Fingers Do the Talking: Sex on an Adult Chat-line. *Sexualities*, Vol. 1, No. 4, pp. 425-452

Appendix 9 – Parallel Article 4: The Internet profiles of men who have sex with men within bareback websites

Nodin, N., Valera, P., Ventuneac, A. M., Maynard, E., & Carballo-Diéguez, A. (2011).
The Internet profiles of men who have sex with men within bareback websites.
Culture, Health & Sexuality, 13, 9, 1015-1029.

The Internet profiles of men who have sex with men within bareback websites

Nuno Nodin^{a*}, Pamela Valera^b, Ana Ventuneac^c, Emily Maynard^d and Alex Carballo-Diéguez^e

^a*Instituto Superior de Psicologia Aplicada, Lisbon, Portugal;* ^b*Albert Einstein College of Medicine, New York, USA;* ^c*Center for HIV Educational Studies and Training, Hunter College of the City University of New York, USA;* ^d*Fordham University, New York, USA;* ^e*HIV Center for Clinical and Behavioral Studies, NYSPI and Columbia University, USA*

(Received 8 December 2010; final version received 17 June 2011)

The Internet has become a venue for men who have sex with men to search for sexual partners. Some of these men intentionally seek unprotected anal intercourse with other men ('bareback' sex). This paper focuses on the creation, use, and content of Internet personal profiles of men who have sex with men in the greater New York City metropolitan area who use bareback sites for sexual networking. We used a mixed-methods approach to examine data from a cybercartography of Internet sites conducted during the first phase of the research (199 personal profiles) and from in-depth interviews conducted during its second phase (120 men who have sex with men who sought partners online for bareback sex). Results indicate that men generally followed offline stereotypical patterns in their online profiles. However, men who disclosed being HIV-positive were more likely to include face and head pictures. Overall, the images they used were heavily sexualised in accordance with group norms perceived and reinforced by the websites' design and imagery. Bottom-identified men tended to be more explicit in the exposition of their sexual and drug use interests online. This paper highlights how certain virtual and social performances play upon and reinforce other, in the flesh, performances.

Keywords: men who have sex with men (MSM); barebacking; Internet; HIV

Introduction

Personal profiles have emerged as a salient form of self-presentation online and, by extension, offline. They have gained in popularity such that some online sites, namely facebook.com (which was created to share personal profiles among college students), has grown exponentially, currently with more than 500 million users worldwide (Wortham 2010). The relational capacities of such sites have not gone unnoticed by individuals seeking others for romantic or sexual partnership and numerous websites exist for the purpose of facilitating real life encounters, such as match.com, friendster.com, and j-date.com. Similar to personal ads in traditional print media, these websites draw upon idiomatic codes that communicate certain assumptions about what is sexually desirable in a mate (Heino, Gibbs, and Ellison 2006; Walther, Loh, and Granka 2005). The majority of these are features that would probably be immediately apparent or discernible in face-to-face encounters, but must be rendered explicit in online communication. For this reason, online profiles can be a rich

*Corresponding author. Email: nunonodin@netcabo.pt

source of analysis for researchers who wish to understand the expectations, desires and social morays of the users of networking websites, who represent themselves and interact with one another in a virtual space, many with the hope of translating their online communications into offline encounters (Carvalho and Gomes 2003).

Websites used by men who have sex with men to find sexual partners are especially relevant sources of information for researchers interested in studying the interplay between sexual desires and norms, on one hand, and sexual behaviour, on the other. For instance, personal ads and profiles placed on Internet websites underline men who have sex with men's tendency to emphasize their stereotypical masculine traits (Phua 2002) and also their straightforwardness about their sexual interests (Phua, Hopper, and Vazquez 2002; Tewksbury 2006).

With the rise in incidences of sexually transmitted infections (STIs) among men who have sex with men (Jaffe, Valdiserri, and De Cock 2007), such websites provide insight into sexual practices that may contribute to the spread of STIs, such as intentional unprotected anal intercourse, or 'bareback' sex (e.g., Carballo-Diéguez et al. 2009; Elford, Bolding, and Sherr 2001). In recent studies, most men who have sex with men failed to mention safe sex intention in their online Internet profiles or ads (Blackwell 2009; Drowning 2010). Other studies (Groves 2010; Sowell and Phillips 2010) identified a low number of such ads and profiles mentioning safe sex, although an even lower number mentioned intentional unsafe sex.

Tewksbury (2003) analysed a sample of profiles posted on a website specialising in bareback sex. His results showed that the majority of barebackers were not specifically seeking HIV infection. Another study by the same author (Tewksbury 2006) focused on profiles of self-proclaimed *bug-chasers* (men actively pursuing HIV infection) and *gift-givers* (HIV-positive men willing to infect others), confirming that these are but a minority of all those seeking bareback sex. The majority of men were in their thirties and White. Most profiles were sexually explicit and only 30% included face pictures. Most men indicated no preference concerning their partners' serostatus. Two-thirds were interested in drug use associated with sexual activity.

Profiles found on websites specialised in bareback sex reveal not only the intentions and desires of their users, but also detail the broader sexual culture in which men who use them participate and 'perform'. Drawing from Goffman's (1959) theory of performance, we understand the creation of online profiles as a form of self-presentation whereby men who have sex with men choose to highlight and/or exclude certain personal traits in the hope of attracting sexual partners. The end point of this 'performance', the sexual act, is itself another performance, albeit one that lies beyond the observation of social scientists. However, we can try to infer the consequences of that hidden performance from its more visible signs: the online profile that anticipates the sexual encounter. Ross (2005) described the Internet as a sexual space midway between fantasy and action that allows sexual experimentation and interaction with the fantasised other. This sexual enactment may well later be transposed into a real life encounter. Studying online profiles may, therefore, give us insight into intentions, decision-making, fantasies and desires that can inform our intervention strategies with this population.

This is even more relevant when trying to understand sexual practices that may impact individuals' health status, such as barebacking. To study barebacking without considering the social contexts and spaces that facilitate such behaviour is to miss a critical aspect of the phenomenon. Therefore, this paper describes the online profiles of men who have sex with men who used the Internet to find bareback sex partners and the decision process behind their creation, in an effort to understand how certain virtual and social

performances play upon and reinforce other, in the flesh, performances. Our research questions were: What are the demographic and behavioral profiles of men who seek male sex partners on bareback websites? How do they use virtual images order to meet sexual partners and to portray the intended sexual acts they seek?

Methods

This paper is based on data collected for a study that examined intentional unprotected anal intercourse among men who use the Internet to meet sexual partners. Our analyses focus on quantitative data resulting from a collection of online profiles found on the six most popular websites used by men in the New York City area to meet other men for bareback sex (Phase 1, see Carballo-Diéguez et al. [2006] for a description of the cybercartography of Internet sites, a methodology used to select and study websites) and qualitative data from face-to-face interviews of men who have sex with men recruited online from those websites (Phase 2, see Carballo-Diéguez et al. [2009]). The profiles of the volunteers in Phase 2 may or may not have been selected in Phase 1 of the study; thus, the samples for analysis, despite originating from the same population, are nevertheless different. The Institutional Review Board at the New York State Psychiatric Institute approved this study.

First phase

A systematic method was used to select profiles from the six websites under study. With the goal of selecting five profiles per data collection session in one week in June of 2004, we accessed the websites in a random order during 126 randomly-selected hours and selected the n th profile based in the NYC area from those that were presented as being logged in on the sites or from those that resulted from searches using website engines. For example, if a search of profiles in the NYC area resulted in 100 profiles, we selected every 20th profile. Duplicates were eliminated, including identical profiles on more than one of the websites selected for this study. We present results from profiles selected from the two bareback sites only ($n = 199$).

We first obtained frequencies on user characteristics, whether drug use was indicated and whether a photo was included in the profile. User characteristics included racial/ethnic group (White: $n = 114$, 59%; Latino: 40, 21%; African American/Black: 27, 14%; and 'Other' ethnicity: 12, 6%), age group (29 or younger: 45, 23%; 30–39: 98, 49%; and 40 or older: 56, 28%), sexual orientation (gay: 174, 88%; and bisexual: 24, 12%), HIV status (HIV-positive: 31, 15%; HIV-negative: 107, 54%; and not provided: 61, 31%), and preferred sexual position (bottom: 35, 18%; versatile bottom: 47, 24%; versatile: 47, 24%; versatile top: 25, 12%; and top: 45, 22%). Among profiles with photographs, we obtained frequencies for 15 dichotomous variables indicating whether the photo had a particular characteristic (see Table 1).

In order to determine if there were significant differences in photo content by user characteristics, Chi-square analyses were performed using SPSS 19.0. Based on results examining the groups overall (see Table 1), we partitioned the groups to 2x2 cross-tabulations to facilitate interpretation of between group differences using the criterion of $p < .05$.

Second phase

The second phase of the study consisted of face-to-face interviews of 120 men who have sex with men recruited online from the websites identified in Phase 1 about their sexual practices and Internet use to meet men for bareback sex (see Carballo-Diéguez et al. [2009])

Table 1. Crosstabulations of user's characteristics, picture inclusion and type of picture.

	With pictures n(%) ^a	Full body ^b n(%)	Torso ^b n(%)	Face head ^b n(%)	Penetration ^b n(%)	Oral ^b n(%)	Butt ^b n(%)	Erection ^b n(%)	Multiple pics ^b n(%)	Duo or group ^b n(%)
Total (n = 199)	134(67)	40(30)	32(24)	67(50)	26(19)	9(7)	71(53)	73(54)	93(69)	29(22)
Ethnic group	NS				$\chi^2_{(3,130)} = 6.52$ $p = .09^c$					
White (114)	81(71)				20(25)					
Latino (40)	27(68)				1(4)					
African American/Black (27)	14(52)				4(29)					
Other (12)	8(67)				1(8)					
Age group	NS	$\chi^2_{(2,134)} = .84$ $p = .02$		$\chi^2_{(2,134)} = 7.50$ $p = .02$				$\chi^2_{(2,134)} = 4.83$ $p = .04^c$		
29 or younger (45)	32(71)	14(44)		22(69)				2(6)		
30-39 (98)	68(69)	13(19)		27(40)				2(3)		
40 + (56)	34(61)	13(38)		18(53)				5(15)		
Sexual identity	NS	$\chi^2_{(1,134)} = 4.83$ $p = .04^c$	$\chi^2_{(1,134)} = 5.70$ $p = .01^c$	$\chi^2_{(1,134)} = 4.54$ $p = .06^c$						
Gay (174)	118(68)	39(33)	32(27)	63(53)						
Bisexual (24)	16(67)	1(6)	0(0)	4(25)						
HIV status	$\chi^2_{(2,199)} = 4.94$ $p = .09$	$\chi^2_{(2,134)} = 6.83$ $p = .03$		$\chi^2_{(2,134)} = 13.04$ $p < .01$					$\chi^2_{(2,134)} = 4.54$ $p = .10$	$\chi^2_{(2,133)} = 6.02$ $p = .05$
Positive (31)	26(84)	12(50)		20(77)				19(73)	23(89)	
Negative (107)	67(63)	15(22)		34(51)				33(49)	45(67)	

for a detailed description of the methodology used). Eligible participants were male and at least 18 years old, lived in the NYC metropolitan area, had had intentional condomless anal intercourse at least once with a male partner met over the Internet and had used the Internet at least twice a month to meet sexual partners. A sampling design was developed in order to recruit similar numbers of men who have sex with men from different ethnic backgrounds, including Latino, European American, African American and Asian or Pacific Islander, and to oversample HIV-negative men who reported having had unprotected receptive anal intercourse. Individuals who qualified were scheduled for interviews at our research offices, during which they were required to undergo an informed consent process before their interview.

Measures

A semi-structured interview guide was developed to cover a variety of topics, including the frequency of Internet use, barebacking, condom use, HIV testing and non-condom HIV prevention strategies, among other issues. Although the guide had a predetermined structure, it was flexible and the interviewers could follow the natural flow of the information presented by the interviewee. As part of the interview, participants were asked to describe their profiles. To help with recall, participants could review their profiles to see what their profiles looked like and the type of information they had included in them. The qualitative results drawn from this part of the study reflect the interviewees' descriptions of and reasons for the type of information they included in creating their profiles and reasons for choosing not to include other type of information. The interview lasted approximately two hours and participants were paid \$50 as compensation for their time.

Analysis

The initial coding paralleled the structure of the interview guide to capture the major themes (e.g. one code was 'Profile'; see Carballo-Diéguez et al. [2009] for a detailed account of the coding process). The sections of the transcripts that covered any reference to profiles, including its creation, were coded using NVivo 7.0 software for qualitative content analysis (QSR 2008). We analysed the material coded under 'Profile' and selected quotes to provide accounts of participants' choices in creating and managing online profiles.

Results

We opted for a mixed presentation of results, prioritising the quantitative results from Phase 1 (hereafter P1) and using quotes from the qualitative phase (P2) to illustrate the topics covered by the former. We do not identify websites, profile handles or participant names; instead, we refer to pseudonyms or participant ID numbers.

Profile characteristics

A total of 199 systematically selected profiles were examined. In examining cross-tabulations among demographic variables, several significant Chi-squares were obtained ($p < .05$). A significantly larger than expected percentage of White men (94%) identified as gay in their profiles compared to African American or Black (69%) and Latino (83%) men combined ($\chi^2_{[1,199]} = 10.72$); more Black and Latino men identified as bisexual than White men. A significantly larger percentage of men 40 and older (34%) reported being HIV-positive in their profiles compared to younger men (17%; $\chi^2_{[1,138]} = 5.01$). None of

the 24 bisexual-identified men indicated a positive HIV status in their profile (four did not provide HIV status and 20 indicated being HIV-negative), while 25% of the gay-identified men indicated that they were HIV-positive ($\chi^2_{[1,137]} = 6.85$).

Drug use

Of participants, 38% indicated in their profiles that they used drugs. A larger percentage of White and Latino men (47%) indicated in their profile using drugs compared to other ethnicities (23% of African American/Black men and those who indicated 'other' combined; $\chi^2_{[1,175]} = 6.77$). Fewer men over the age of 40 indicated drug use (28%) as compared to younger men (47%; $\chi^2_{[1,181]} = 5.55$). A marginally significant difference was found with respect to HIV status: more HIV-positive men indicated drug use than those who chose not to provide their HIV status ($\chi^2_{[1,81]} = 3.30$; $p = .07$), but not more than men who indicated being HIV-negative ($\chi^2_{[1,126]} = 0.81$; $p = .37$). Finally, fewer men (29%) who reported being a 'top' or 'versatile top' in their profiles indicated using drugs as compared to men who noted being 'versatile,' 'versatile bottom' or 'bottom' (50%; $\chi^2_{[1,181]} = 7.43$). No differences were found in drug use by sexual identity.

Pictures in profiles

The number and percentages of profiles that included a photograph with a particular characteristic are listed in Table 1. Of the total profiles examined, two-thirds ($n = 134$, 67%) included at least one photograph and many profiles had multiple pictures. For some of the men, concern that friends would recognise their photos led to the decision to not post a photo (P2):

I didn't include a picture because I created the profile to cruise for guys and if my friends saw me in a chat room, I didn't want to be, like, 'A-ha, here you are'. (Jose, 20 years old, Latino, HIV-negative)

[MEAT] is like a secret site. I know none of my friends are on there. So that one, I have – they have the category bondage, and voyeurs and exhibitionist, all that kind of stuff. I have everything marked, three-ways, groups, bondage, water sports. They will see it inside, but I don't have a picture there. So you have to contact me. And I'll unlock my pictures so that you can see them. And on my good one I have a big picture of me sitting on my deck reading a book. (Antony, 35 years old, mixed ethnicity, reported HIV-negative but never tested)

The second participant, particularly, discussed how he managed his different profiles and his exposure towards his friends, considering the type of profile he used (in this case, a more sexually explicit profile versus a milder, 'good-behaviour' profile).

But deciding not to include a picture on a profile may serve another function. For instance, it may be a way to negotiate access to other men's photos:

I: Do you put pictures of yourself or not?

R: Not in my profile, I'd rather somebody ask me for it, that way I can get their picture. If I put my picture in my profile, they're not going to want to send me their picture. (Gabriel, 26 years old, White, HIV-positive)

Type of pictures

The 134 profiles containing photographs were examined for specific characteristics (P1). Often men had more than one picture in their profiles, therefore percentages are not cumulative. A larger proportion of HIV-positive men (84%) included a photograph in their profile relative to men who reported being HIV-negative (63%, $\chi^2_{[1,138]} = 4.94$).

The comparison between HIV-positive men and those who did not provide an HIV status in their profile did not reach statistical significance (67%; $\chi^2_{[1,92]} = 2.88$; $p = .09$).

Several significant findings were obtained in conducting Chi-squares for the cross-tabulations between demographic variables and photo characteristic variables within the subsample of profiles that included photographs. These findings were broken down into the type of photographs displayed.

Body pictures

A significantly greater percentage of men 29 or younger and 40 or older (44 and 38%, respectively) included full body photos in their profiles than men ages 30–39 (19%). More gay-identified men (33%) as compared bisexual men (6%) included a full body photo. Similarly, 27% of gay-identified men who included any sort of picture in their profiles included at least one torso photo in their profile. Finally, a larger proportion (50%) of men who noted being HIV-positive in their profiles included a full body photo as compared to HIV-negative men (22%; $\chi^2_{[1,93]} = 6.79$).

Showing different non-sexual parts of the body may encompass different meanings and messages (P2):

I: And tell me how people typically approach you to make contact.

R: Well, first, they like my photo. Because – Well, I don't have a face photo, but I have very stylized, very artfully, tastefully done body shots that are provocative. And so that's how. (Jack, 31 years old, Asian/Pacific Islander [API], HIV-negative)

It's a picture of me kicking back in a black tank top. And I like this picture because, right after I lost a lot of that weight, and I started working out, and I was just starting to get the self-confidence that I have now, I wanted a decent picture for my profile. I was at a friend's house. And I was just sitting back in a chair, relaxing. And he took my picture. And this is that picture. And I look good in that picture. I thought to myself, 'Wow! That's me! Wow!' So I kept it. It's a personal favourite. It's a sentimental favourite. (Manuel, 35 years old, Latino, HIV-positive)

In both quotes it is possible to identify a careful, personalised choice of the body pictures. The images do not seem to be primarily sexually oriented. Yet, they portray a certain intimate dimension of who these men are.

Face pictures

There were several findings with regard to face/head photographs. A greater proportion of men ages 29 and younger included a face/head photo in their profile as compared those 30–39 years of age ($\chi^2_{[1,100]} = 7.35$). Also, more gay-identified men included face/head photos in their profile as compared to bisexually-identified men. Lastly, a greater number of HIV-positive men included face/head photos in their profile as compared to HIV-negative men ($\chi^2_{[1,93]} = 5.27$) and men who did not specify their HIV status ($\chi^2_{[1,93]} = 13.01$).

Some of the men interviewed for P2 explained how they considered Internet-initiated contacts to be basically anonymous, that being the main reason for them not to show their face in their profile pictures:

I don't ever have a face picture. And I may be the only person that you hear that says that. Or maybe I haven't been. But I've been adamant about not having a face picture. To me, I think it's preposterous to have one. Because this is supposed to be a blind meeting, and a lot of the time, when you're meeting people using a face picture, sometimes the person isn't who they say they are. (Mitch, 25 years old, Latino, HIV-negative)

If they say, 'Oh I want to see your body, your face.' Uh-uh. And I sometimes even list on the profile, 'Don't send face pics so don't ask' so I like to keep the situation very anonymous and very

disconnected. So, it's all about a disconnected experience. The whole thing, I like to keep – I'm very business-like about the whole thing. (Blake, 32 years old, African American, HIV-positive)

For these men, of different HIV status, choosing not to show their faces is a sort of ideological statement. It is not apparently related with privacy concerns, but with an idea of what Internet sexual networking 'should' be – basically the first step for anonymous or uninvolved encounters between men. This option thus seems to be rooted in specific beliefs or core values of the men.

There were, however, some men that did mention issues that were closer to privacy concerns for not showing their faces:

In my profile, you will find a link that when you click that link, and this is also for time consumption, instead of asking me for the four photographs, that links you to a site that will have pictures that I've already selected. It won't show my face, but it will show basically everything else. It took me a lot of courage to make those pictures. (John, 40 years old, African American, HIV-positive)

In light of these results, it is interesting to look into the reasons of men who decided to show their faces online:

If [the website is] free, I'll just put a profile up; if someone writes to me, I'll write to them. Otherwise, I won't start writing to people. And then I moved my pictures, 'cause I use the same pictures in all my profiles. And it's all – there's a face picture with just regular upper-body shots with a jacket on. I mean, I don't have any naked pictures. So I thought whoever sees it, and they see it on another profile, they'll know it's the same person. (Albert, 27 years old, API, HIV-negative)

For this participant using face pictures provides a sense of identity throughout the different profiles he uses. It has a social function, allowing others to identify him whenever they run into his profiles across the web. Other participants discuss similar intentions by using the same screen name in different profiles they created and simultaneously managed.

Sexually explicit pictures

Even more than pictures of naked bodies, images of sexual activity (two or more persons engaging in actions involving genital stimulation) or pictures portraying sexually charged parts of the body such as those of butts or of penises are the ones that, when included in personal online profiles, more clearly inform about the nature of men's intentions. The following quote (P2) tells of that:

I usually don't include any kind of stats unless they put the age stuff in there. Because I'm just like beyond stats. I'm like, 'If you like the pictures, you're going to respond to me. If you don't like the pictures, then don't respond to me.' Pictures are a very big, important part of my profile. . . . But my pictures are very explicit and I usually always show penetration. And that usually always gets them going. Because I know – I mean, I realise that gay men are visual. And I'm actually a pretty good photographer. So, I mean, it's definitely, you know, hit the level of beyond erotic art and to like, nearly porn. But still, it's very hot. It's like, you look at it, you're like – oh man! (Blake, 32 years old, African American, HIV-positive)

This participant is aware that sexually explicit images are a good way to get attention for his profile, but also a way to filter those who likely will or will not contact him. Thus, it seems that the choice of images posted online is strategic.

There were also several findings regarding photographs depicting penetration and oral sex. A larger proportion of White and African American men (25 and 29%, respectively) included a penetration photo in their profile compared to Latino men (4; $\chi^2_{[1,122]} = 5.99$). Photos depicting penetration were more common in those who indicated 'bottom' (48%) than the other position groups (14%; $\chi^2_{[1,134]} = 12.68$).

In examining profiles that included oral sex photos, a significant larger proportion of men ages 40 or older (15%) included an oral sex photo in their profile as compared to men ages 30–39 (3%) and those 29 and younger (6%). Here is a quote from one of the interviewees about the oral sex picture in his profile (P2):

So – and this picture. It's me with somebody's dick in my mouth. I met this guy on [website X]. He seemed like a really nice guy. After we had sex, I realized he was psycho. And his face is not in the picture. . . . The picture was enough . . . it'll scare some people away. It'll attract others. (Manuel, 35 years old, Latino, HIV-positive)

For this participant, as for the previous one quoted, the explicit nature of the picture used in his profile seemed to have the purpose of filtering specific types of website users.

More men who identified themselves as 'bottoms' or 'versatile bottoms' in their profiles included butt photos (91 and 75%, respectively). Fewer (19%) men who identified themselves as 'tops' in their profiles included a butt photo. A larger proportion of men who noted that they were HIV-positive in their profile (73%) included a photo of an erect penis as compared to men who indicated being HIV-negative ($\chi^2_{[1,93]} = 4.31$).

Multiple pictures and sexual position

Finally, a larger proportion of HIV-positive men (89%) included multiple photos in their profile as compared to HIV-negative men (67%; $\chi^2_{[1,92]} = 4.48$) and to those without mention of an HIV status (61%; $\chi^2_{[1,67]} = 5.92$). Moreover, more men (34%) who identified themselves as 'bottoms' or 'versatile bottoms' in their profiles included duo or group photos (43 and 28%, respectively) than men who identified as 'tops', 'versatile' or 'versatile tops' (14%; $\chi^2_{[1,134]} = 7.85$).

There were no statistically significant findings with regard to nude, headless or genital photos, photos showing semen, involving use of a sex toy or involving fetish behaviour.

Discussion

The purpose of this study was to describe the online profiles of men who use the Internet to find bareback sex partners, in an effort to gain insight into the motivations of those who create them, within the context of their potential risk behaviour associated with using the Internet to meet other men. We used a mixed methods approach by systematically analysing the content of online profiles from websites used by men to find partners for bareback sex and by drawing from in-depth interviews to understand some of the meanings that the users of such profiles attribute to them. This strategy allowed us to have a broader and contextual perspective not only of these men's online presentations, but also of the reasoning and decision-making behind some of their choices during the construction and maintenance of their Internet profiles.

The general findings of the study contribute to the understanding of how men actively use their online images and performances to put themselves in diverse categories, including those of sexual position and identity in order to appeal to potential sexual partners. In addition, the dramatic effect of the performance is reinforced by using stereotypes of certain sexual and ethnic groups, as suggested by Wilson and colleagues (2009). These researchers found that sexual stereotyping is an important mechanism for making sexual partnering decisions and for making sense of the milieu of sexual images presented to the participant within bareback websites. This approach may help men begin to fantasize and desire for their face-to-face sexual encounter, by knowingly carrying out sexual activities based on the images of the online profiles (Ross 2005).

Therefore should be no surprise that the analysed profiles tended to be highly sexualized, which may be a partial consequence of the design of the websites where they were hosted. These include pre-determined fields for detailed information on intended sexual activity, HIV-risk reduction strategies and sexual position in anal intercourse, to name a few. As reported by Carballo-Diéguez and colleagues (2006), the categories and options provided by the web masters of such websites generally determine the ways people portray themselves. We were also able to verify that, when men were free to enter text and photos in open fields, they depicted themselves in sexually explicit ways.

Websites directed at men interested in bareback sex also tend to include explicit imagery with pictures of anal intercourse where no condoms are used, as well as images of naked muscular men with erections (Carballo-Diéguez et al. 2006). Although it was unclear to what extent this imagery influenced men's self-presentation, there seems to be a highly dynamic, eroticized performance on online profiles, in which online self-presentation is limited and influenced by the website structure and design, but it is also actively constructed by the users. Simultaneously, the websites are also shaped by content added by users, on a continuous constructivist process where the website structure and individual self-presentation mutually influence and reinforce each other.

The analysis of explicit sexual performance is particularly interesting in the case of men who, in their profiles, identify as bottoms or versatile bottoms (those who have a preference for being sexually receptive during anal intercourse). Our findings suggest that both, as expected, had significantly more butt pictures in their profiles than any other men, but also more penetration and group pictures. This suggests a more direct exposition of their sexual role and preferences. Furthermore, these men also tended to mention they were more interested in using drugs associated with sex. Therefore, several high-risk practices are suggested in these men's profiles long before any physical action takes place. The theme (bareback sex) is given by the website, the actor's sexual position and interest in drug use is specified by the options that the website allows and the pictures that the men post set imagery suggestive of the sexual act. Thus, in several ways, the stage is set up for the in the flesh performance to take place. These results highlight the fact that many high-risk behaviours are anticipated by fantasy, which in turn translates into scenarios created by the men in articulation with the website's possibilities of how they would like situations to unroll and which practices they wish to enrol in, which generally include identifiable elements of risk.

Other authors have indicated that individual preference and mutual agreement are the main reasons for bottom-identified men not to use condoms with partners met online (Ostergren, Rosser, and Horvath 2011). Our findings suggest that online profiles may be the contextual and symbolic link between these two elements in sexual risk taking among men who seek sex partners on online bareback sites.

Drug use deserves special attention, because using substances that alter mood and judgement can lead to higher levels of risk taking, even for men who already choose to bareback. According to research, men who use illicit drugs tend to use Internet-based sex sites to find other users. Thus, the risk factor of illicit drug use is amplified because both sexual partners have found compatibility based on each man's illicit drug use (Blackwell 2008).

HIV status was the category of analysis where more significant differences were found. HIV-positive men were more likely to post more pictures in their profiles, but also to post more body, erection and face/head pictures. This was a somewhat counter-intuitive result, considering the social stigma that still surrounds a positive HIV status in society (Wolitski, Parsons, and Gómez 2006).

All of these results, but this last one in particular, seem to suggest that HIV-positive men who seek sex partners in online bareback sites may feel comfortable including their

serostatus in their online presentations, and therefore may not fear HIV-associated stigma or are willing to accept the risk. These are websites where HIV status is, after all, put into perspective, where other categories are prioritised and where risk behaviours are reinforced (Tewksbury 2006). On the other hand, there is evidence that disclosure is one of the strategies used by men who have sex with men to cope with discrimination. In a qualitative study about how HIV-positive men who have sex with men dealt with stigma, disclosure was identified as one of the leading ways that men affirmed social support systems (Chenard 2007). Perhaps, this is a strategy that men are also using online, and that by showing several pictures of themselves, including some of their faces and erect penises, they can assure potential partners that they look healthy and are sexually desirable and capable. By arousing their viewers, the creators of the profiles may be, willingly or not, increasing their chances of attracting sexual partners. However, the shade of social judgement is still present, at least for some men, like the ones quoted saying how they were self-conscious about the possibility of some of their friends discovering they were using bareback websites.

These concerns suggest that for some men a part of their online sexual image and activity remains hidden, as a performance not assumed or discussed out loud. This concurs with the results of Carballo-Diéguez and colleagues (2009), where it was found that, despite their sexual practices, some men were uncomfortable with admitting to not using condoms at least sometimes, as they were with the possibility of being considered a 'barebacker'. This result, apparently contradictory with the willingness with which some men show their faces, points to the fact that, far from it being a homogenized group of men, those who use the Internet to meet others for sex without condoms are very diverse in their backgrounds, interests and desires.

The strategies the men used were similar to the ones described by marketing researchers on personal ads of newspapers (Hirschman 1987; Jagger 1998). The difference, however, was that in our analysis, the medium of exchange was performances of sexual prowess and of a certain masculine ideal that rejects condoms and that eroticizes risk. Furthermore, it was also clear that, as Dowsett and colleagues (2008) suggested in the context of the same population, sexual objectification becomes a project of the self. It thus also becomes part of these men's online image which, at the same time, provides insight into their desires and into their perception of other men's desires.

Limitations and Conclusion

By sample design, we recruited from highly sexualized websites that did not require membership fees and therefore our results only pertain to men who have sex with men in New York City who use these websites. Consequently, our findings may not be generalizable to all men who use the Internet for bareback sex in the USA or globally. Response bias and having multiple profiles with different characteristics may have interfered with the reporting. However, despite these limitations, this study demonstrates that many men who have sex with men are using Internet profiles to communicate and interact with other men from a wide variety of background, cultures, ethnicities and countries for bareback sex and therefore represent a population in need of further investigation.

Mixed methods allowed for greater insight into the motivations behind the construction and use of certain online profiles. Because the study was not designed for a direct correspondence between participants from both phases of the study, men whose profiles were sampled on P1 were likely not the same as those recruited and interviewed for P2. However, they all belong to the same pool of men who have sex with men who use specific websites to find partners for bareback sex. Therefore, we believe that this study

allowed us to sample an important part of the textual and symbolic performances and interactions that take place online amongst these men. The exact correspondence between those sampled and those interviewed is not of utmost importance for our analysis.

The data used were collected between 2004 (P1) and 2006 (P2), which means that the realities that we tried to capture may be changing, as new technologies, websites and trends appear and gain popularity, while others fade away. However, the use of profiles in sex websites, including barebacking sites, remains very popular. Therefore, we believe that our insights on the elements present in a profile give a good building stone for future analysis of this reality.

Finally, worthy of notice is the fact that we found a high proportion of HIV-positive men in our sample (P1). This may mean that websites specialising in bareback sex are attracting HIV-positive men to seek partners of the same serostatus, a practice that has been designated 'serosorting' (Clatts, Goldsamt, and Yi 2005; Parsons et al. 2006). However, the next most numerous group was that of men who failed to disclose serostatus. These two groups appear to have different patterns of presentation, as HIV-positive men were more likely to include multiple pictures, face pictures and to mention interest in drug use in their profiles, while non-disclosing men showed the opposite tendency of presentation. As we identified in the interviews with users of these websites, excluding pictures from the profiles may be a strategy to obtain other men's pictures or, alternatively, may suggest a specific form of performance and interaction philosophy, one for which the Internet and the sites used for that purpose should be venues for anonymous sexual encounters. While the frequent presence of pictures of HIV-positive men, as previously discussed, may indicate a sort of inverted perception of stigma in bareback websites, the lack of images in the presentation of non-disclosed HIV status men may indicate that this is a subset of users with higher levels of increased secrecy or anonymity. The implications of the existence of such a sub-group within the online barebacking networks seem well worth investigating.

Acknowledgements

This research was supported by a grant from the National Institute of Mental Health to the HIV Center for Clinical and Behavioral Studies at New York State Psychiatric Institute and Columbia University, New York, USA (R01 MH69333; Principal Investigator: Alex Carballo-Diéguez) and by a Center Grant also from the National Institute of Mental Health to the HIV Center for Clinical and Behavioral Studies at NY State Psychiatric Institute and Columbia University (P30-MH43520; Principal Investigator: Anke A. Ehrhardt). The content is solely the responsibility of the authors and does not necessarily represent the official views of NIMH or the NIH. The first author's work was supported by grant SFRH/BD/17396/2004 of Fundação para a Ciência e Tecnologia, Portugal. The authors of this paper would like to thank Ivan Balan and Robert Remien, HIV Center for Clinical and Behavioral Studies at New York State Psychiatric Institute and Columbia University; and Patrick Wilson, Columbia University Mailman School of Public Health, Department of Sociomedical Sciences.

References

- Blackwell, C.W. 2008. Men who have sex with men and recruit bareback sex partners on the Internet: Implications for STI and HIV prevention and client education. *American Journal of Men's Health* 2, no. 4: 306–13.
- Blackwell, C.W. 2009. Requests for safer sex among men who have sex with men who use the Internet to initiate sexual relationships: Implications for healthcare providers. *Journal of LGBT Health Research* 5: 4–9.
- Carballo-Diéguez, A., A. Ventuneac, J. Bauermeister, G.W. Dowsett, C. Dolezal, R.H. Remien, I. Balan, and M. Rowe. 2009. Is 'bareback' a useful construct in primary HIV-prevention? Definitions, identity and research. *Culture, Health & Sexuality* 11: 51–65.

- Carballo-Dieiguez, A., G.W. Dowsett, A. Ventuneac, R.H. Remien, I. Balan, C. Dolezal, O. Luciano, and P. Lin. 2006. Cybercartography of popular Internet sites used by New York City men who have sex with men interested in bareback sex. *AIDS Education and Prevention* 18: 475–89.
- Carvalho, A., and F.A. Gomes. 2003. Cybersex in Portuguese chatrooms: A study of sexual behaviors related to online sex. *Journal of Sex and Marital Therapy* 29: 345–60.
- Chenard, C. 2007. The impact of stigma on the self-care behaviors of HIV-positive gay men striving for normalcy. *Journal of the Association of Nurses in Aids Care* 18: 23–32.
- Clatts, M.C., L.A. Goldsamt, and H. Yi. 2005. An emerging HIV risk environment: A preliminary epidemiological profile of an MSM POZ Party in New York City. *Sexually Transmitted Infections* 81: 373–6.
- Drowning, M.J. 2010. Internet advertisements for public sexual encounters among men who have sex with men: Are safe behaviors communicated? *Journal of Men's Health* XX: 1–9.
- Dowsett, G., H. Williams, A. Ventuneac, and A. Carballo-Dieiguez. 2008. 'Taking it like a man': Masculinity and barebacking online. *Sexualities* 11: 121–41.
- Elford, J., G. Bolding, and L. Sherr. 2001. Seeking sex on the Internet and sexual risk Behaviour among gay men using London Gyms. *AIDS* 15: 1409–15.
- Heino, R., J. Gibbs, and N. Ellison. 2006. Managing impressions online: Self- presentation processes in the online dating environment. *Journal of Computer-Mediated Communication* 11: 415–41.
- Goffman, E. 1959. *The presentation of self in everyday life*. (1962 ed.) New York: Doubleday.
- Grov, C. 2010. Risky sex- and drug-seeking in a probability sample of men-for-men online bulletin board postings. *AIDS and Behaviour* 14: 1387–92.
- Hirschman, E.C. 1987. People as products: Analysis of a complex marketing. *Journal of Marketing* 51: 98–108.
- Jaffe, H.W., R.O. Valdiserri, and K.M. De Cock. 2007. The re-emerging HIV/AIDS epidemic in men who have sex with men. *Journal of the American Medical Association* 298: 2412–4.
- Jagger, E. 1998. Marketing the self, buying an other: Dating in a postmodern, consumer society. *Sociology* 32: 795–814.
- Ostergren, J., B.R.S. Rosser, and K. Horvath. 2011. Reasons for non-use of condoms among men who have sex with men: A comparison of receptive and insertive role in sex and online and offline meeting venue. *Culture, Health & Sexuality* 13, no. 2: 123–40.
- Parsons, J.T., J. Severino, J. Nanin, J.C. Punzalan, K. von Sternberg, W. Missildine, and D. Frost. 2006. Positive, negative, unknown: Assumptions of HIV status among HIV-positive men who have sex with men. *AIDS Education and Prevention* 18: 139–49.
- Phua, V.C. 2002. Sex and sexuality in men's personal advertisements. *Men and Masculinities* 5: 178–91.
- Phua, V.C., J. Hopper, and O. Vazquez. 2002. Men's concerns with sex in personal advertisements. *Culture, Health & Sexuality* 4: 355–63.
- QSR International. 2008. *Nvivo8*. [computer software], Melbourne, Australia: QSR International.
- Ross, M.W. 2005. Typing, doing and being: Sexuality and the Internet. *Journal of Sex Research* 42: 342–52.
- Sowell, R.L., and K.D. Phillips. 2010. Men seeking sex on an intergenerational gay Internet website: An exploratory study. *Public Health Reports* 25: Suppl. 1: 21–8.
- Tewksbury, R. 2003. Bareback sex and the quest for HIV: Assessing the relationship in Internet personal advertisements of men who have sex with men. *Deviant Behavior* 24: 467–82.
- Tewksbury, R. 2006. 'Click here for HIV': An analysis of internet-based bug chasers and bug givers. *Deviant Behavior* 27: 379–95.
- Walther, J.B., T. Loh, and L. Granka. 2005. Let me count the ways: The interchange of verbal and non-verbal cues in computer-mediated and face-to-face affinity. *Journal of Language and Social Psychology* 24: 36–65.
- Wilson, P., P. Valera, A. Ventaneauc, I. Balan, and A. Carballo-Dieiguez. 2009. Race-based sexual stereotyping and sexual partnering among men who use the Internet to identify other men for bareback sex. *Journal of Sex Research* 46: 1–15.
- Wolitski, R.J., J.T. Parsons, C.A. Gómez, the Seropositive Urban Men's Study Team, and C. Courtenay-Quirk. 2006. Is HIV/AIDS stigma dividing the gay community? Perceptions of HIV-positive men who have sex with men. *AIDS Education and Prevention* 18: 56–67.
- Wortham, J. 2010. Facebook tops 500 million users. *The New York Times*, July 21. New York Times. <http://dealbook.nytimes.com/2010/07/22/facebook-tops-500-million-users/>

Résumé

Internet est devenu un espace de recherche de partenaires sexuels pour les hommes qui ont des rapports avec des hommes (HSH). Certains de ces hommes recherchent spécifiquement des rapports anaux non protégés (sexe «bareback») avec d'autres hommes. Cet article examine la création, l'utilisation et le contenu des profils personnels d'HSH vivant dans la zone métropolitaine du Grand New-York qui utilisent des sites web spécialisés dans le bareback pour développer leur réseau sexuel. Nous avons utilisé une approche mixte pour analyser les données obtenues d'une cybercartographie de sites Internet, élaborée dans la première phase de cette recherche (199 profils personnels en ligne), et d'entretiens en profondeur conduits dans la seconde phase de la recherche (120 HSH qui, en ligne, recherchaient couramment des partenaires pour du sexe bareback). Les résultats indiquent que généralement, ces hommes avaient pour modèles de leurs profils en ligne, des stéréotypes rencontrés hors ligne. Cependant les hommes qui révélaient leur séropositivité au VIH étaient les plus susceptibles de joindre des photos de leur visage ou de leur tête à leurs profils. D'une manière générale, les images utilisées par eux étaient fortement sexualisées et conformes aux normes de groupe, perçues et renforcées par la conception et l'imagerie des sites web. Les hommes qui s'identifiaient comme «soumis» avaient tendance à être plus explicites en ligne dans la description de leurs goûts sexuels et pour les drogues. Cet article souligne comment certaines performances virtuelles et sexuelles agissent sur d'autres performances dans la réalité, et les renforcent.

Resumen

Internet se ha convertido en un lugar donde los hombres que tienen relaciones sexuales con hombres (HSH) buscan compañeros sexuales. Algunos de estos hombres buscan expresamente tener relaciones sexuales anales sin protección con otros hombres (también denominado sexo 'bareback'). En este artículo prestamos atención a la creación, el uso y el contenido de las descripciones personales en Internet de los HSH, del área metropolitana de Nueva York, que usan páginas web bareback para participar en redes sexuales. Utilizamos un enfoque de valoración según varios métodos para analizar los datos de una cibercartografía de páginas de Internet llevada a cabo durante la primera fase de la investigación (199 descripciones personales), y para analizar los datos de entrevistas exhaustivas realizadas en la segunda fase del estudio (120 HSH que buscaban parejas por Internet para tener relaciones sexuales bareback). Los resultados indican que los hombres seguían en general los mismos patrones estereotipados fuera de Internet que en sus descripciones cibernéticas. Sin embargo, era más probable que los hombres que revelaban ser seropositivos incluyeran fotografías de su rostro y cabeza. En general, las imágenes que utilizaban eran altamente sexualizadas, de acuerdo con las normas de grupo que se percibían y reforzaban mediante el diseño y el tipo de imágenes utilizados en las páginas web. Los hombres que también mostraban las partes inferiores de sus cuerpos solían ser más explícitos al exponer por Internet sus intereses sexuales y uso de drogas. En este artículo ponemos de relieve en qué medida ciertos comportamientos virtuales y sociales influyen y refuerzan otros comportamientos en la vida real.

Appendix 10 – Abstract: The laws of online attraction – The good the bad and the ugly

Nodin, N., Carballo-Diéguez, A., & Leal, I.P. (2009). The laws of online attraction – The good the bad and the ugly. Oral presentation at the *Gender, media and the public sphere Conference*, Coimbra, Portugal; October 2009.

Title: The laws of online attraction – The good, the bad and the ugly

Abstract

Although the Internet has been around for a few years, only now we are starting to understand how some of the typical social offline phenomena translates – or not – into cyberspace. One such phenomenon is sexual attraction and partner selection.

A common assumption that many researchers and scholars have made is that the Internet is a disembodied space where physical features don't matter as everything and everyone are virtual. Using a sample of Portuguese men who have sex with men (MSM) and who use the Internet to seek sexual and relationship partners, we decided to verify that assumption. For that purpose, we looked at the criteria these men use in order to decide who to contact and with whom to continue to interact using dating websites and chat rooms. We also wanted to research how the dynamics of desire play out online.

Thirty-six Portuguese MSM (age: $m=34.5$; $sd=8.5$) mostly recruited online were interviewed face-to-face about their use of the Internet to meet sexual partners. These interviews were audio recorded with the participants' agreement and later transcribed. Interview content that included information relevant for the purpose of this study was coded and analysed for common themes.

Pictures of other men online were the most common feature used by men in their selection process, but many also mentioned they sought others with interests similar to theirs. Sexual compatibility was a frequent feature sought on potential matches, although a subset of participants would specifically not contact others whose purpose would be sexual.

It seems clear from our results that there is no disembodiment online, as the body is very much present both in the profiles men create to advertise themselves online, and as an important selection criteria for those out seeking others for sexual and relationship purposes.

Appendix 11 – SPSS Outputs: Study 2 EFA (available in the CD version only)

Factor Analysis AFE Inicial

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.859
Bartlett's Test of Sphericity	Approx. Chi-Square	9318.520
	df	2080
	Sig.	.000

“Factor Analysis AFE Inicial” Tables suppressed as too large to fit in document but available on request

Communalities

	Initial	Extraction
Q42_r1	1.000	.579
Q42_r2	1.000	.613
Q42_r3	1.000	.737
Q42_r4	1.000	.693
Q42_r5	1.000	.598
Q42_r6	1.000	.562
Q42_r7	1.000	.648
Q42_r8	1.000	.687
Q42_r9	1.000	.619
Q42_r10	1.000	.724
Q42_r11	1.000	.532
Q42_r12	1.000	.562
Q42_r13	1.000	.706
Q42_r14	1.000	.634
Q42_r15	1.000	.674
Q42_r16	1.000	.586
Q43_r1	1.000	.623
Q43_r2	1.000	.581
Q43_r3	1.000	.651
Q43_r4	1.000	.518
Q43_r5	1.000	.640
Q43_r6	1.000	.659
Q43_r7	1.000	.469
Q43_r8	1.000	.715
Q43_r9	1.000	.608

Q43_r10	1.000	.642
Q43_r11	1.000	.653
Q43_r12	1.000	.622
Q43_r13	1.000	.627
Q43_r14	1.000	.596
Q43_r15	1.000	.702
Q44_r1	1.000	.617
Q44_r2	1.000	.606
Q44_r3	1.000	.553
Q44_r4	1.000	.583
Q44_r5	1.000	.597
Q44_r6	1.000	.719
Q44_r7	1.000	.552
Q44_r8	1.000	.716
Q44_r9	1.000	.719
Q44_r10	1.000	.711
Q44_r11	1.000	.760
Q44_r12	1.000	.695
Q44_r13	1.000	.639
Q44_r14	1.000	.645
Q44_r15	1.000	.564
Q44_r16	1.000	.655
Q44_r17	1.000	.631
Q44_r18	1.000	.655
Q45_r1	1.000	.664
Q45_r2	1.000	.542
Q45_r3	1.000	.647
Q45_r4	1.000	.635
Q45_r5	1.000	.587
Q45_r6	1.000	.581
Q45_r7	1.000	.783
Q45_r8	1.000	.576
Q45_r9	1.000	.723
Q45_r10	1.000	.578
Q45_r11	1.000	.604
Q45_r12	1.000	.692
Q45_r13	1.000	.768
Q45_r14	1.000	.647
Q45_r15	1.000	.583
Q45_r16	1.000	.719

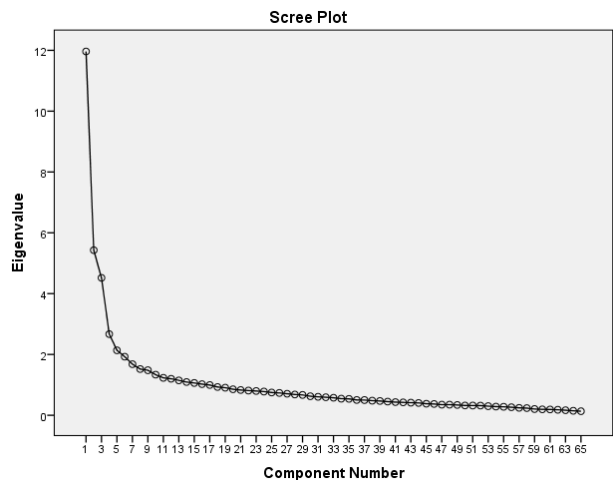
Extraction Method: Principal
Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	11.962	18.404	18.404	11.962	18.404	18.404	7.017	10.796	10.796
2	5.430	8.354	26.758	5.430	8.354	26.758	5.233	8.050	18.846
3	4.518	6.951	33.709	4.518	6.951	33.709	3.568	5.490	24.336
4	2.670	4.107	37.816	2.670	4.107	37.816	3.189	4.907	29.242
5	2.135	3.285	41.101	2.135	3.285	41.101	2.923	4.497	33.739
6	1.927	2.964	44.065	1.927	2.964	44.065	2.772	4.264	38.004
7	1.680	2.584	46.649	1.680	2.584	46.649	2.136	3.287	41.291
8	1.520	2.338	48.988	1.520	2.338	48.988	2.128	3.274	44.564
9	1.481	2.279	51.266	1.481	2.279	51.266	1.752	2.696	47.260
10	1.334	2.052	53.318	1.334	2.052	53.318	1.668	2.566	49.827
11	1.230	1.892	55.210	1.230	1.892	55.210	1.662	2.557	52.384
12	1.201	1.847	57.058	1.201	1.847	57.058	1.619	2.490	54.874
13	1.148	1.766	58.823	1.148	1.766	58.823	1.602	2.465	57.339
14	1.092	1.680	60.503	1.092	1.680	60.503	1.517	2.333	59.672
15	1.063	1.635	62.138	1.063	1.635	62.138	1.351	2.079	61.751
16	1.022	1.573	63.711	1.022	1.573	63.711	1.274	1.960	63.711
17	.995	1.530	65.241						
18	.929	1.430	66.671						
19	.906	1.394	68.065						
20	.856	1.317	69.382						
21	.830	1.277	70.659						
22	.812	1.250	71.909						
23	.797	1.226	73.135						
24	.780	1.200	74.335						
25	.748	1.150	75.485						
26	.735	1.130	76.615						
27	.708	1.090	77.705						
28	.684	1.052	78.757						
29	.668	1.028	79.785						
30	.627	.964	80.749						
31	.607	.933	81.682						
32	.593	.912	82.594						

33	.577	.887	83.481					
34	.546	.840	84.321					
35	.540	.831	85.152					
36	.503	.774	85.926					
37	.500	.769	86.695					
38	.480	.739	87.434					
39	.469	.722	88.155					
40	.449	.690	88.846					
41	.434	.667	89.513					
42	.424	.652	90.165					
43	.414	.636	90.801					
44	.405	.624	91.425					
45	.380	.584	92.009					
46	.371	.571	92.580					
47	.349	.537	93.117					
48	.349	.537	93.654					
49	.338	.521	94.174					
50	.323	.497	94.671					
51	.319	.491	95.162					
52	.318	.489	95.651					
53	.300	.461	96.112					
54	.284	.437	96.549					
55	.279	.430	96.979					
56	.266	.409	97.388					
57	.244	.375	97.763					
58	.236	.363	98.126					
59	.205	.315	98.441					
60	.195	.300	98.741					
61	.192	.295	99.036					
62	.180	.277	99.313					
63	.166	.256	99.568					
64	.148	.228	99.796					
65	.132	.204	100.000					

Extraction Method: Principal Component Analysis.



Component Matrix^a

	Component															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Q42_r1	.238	-.279	-.252	.277	-.066	.291	.025	.079	-.018	-.035	-.382	.119	-.109	.034	-.054	.175
Q42_r2	.279	-.359	-.131	.312	-.123	.157	.013	.203	-.031	.251	-.017	.199	-.184	.099	.053	.246
Q42_r3	.232	.088	.314	-.034	-.168	.213	.519	.061	-.280	-.066	.242	.098	-.160	-.207	.075	.057
Q42_r4	.499	.169	-.059	-.217	-.349	-.239	.168	.007	-.130	.088	-.074	.243	-.169	-.172	.034	-.101
Q42_r5	.498	-.171	-.064	.066	-.303	.315	.066	-.271	.100	.059	-.115	.028	.091	.026	-.080	-.010
Q42_r6	.473	.131	-.119	.284	.239	.047	-.063	-.230	-.278	-.020	-.044	.031	-.069	.106	.084	.077
Q42_r7	-.314	.337	.183	-.044	.179	-.193	-.083	.315	-.048	-.156	.287	.218	.174	.182	.049	.055
Q42_r8	.281	-.113	.657	.079	-.061	.028	-.326	.052	.040	.076	-.029	-.022	-.007	-.072	-.073	-.156
Q42_r9	-.094	.478	.016	.347	.114	-.162	-.025	.134	.068	.332	-.079	.109	.088	-.216	.041	.117
Q42_r10	.444	.152	.190	-.281	-.221	.192	.327	-.055	-.175	.025	.068	.036	-.037	.121	-.371	.050
Q42_r11	.411	.116	-.184	-.291	-.197	.013	-.152	.086	-.104	.322	.066	-.079	-.007	.106	-.159	.028
Q42_r12	.458	-.314	-.127	.001	.105	.018	-.111	-.204	.230	.067	.112	.216	.151	.048	-.088	-.150
Q42_r13	.430	-.192	-.096	-.076	-.065	.109	-.070	-.223	.089	.239	.131	.261	-.332	.122	.225	-.270
Q42_r14	.411	.342	.133	-.212	.019	.281	-.053	.181	-.037	-.012	-.200	-.088	.131	.038	-.316	-.064
Q42_r15	.533	-.048	-.213	.335	-.040	.343	-.042	.114	-.119	.038	-.086	-.111	-.076	.143	.160	-.097
Q42_r16	.005	.352	.066	.295	-.139	.268	.226	.203	-.325	.121	-.029	.015	.218	-.031	.039	-.126
Q43_r1	.493	.305	-.208	-.030	.237	-.033	-.111	-.024	-.171	.250	-.061	-.116	-.115	-.005	-.170	-.147
Q43_r2	.664	.005	-.089	-.025	-.190	-.191	.096	.139	-.009	.068	-.054	-.040	.110	.073	-.021	.058
Q43_r3	.353	.010	-.018	-.044	-.233	-.007	-.310	.215	.002	.261	.309	-.359	-.068	.092	-.039	.141
Q43_r4	-.083	.519	.203	.240	.078	.024	.079	-.045	.119	.126	-.101	-.053	-.074	.138	-.130	.207
Q43_r5	.388	-.186	.393	.242	-.132	-.009	-.233	.172	.152	.171	.251	.097	.086	-.042	-.076	-.023
Q43_r6	-.229	.438	.276	-.195	.131	-.090	.136	.409	-.058	-.012	.061	.131	-.081	.176	.104	.130
Q43_r7	-.125	.402	-.010	.037	-.196	.101	.001	.294	-.262	.001	.018	-.104	-.130	.009	.003	-.241
Q43_r8	.456	-.206	.624	.071	-.101	-.015	-.026	-.049	.041	.164	-.095	.073	.112	.022	.042	-.010
Q43_r9	-.085	.309	.227	.143	-.004	-.092	.221	.119	.235	.159	-.262	-.264	.346	.095	.117	-.001

Q43_r10	.392	.128	-.168	.133	.186	.227	.150	.099	.251	-.060	.117	.048	.181	-.432	.015	.071
Q43_r11	.662	-.014	-.112	-.090	-.153	.027	.184	.002	.230	-.099	-.107	-.087	.126	-.189	.053	-.028
Q43_r12	.685	.106	-.012	.032	-.209	-.255	.080	-.043	.018	-.011	.045	.077	.108	-.055	-.012	-.016
Q43_r13	.466	-.172	.489	-.011	.066	.001	.008	-.016	-.138	-.035	-.042	-.071	.135	.254	-.131	-.092
Q43_r14	-.247	.426	.296	-.245	-.129	.110	-.143	-.113	-.058	-.050	-.016	.254	.148	-.039	.169	-.148
Q43_r15	.522	-.179	-.201	.267	.056	.010	.159	-.173	-.021	.097	.360	.118	.227	.113	-.093	.031
Q44_r1	.378	-.189	.572	.090	.107	-.049	.017	-.003	.012	.011	-.059	.109	-.098	.054	.188	.160
Q44_r2	.549	-.051	.003	-.123	.338	.186	.075	.159	.012	.014	-.067	.061	-.079	-.258	-.102	.129
Q44_r3	-.068	.452	.013	.044	-.139	.193	-.340	.029	-.007	.003	-.065	.310	.183	.002	-.047	.182
Q44_r4	.613	.027	-.105	-.284	-.165	-.159	.078	-.081	-.059	.125	.021	.086	.108	-.107	-.007	-.021
Q44_r5	.445	-.072	.088	-.413	.296	.088	.216	.015	.165	.130	.054	-.123	-.054	.022	.078	.044
Q44_r6	-.043	.563	.166	-.258	-.062	.357	-.135	-.267	-.081	.000	-.097	.086	.111	.011	.188	.117
Q44_r7	.392	.188	-.167	.130	.344	-.082	-.067	-.220	-.286	.021	.107	.046	.158	-.104	-.062	.063
Q44_r8	.666	.237	-.179	-.043	-.215	-.319	.097	.050	.010	-.022	-.071	.097	.062	.044	.029	-.027
Q44_r9	.030	.374	-.084	.174	.285	-.187	.306	-.206	.240	.077	-.253	.113	-.040	.272	-.205	-.174
Q44_r10	-.181	.382	-.562	-.190	-.136	.125	.050	-.054	.156	.011	.082	.098	.049	.306	.040	.044
Q44_r11	.573	.041	-.014	-.310	.456	.205	.065	.166	.129	.167	.010	-.053	.017	-.011	.065	-.005
Q44_r12	.671	.178	-.155	-.099	-.182	-.239	.114	.210	.107	-.025	-.025	.067	.049	.064	.083	-.036
Q44_r13	.442	-.008	-.280	.224	.161	.261	.058	.183	-.192	-.214	-.042	.014	.068	.128	.107	-.259
Q44_r14	-.170	.499	-.436	-.048	-.104	.082	-.045	-.044	.170	.179	.063	.074	-.029	.111	.223	.140
Q44_r15	.506	-.079	-.268	.188	.201	.061	-.013	-.048	-.189	-.065	.208	-.025	.204	.127	.085	-.003
Q44_r16	.056	.467	.358	-.325	-.044	.289	-.148	-.228	-.048	-.079	-.024	-.037	.097	-.093	.101	.042
Q44_r17	.506	.129	-.092	-.011	.135	-.332	-.056	-.181	-.277	.049	-.088	-.101	.206	.020	.168	.131
Q44_r18	.519	.044	-.147	-.276	.167	.054	-.268	.084	.001	.148	-.103	-.170	-.047	-.050	.232	-.240
Q45_r1	.498	.330	-.171	.154	-.116	-.248	-.302	.075	.035	-.124	-.170	-.080	-.100	-.133	-.031	.021
Q45_r2	-.147	.404	.402	-.014	.097	-.046	.176	-.159	.100	-.024	.193	-.124	-.121	-.011	-.167	-.146
Q45_r3	.670	-.011	.074	.131	-.050	.024	-.020	-.065	.074	-.187	.164	-.135	-.035	.025	.042	.279
Q45_r4	.072	.573	.049	.208	-.027	.210	-.209	-.168	.088	-.016	.138	-.060	-.159	-.071	-.265	.089
Q45_r5	.382	.188	.079	-.261	.034	-.278	-.043	-.247	-.303	-.045	-.083	-.088	-.176	.020	.002	.226
Q45_r6	-.054	.556	.145	.288	.047	-.102	.022	.006	.143	.152	-.038	.225	-.216	-.040	-.066	-.064
Q45_r7	.734	.239	-.067	.009	-.135	-.070	-.135	.009	.143	-.335	-.060	-.019	-.022	-.037	.010	-.048
Q45_r8	.062	.500	.239	.070	-.068	.087	.130	-.047	.203	-.199	.095	-.189	-.125	.197	.220	-.007
Q45_r9	.718	.077	-.048	-.034	-.049	-.002	-.071	.063	.204	-.300	.164	-.028	-.028	.133	-.088	.028
Q45_r10	.102	.520	.042	.319	.232	-.127	-.099	.001	-.076	-.045	.164	.062	-.033	-.097	-.030	-.253
Q45_r11	.633	.138	-.012	.169	-.164	.094	-.074	.045	.177	-.253	.032	.017	-.092	-.033	.034	-.075
Q45_r12	.574	.086	-.001	-.307	.431	.065	.021	.087	.149	.074	.045	.094	-.133	-.036	.058	.050
Q45_r13	.461	-.199	.662	.123	.059	.079	-.029	-.049	.066	.030	-.080	.016	.023	.164	.100	.033
Q45_r14	-.044	.232	.136	.371	-.207	-.009	.228	-.256	.045	.246	.144	-.345	-.030	-.136	.225	-.046
Q45_r15	.599	.139	.010	.230	.141	-.095	.017	.020	-.103	-.197	-.105	-.025	-.231	-.003	.029	.087
Q45_r16	.327	-.273	.700	.045	.028	-.121	-.032	.011	-.063	-.026	-.059	.118	-.016	.047	.061	-.034

Extraction Method: Principal Component Analysis.

a. 16 components extracted.

Rotated Component Matrix^a

	Component															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Q42_r1	.066	.004	.013	-.058	.046	-.122	.655	.272	-.042	-.025	.047	.084	-.124	-.043	.061	.133
Q42_r2	.071	.138	.024	-.005	.016	-.240	.659	.064	.105	.148	-.046	.017	.183	-.094	-.002	-.121
Q42_r3	.137	.203	.070	-.001	-.007	.068	-.012	-.037	.786	-.058	.067	.132	-.050	-.061	.113	-.053
Q42_r4	.710	.029	.073	.054	-.023	.071	.006	.070	.255	-.092	-.210	.028	-.022	-.176	-.108	-.092
Q42_r5	.309	.141	.039	-.102	.024	.123	.259	.519	.110	.288	.092	.017	.035	.015	.010	.113
Q42_r6	.165	.084	.113	.160	.620	.031	.203	.119	.007	.046	.137	.121	-.040	-.079	-.058	-.034
Q42_r7	-.133	-.040	-.108	.120	-.018	.132	-.202	-.731	-.041	.065	.028	.034	-.016	.022	.029	.020
Q42_r8	.043	.755	.019	.091	-.101	.127	-.089	.068	-.119	-.020	-.009	.085	.184	-.075	.047	.050
Q42_r9	.022	-.076	-.057	.577	.095	.082	.062	-.182	-.068	-.076	-.253	.023	.045	.266	.225	-.160
Q42_r10	.341	.137	.172	.021	.002	.145	-.032	.105	.522	.106	.028	.000	.095	-.047	-.178	.446
Q42_r11	.379	-.092	.223	-.030	.057	.097	.052	.078	.016	.066	-.168	.035	.456	-.054	-.188	.167
Q42_r12	.233	.167	.217	-.110	.108	-.104	.061	.227	-.199	.507	-.031	-.081	-.040	-.183	.057	.002
Q42_r13	.241	.124	.287	.004	-.013	.016	.139	.277	.020	.309	.015	.087	.045	-.371	-.280	-.363
Q42_r14	.264	.117	.315	.115	.008	.287	-.005	.037	.015	-.053	.023	.235	.108	.090	.035	.525
Q42_r15	.212	.070	.151	-.008	.247	-.062	.425	.252	-.006	.097	.225	.457	.145	.021	.007	-.045
Q42_r16	.001	-.018	-.157	.186	.100	.182	.103	-.069	.321	.019	-.123	.506	.015	.282	.101	.065
Q43_r1	.297	-.070	.375	.285	.382	-.020	-.046	.145	-.085	-.043	-.123	.209	.185	-.075	-.105	.142
Q43_r2	.649	.133	.137	-.068	.144	-.125	.142	.036	.048	.080	.002	.028	.158	.134	-.025	.086
Q43_r3	.222	.083	.090	-.030	.032	-.059	.029	.013	-.041	.011	.105	.032	.752	.005	-.020	.004
Q43_r4	-.080	-.005	-.032	.582	.047	.165	.028	-.094	.070	-.080	.146	-.081	.022	.270	-.063	.123
Q43_r5	.171	.582	-.020	.100	-.077	-.068	.082	-.034	-.043	.289	-.007	.037	.332	-.067	.200	-.042
Q43_r6	-.062	-.023	.127	.211	-.163	.171	-.073	-.650	.178	-.206	.028	.042	-.019	.128	-.129	.025
Q43_r7	.037	-.160	-.124	.176	-.101	.124	-.091	-.146	.142	-.239	-.011	.482	.151	-.003	-.079	.049
Q43_r8	.206	.773	.076	-.003	-.014	.090	.065	.108	.075	.122	-.046	-.055	.050	.124	-.037	-.020
Q43_r9	.031	.075	-.011	.209	-.115	.066	-.100	-.064	-.069	-.049	.018	.055	-.061	.715	.011	.011
Q43_r10	.218	-.073	.324	.111	.096	.002	.078	.105	.091	.164	.070	.064	-.055	.061	.628	-.011
Q43_r11	.610	.076	.270	-.128	.004	-.023	.054	.285	.057	.075	.136	.018	-.036	.128	.235	.036
Q43_r12	.709	.185	.044	.046	.194	-.034	-.012	.075	.082	.147	.017	-.014	.059	.020	.063	-.002
Q43_r13	.153	.634	.126	-.110	.169	-.019	-.050	.014	.061	.128	.092	.081	.026	.081	-.182	.258
Q43_r14	-.047	.030	-.108	.086	-.151	.640	-.255	-.186	.022	-.022	-.094	.085	-.131	-.019	-.056	-.070
Q43_r15	.256	.062	.055	-.027	.393	-.232	.117	.119	.161	.586	.045	-.004	.094	-.018	.108	-.001
Q44_r1	.094	.687	.163	.018	.086	.017	.154	-.075	.111	-.027	.126	-.141	-.056	.024	-.038	-.138
Q44_r2	.205	.172	.567	.012	.172	-.055	.185	.057	.105	-.054	-.026	-.001	-.023	-.126	.289	.168
Q44_r3	.044	-.098	-.169	.251	.011	.560	.175	-.192	-.137	.059	-.060	.020	.079	-.036	.132	.134
Q44_r4	.625	.058	.229	-.131	.148	.065	-.046	.132	.121	.114	-.174	-.070	.095	-.043	-.019	.016

Q44_r5	.167	.128	.682	-.135	.027	-.034	-.080	.048	.145	.059	.081	-.132	.038	.077	-.054	.015
Q44_r6	-.037	-.094	.083	.128	.076	.802	-.071	.006	.096	-.074	.078	.004	-.012	.086	-.059	.016
Q44_r7	.162	-.020	.146	.125	.659	.030	-.057	.019	-.003	.113	-.090	.024	-.010	-.073	.140	.056
Q44_r8	.812	-.004	.084	.071	.175	-.024	.042	-.016	.013	.061	.012	.038	.014	.054	-.053	.010
Q44_r9	.098	-.152	.124	.542	.084	-.118	-.092	.033	-.092	.159	.043	-.026	-.413	.219	-.266	.142
Q44_r10	.088	-.721	.006	.059	-.086	.228	.059	-.094	-.050	.221	.120	.003	.027	.051	-.198	.026
Q44_r11	.187	.107	.809	-.035	.148	.021	.044	-.017	-.002	.098	.029	.068	.067	.049	.081	.073
Q44_r12	.777	.016	.207	.005	.047	-.062	.076	-.088	.010	.078	.073	.086	.061	.076	-.009	-.006
Q44_r13	.200	-.035	.183	-.115	.300	-.103	.231	.036	-.028	.145	.194	.553	-.130	-.048	.078	.072
Q44_r14	.066	-.607	.023	.251	-.033	.304	.101	-.091	-.062	.070	.058	-.026	.126	.114	-.073	-.220
Q44_r15	.210	-.003	.148	-.150	.529	-.124	.124	.022	-.009	.310	.133	.191	.076	-.015	.095	-.005
Q44_r16	.004	.116	.135	.067	.025	.706	-.254	.030	.111	-.129	.121	-.010	.040	.041	.024	.083
Q44_r17	.424	.087	.104	-.069	.605	.035	-.041	-.001	-.078	-.062	-.077	-.074	.039	.162	-.068	-.071
Q44_r18	.320	.051	.524	-.133	.149	.100	-.037	.149	-.275	-.085	-.027	.248	.189	-.059	-.050	-.124
Q45_r1	.583	-.001	-.018	.251	.217	.027	.060	.061	-.289	-.230	.121	.084	.142	-.079	.137	.038
Q45_r2	-.130	.115	.015	.409	-.082	.099	-.485	-.054	.222	-.031	.160	-.025	-.040	.058	-.057	.074
Q45_r3	.408	.260	.133	-.022	.292	-.033	.144	.096	.108	.080	.419	-.119	.201	-.018	.171	.027
Q45_r4	.001	-.097	-.058	.567	.113	.304	-.085	.104	.025	-.009	.242	.028	.220	-.118	.146	.184
Q45_r5	.350	.098	.126	.004	.407	.132	-.112	.013	.114	-.302	.024	-.248	.066	-.108	-.241	.058
Q45_r6	.068	-.006	-.052	.717	-.051	.125	-.032	-.134	.021	-.034	-.014	.064	-.091	.001	-.005	-.090
Q45_r7	.706	.122	.135	.056	.159	.103	.015	.098	-.135	-.010	.355	.104	.012	-.110	.154	.104
Q45_r8	.096	.014	.027	.287	-.063	.243	-.178	-.097	.135	-.065	.533	.097	-.003	.214	-.081	-.105
Q45_r9	.569	.141	.227	-.018	.122	-.037	.034	.003	-.050	.190	.438	.021	.124	-.144	.104	.180
Q45_r10	.089	-.001	-.027	.513	.282	.051	-.259	-.164	-.070	.024	.051	.301	-.044	-.076	.142	-.065
Q45_r11	.524	.173	.091	.108	.056	.045	.120	.141	-.028	.088	.379	.184	.045	-.128	.189	.019
Q45_r12	.270	.111	.733	.058	.158	.029	.030	-.079	-.004	.057	.069	-.066	-.003	-.131	.056	.012
Q45_r13	.086	.801	.161	.010	.058	.075	.110	.051	.052	.107	.188	-.030	-.003	.113	-.080	-.008
Q45_r14	-.039	.022	-.206	.302	.067	-.007	-.181	.301	.265	-.019	.117	.071	.169	.357	.043	-.368
Q45_r15	.400	.206	.164	.197	.377	-.120	.174	.030	.030	-.162	.274	.092	-.061	-.102	.050	.027
Q45_r16	.094	.823	.041	-.059	.009	-.008	-.007	-.071	.074	-.005	.014	-.056	-.076	-.030	-.081	-.032

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 23 iterations.

Component Transformation Matrix

Component	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	.694	.330	.388	-.011	.326	-.035	.159	.189	.052	.151	.152	.092	.132	-.065	.069	.077
2	.221	-.319	.023	.612	.113	.489	-.242	-.233	.069	-.157	.121	.167	.032	.177	.008	.073
3	-.173	.845	-.033	.134	-.177	.221	-.228	-.150	.201	-.113	.066	-.085	-.016	.117	-.046	.037
4	.138	.174	-.469	.456	.259	-.321	.327	.112	-.066	.146	.170	.258	-.047	.147	.249	-.163
5	.420	.038	.601	.146	.437	-.194	-.112	-.227	-.221	.012	-.008	-.034	-.288	-.018	.107	.039
6	.406	-.055	.257	-.088	-.137	.430	.350	.309	.237	.175	.220	.350	.072	-.058	.179	.194
7	.084	-.149	.122	.014	-.107	-.321	-.039	.031	.717	.077	.019	-.013	-.423	.368	-.055	.009
8	.097	.024	.159	-.063	-.361	-.273	.267	-.588	-.039	-.211	-.083	.398	.227	.100	.218	.135
9	.091	-.043	.229	.240	-.572	-.076	-.035	.123	-.353	.299	.327	-.334	-.070	.181	.219	-.111
10	.113	.026	.247	.302	-.050	-.024	.137	.173	.059	.178	-.615	-.048	.434	.251	-.245	.236
11	.105	-.081	-.032	-.035	.082	-.123	-.366	-.280	.330	.473	.199	-.031	.452	-.295	.190	.212
12	.137	.055	-.065	.151	-.105	.247	.331	-.329	.063	.381	-.330	-.093	-.441	-.438	.011	.093
13	.053	.025	-.168	-.339	.176	.230	-.146	-.126	-.177	.427	-.253	.038	-.062	.554	.313	.211
14	.059	-.003	-.040	-.040	.049	-.030	.182	-.263	-.134	.338	.354	.057	.050	.170	-.750	.180
15	.030	.008	.103	-.276	.071	.240	.115	-.135	-.034	-.118	.176	.135	-.100	.214	-.035	.835
16	.062	-.069	-.034	-.021	.214	.113	.467	-.215	.189	-.189	.141	-.679	.228	.153	.175	.093

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

FACTOR

```
/VARIABLES Q42_r1 Q42_r2 Q42_r3 Q42_r4 Q42_r5 Q42_r6 Q42_r7 Q42_r8 Q42_r9 Q42_r10 Q42_r11
Q42_r12 Q42_r13 Q42_r14 Q42_r15 Q42_r16 Q43_r1 Q43_r2 Q43_r3 Q43_r4 Q43_r5 Q43_r6 Q43_r7
Q43_r8 Q43_r9 Q43_r10 Q43_r11 Q43_r12 Q43_r13 Q43_r14 Q43_r15 Q44_r1 Q44_r2 Q44_r3 Q44_r4
Q44_r5 Q44_r6 Q44_r7 Q44_r8 Q44_r9 Q44_r10 Q44_r11 Q44_r12 Q44_r13 Q44_r14 Q44_r15 Q44_r16
Q44_r17 Q44_r18 Q45_r1 Q45_r2 Q45_r3 Q45_r4 Q45_r5 Q45_r6 Q45_r7 Q45_r8 Q45_r9 Q45_r10 Q45_r11
Q45_r12 Q45_r13 Q45_r14 Q45_r15 Q45_r16
/MISSING LISTWISE
/ANALYSIS Q42_r1 Q42_r2 Q42_r3 Q42_r4 Q42_r5 Q42_r6 Q42_r7 Q42_r8 Q42_r9 Q42_r10 Q42_r11
Q42_r12 Q42_r13 Q42_r14 Q42_r15 Q42_r16 Q43_r1 Q43_r2 Q43_r3 Q43_r4 Q43_r5 Q43_r6 Q43_r7
Q43_r8 Q43_r9 Q43_r10 Q43_r11 Q43_r12 Q43_r13 Q43_r14 Q43_r15 Q44_r1 Q44_r2 Q44_r3 Q44_r4
Q44_r5 Q44_r6 Q44_r7 Q44_r8 Q44_r9 Q44_r10 Q44_r11 Q44_r12 Q44_r13 Q44_r14 Q44_r15 Q44_r16
Q44_r17 Q44_r18 Q45_r1 Q45_r2 Q45_r3 Q45_r4 Q45_r5 Q45_r6 Q45_r7 Q45_r8 Q45_r9 Q45_r10 Q45_r11
Q45_r12 Q45_r13 Q45_r14 Q45_r15 Q45_r16
/PRINT INITIAL KMO ROTATION
/PLOT EIGEN
/CRITERIA FACTORS(6) ITERATE(25)
/EXTRACTION PC
/CRITERIA ITERATE(25)
/ROTATION VARIMAX
/METHOD=CORRELATION.
```

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.859
Bartlett's Test of Sphericity	Approx. Chi-Square	9318.520
	df	2080
	Sig.	.000

Communalities

	Initial
Q42_r1	1.000
Q42_r2	1.000
Q42_r3	1.000
Q42_r4	1.000
Q42_r5	1.000
Q42_r6	1.000
Q42_r7	1.000
Q42_r8	1.000
Q42_r9	1.000
Q42_r10	1.000
Q42_r11	1.000
Q42_r12	1.000
Q42_r13	1.000
Q42_r14	1.000
Q42_r15	1.000
Q42_r16	1.000
Q43_r1	1.000
Q43_r2	1.000
Q43_r3	1.000
Q43_r4	1.000
Q43_r5	1.000
Q43_r6	1.000
Q43_r7	1.000
Q43_r8	1.000
Q43_r9	1.000
Q43_r10	1.000
Q43_r11	1.000
Q43_r12	1.000
Q43_r13	1.000
Q43_r14	1.000
Q43_r15	1.000
Q44_r1	1.000
Q44_r2	1.000
Q44_r3	1.000
Q44_r4	1.000
Q44_r5	1.000
Q44_r6	1.000
Q44_r7	1.000

Q44_r8	1.000
Q44_r9	1.000
Q44_r10	1.000
Q44_r11	1.000
Q44_r12	1.000
Q44_r13	1.000
Q44_r14	1.000
Q44_r15	1.000
Q44_r16	1.000
Q44_r17	1.000
Q44_r18	1.000
Q45_r1	1.000
Q45_r2	1.000
Q45_r3	1.000
Q45_r4	1.000
Q45_r5	1.000
Q45_r6	1.000
Q45_r7	1.000
Q45_r8	1.000
Q45_r9	1.000
Q45_r10	1.000
Q45_r11	1.000
Q45_r12	1.000
Q45_r13	1.000
Q45_r14	1.000
Q45_r15	1.000
Q45_r16	1.000

Extraction Method:
Principal Component
Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	11.962	18.404	18.404	7.532	11.588	11.588
2	5.430	8.354	26.758	5.427	8.349	19.937
3	4.518	6.951	33.709	4.521	6.955	26.892
4	2.670	4.107	37.816	4.000	6.153	33.045
5	2.135	3.285	41.101	3.895	5.993	39.038
6	1.927	2.964	44.065	3.268	5.028	44.065
7	1.680	2.584	46.649			
8	1.520	2.338	48.988			
9	1.481	2.279	51.266			
10	1.334	2.052	53.318			
11	1.230	1.892	55.210			
12	1.201	1.847	57.058			
13	1.148	1.766	58.823			
14	1.092	1.680	60.503			
15	1.063	1.635	62.138			
16	1.022	1.573	63.711			
17	.995	1.530	65.241			
18	.929	1.430	66.671			
19	.906	1.394	68.065			
20	.856	1.317	69.382			
21	.830	1.277	70.659			
22	.812	1.250	71.909			
23	.797	1.226	73.135			
24	.780	1.200	74.335			
25	.748	1.150	75.485			
26	.735	1.130	76.615			
27	.708	1.090	77.705			
28	.684	1.052	78.757			
29	.668	1.028	79.785			
30	.627	.964	80.749			
31	.607	.933	81.682			
32	.593	.912	82.594			
33	.577	.887	83.481			
34	.546	.840	84.321			
35	.540	.831	85.152			
36	.503	.774	85.926			

37	.500	.769	86.695		
38	.480	.739	87.434		
39	.469	.722	88.155		
40	.449	.690	88.846		
41	.434	.667	89.513		
42	.424	.652	90.165		
43	.414	.636	90.801		
44	.405	.624	91.425		
45	.380	.584	92.009		
46	.371	.571	92.580		
47	.349	.537	93.117		
48	.349	.537	93.654		
49	.338	.521	94.174		
50	.323	.497	94.671		
51	.319	.491	95.162		
52	.318	.489	95.651		
53	.300	.461	96.112		
54	.284	.437	96.549		
55	.279	.430	96.979		
56	.266	.409	97.388		
57	.244	.375	97.763		
58	.236	.363	98.126		
59	.205	.315	98.441		
60	.195	.300	98.741		
61	.192	.295	99.036		
62	.180	.277	99.313		
63	.166	.256	99.568		
64	.148	.228	99.796		
65	.132	.204	100.000		

Extraction Method: Principal Component Analysis.

**Component
Matrix^a**



a. 6 components
extracted.

Rotated Component Matrix^a

	Component					
	1	2	3	4	5	6
Q42_r1	.001	-.010	.585	-.001	-.131	-.071
Q42_r2	.067	.144	.533	-.085	-.137	-.158
Q42_r3	.123	.303	.068	.001	-.024	.351
Q42_r4	.700	.025	-.039	-.009	-.067	.098
Q42_r5	.314	.160	.506	.001	-.240	.196
Q42_r6	.217	.073	.378	.306	.320	-.066
Q42_r7	-.166	-.054	-.429	-.004	.317	.051
Q42_r8	.067	.710	-.022	-.016	.020	.153
Q42_r9	-.009	-.103	-.064	-.084	.612	.031
Q42_r10	.391	.203	.034	.157	-.154	.421
Q42_r11	.489	-.113	.060	.158	-.176	.168
Q42_r12	.230	.152	.322	.267	-.193	-.218
Q42_r13	.280	.108	.284	.176	-.227	-.007
Q42_r14	.268	.098	.058	.340	.065	.472
Q42_r15	.217	.059	.692	.145	.067	.087
Q42_r16	-.040	-.019	.211	-.149	.325	.364
Q43_r1	.383	-.106	.146	.440	.254	.030
Q43_r2	.663	.146	.208	.111	-.025	-.062
Q43_r3	.370	.087	.142	-.016	-.086	.093
Q43_r4	-.066	.022	-.099	-.041	.541	.271
Q43_r5	.185	.571	.218	-.081	.030	-.001
Q43_r6	-.091	-.009	-.482	.074	.266	.258
Q43_r7	.035	-.185	-.064	-.171	.213	.336
Q43_r8	.214	.771	.064	.017	-.053	.084
Q43_r9	-.016	.095	-.164	-.109	.341	.136
Q43_r10	.142	-.032	.373	.328	.161	.092
Q43_r11	.566	.114	.295	.208	-.119	.070
Q43_r12	.713	.199	.164	.072	.097	-.035
Q43_r13	.192	.638	.055	.201	-.046	.041
Q43_r14	-.076	-.019	-.397	-.082	.104	.487
Q43_r15	.292	.111	.494	.167	.042	-.219
Q44_r1	.095	.705	.022	.139	.035	-.019
Q44_r2	.190	.190	.241	.578	-.043	.034
Q44_r3	.020	-.163	-.014	-.085	.250	.413
Q44_r4	.660	.062	.051	.219	-.171	.021
Q44_r5	.211	.185	-.044	.587	-.218	.064
Q44_r6	-.006	-.115	-.183	.131	.142	.678

Q44_r7	.220	-.034	.179	.397	.319	-.134
Q44_r8	.801	-.005	.104	.099	.135	-.034
Q44_r9	.047	-.136	-.077	.166	.483	-.080
Q44_r10	.090	-.713	-.010	-.011	.013	.219
Q44_r11	.210	.123	.125	.766	-.065	.101
Q44_r12	.751	.025	.120	.159	.054	-.003
Q44_r13	.144	-.053	.543	.300	.098	-.005
Q44_r14	.081	-.611	-.024	-.047	.213	.245
Q44_r15	.247	.004	.455	.327	.087	-.176
Q44_r16	.046	.108	-.261	.177	.078	.649
Q44_r17	.498	.068	.018	.277	.196	-.204
Q44_r18	.372	-.008	.112	.484	-.110	.048
Q45_r1	.590	-.051	.151	.049	.331	-.020
Q45_r2	-.101	.168	-.353	.007	.348	.273
Q45_r3	.457	.318	.350	.191	.070	.034
Q45_r4	.056	-.091	.096	.007	.469	.428
Q45_r5	.461	.104	-.220	.242	.056	.005
Q45_r6	.031	-.018	-.111	-.089	.609	.189
Q45_r7	.683	.116	.248	.210	.148	.128
Q45_r8	.097	.072	-.100	-.021	.370	.408
Q45_r9	.575	.172	.281	.287	.023	.073
Q45_r10	.080	-.029	-.010	.111	.657	.059
Q45_r11	.489	.183	.395	.102	.135	.165
Q45_r12	.288	.125	.038	.720	-.007	.042
Q45_r13	.096	.814	.118	.140	.016	.097
Q45_r14	.017	.087	.100	-.322	.340	.134
Q45_r15	.401	.217	.283	.265	.311	-.070
Q45_r16	.089	.818	-.081	.042	-.045	-.041

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 16 iterations.

Component Transformation Matrix

Component	1	2	3	4	5	6
1	.726	.343	.419	.423	.015	.029
2	.228	-.324	-.265	.073	.684	.548
3	-.167	.863	-.358	-.082	.105	.286
4	-.195	.175	.584	-.389	.614	-.249
5	-.419	.032	-.081	.787	.301	-.327
6	-.424	-.038	.528	.197	-.230	.669

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Factor Analysis AFE Final

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.855
Bartlett's Test of Sphericity Approx. Chi-Square	5012.231
df	780
Sig.	.000

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.589	18.972	18.972	7.589	18.972	18.972	5.009	12.522	12.522
2	4.313	10.783	29.754	4.313	10.783	29.754	4.886	12.215	24.736
3	3.524	8.809	38.563	3.524	8.809	38.563	3.226	8.066	32.802
4	2.137	5.342	43.905	2.137	5.342	43.905	2.781	6.953	39.755
5	1.585	3.962	47.868	1.585	3.962	47.868	2.484	6.211	45.966
6	1.466	3.666	51.534	1.466	3.666	51.534	2.227	5.568	51.534
7	1.179	2.947	54.480						
8	1.129	2.821	57.302						
9	.986	2.465	59.767						
10	.927	2.318	62.085						
11	.902	2.254	64.339						
12	.874	2.186	66.525						

13	.851	2.128	68.653					
14	.771	1.927	70.580					
15	.744	1.859	72.439					
16	.715	1.786	74.226					
17	.680	1.700	75.926					
18	.672	1.681	77.606					
19	.636	1.589	79.195					
20	.607	1.517	80.712					
21	.586	1.466	82.178					
22	.573	1.433	83.611					
23	.551	1.379	84.989					
24	.537	1.342	86.331					
25	.509	1.274	87.605					
26	.471	1.178	88.782					
27	.450	1.124	89.906					
28	.418	1.045	90.951					
29	.410	1.025	91.977					
30	.395	.987	92.964					
31	.369	.922	93.886					
32	.348	.871	94.757					
33	.323	.807	95.564					
34	.313	.782	96.346					
35	.295	.738	97.084					
36	.268	.671	97.755					
37	.264	.660	98.415					
38	.245	.612	99.027					
39	.209	.521	99.548					
40	.181	.452	100.000					

Extraction Method: Principal Component Analysis.

Appendix 12 – SPSS Outputs: Study 3 ANOVAs

H1: There are differences in the levels of perceived self-change associated with using the Internet to meet sexual partners among users with different lengths of experience of using the Internet to meet sexual partners

For SUIS Factor 1

ONEWAY SUIS_Factor1 BY Q24adj_binned_x3
 /STATISTICS DESCRIPTIVES HOMOGENEITY BROWNFORSYTHE
 /PLOT MEANS
 /MISSING ANALYSIS
 /POSTHOC=TUKEY ALPHA(0.05).

Oneway

Descriptives

SUIS_Factor1

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
<= 5	139	26,5827	6,82801	,57914	25,4376	27,7279	9,00	45,00
6 - 8	89	25,3258	6,61056	,70072	23,9333	26,7184	9,00	41,00
9+	85	25,6824	7,03937	,76353	24,1640	27,2007	11,00	39,00
Total	313	25,9808	6,82611	,38583	25,2217	26,7400	9,00	45,00

Test of Homogeneity of Variances

SUIS_Factor1

Levene Statistic	df1	df2	Sig.
,039	2	310	,962

ANOVA

SUIS_Factor1

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	96,112	2	48,056	1,032	,358
Within Groups	14441,773	310	46,586		
Total	14537,885	312			

Robust Tests of Equality of Means

SUIS_Factor1

	Statistic ^a	df1	df2	Sig.
Brown-Forsythe	1,030	2	276,335	,358

a. Asymptotically F distributed.

Post Hoc Tests

Multiple Comparisons

Dependent Variable: SUIS_Factor1

Tukey HSD

(I) Q24 - 24. Há quanto tempo é que começou a utilizar a Internet para conhecer outros homens? anos (Binned 3 cat)	(J) Q24 - 24. Há quanto tempo é que começou a utilizar a Internet para conhecer outros homens? anos (Binned 3 cat)	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
<= 5	6 - 8	1,25689	,92660	,365	-,9253	3,4391
	9+	,90038	,93980	,604	-1,3129	3,1136
6 - 8	<= 5	-1,25689	,92660	,365	-3,4391	,9253
	9+	-,35651	1,03514	,937	-2,7943	2,0813
9+	<= 5	-,90038	,93980	,604	-3,1136	1,3129
	6 - 8	,35651	1,03514	,937	-2,0813	2,7943

Homogeneous Subsets

SUIS_Factor1

Tukey HSD

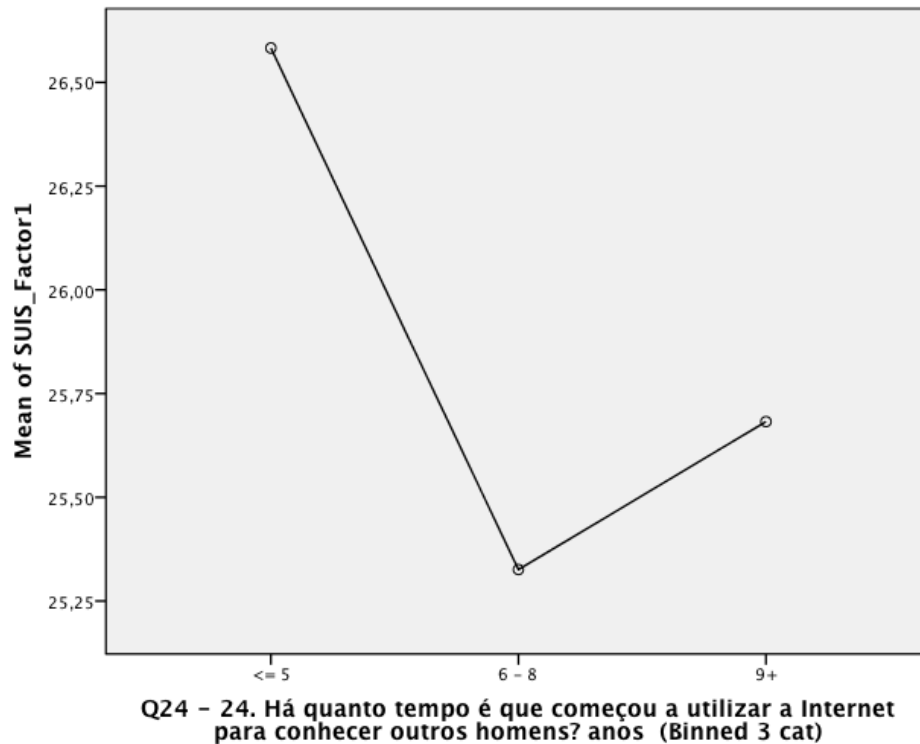
Q24 - 24. Há quanto tempo é que começou a utilizar a Internet para conhecer outros homens? anos (Binned 3 cat)	N	Subset for alpha = 0.05
		1
6 - 8	89	25,3258
9+	85	25,6824
<= 5	139	26,5827
Sig.		,397

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 99,355.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Means Plots



For SUIS Factor 2

```

ONEWAY SUIS_Factor6 BY Q24adj_binned_x3
/STATISTICS DESCRIPTIVES HOMOGENEITY BROWNFORSYTHE
/PLOT MEANS
/MISSING ANALYSIS
/POSTHOC=TUKEY ALPHA(0.05).
    
```

Oneway

Descriptives

SUIS_Factor6

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
<= 5	139	11,5899	3,29209	,27923	11,0378	12,1421	5,00	20,00
6 - 8	89	10,7528	3,25884	,34544	10,0663	11,4393	5,00	22,00
9+	85	9,6588	2,97431	,32261	9,0173	10,3004	5,00	16,00
Total	313	10,8275	3,28686	,18578	10,4619	11,1930	5,00	22,00

Test of Homogeneity of Variances

SUIS_Factor6

Levene Statistic	df1	df2	Sig.
,309	2	310	,734

ANOVA

SUIS_Factor6

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	197,390	2	98,695	9,642	,000
Within Groups	3173,294	310	10,236		
Total	3370,684	312			

Robust Tests of Equality of Means

SUIS_Factor6

	Statistic ^a	df1	df2	Sig.
Brown-Forsythe	9,835	2	284,886	,000

a. Asymptotically F distributed.

Post Hoc Tests

Multiple Comparisons

Dependent Variable: SUIS_Factor6

Tukey HSD

(I) Q24 - 24. Há quanto tempo é que começou a utilizar a Internet para conhecer outros homens? anos (Binned 3 cat)	(J) Q24 - 24. Há quanto tempo é que começou a utilizar a Internet para conhecer outros homens? anos (Binned 3 cat)	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
<= 5	6 - 8	,83712	,43435	,133	-,1858	1,8600
	9+	1,93110*	,44054	,000	,8936	2,9686
6 - 8	<= 5	-,83712	,43435	,133	-1,8600	,1858
	9+	1,09399	,48523	,064	-,0487	2,2367
9+	<= 5	-1,93110*	,44054	,000	-2,9686	-,8936
	6 - 8	-1,09399	,48523	,064	-2,2367	,0487

*. The mean difference is significant at the 0.05 level.

Homogeneous Subsets

SUIS_Factor6

Tukey HSD

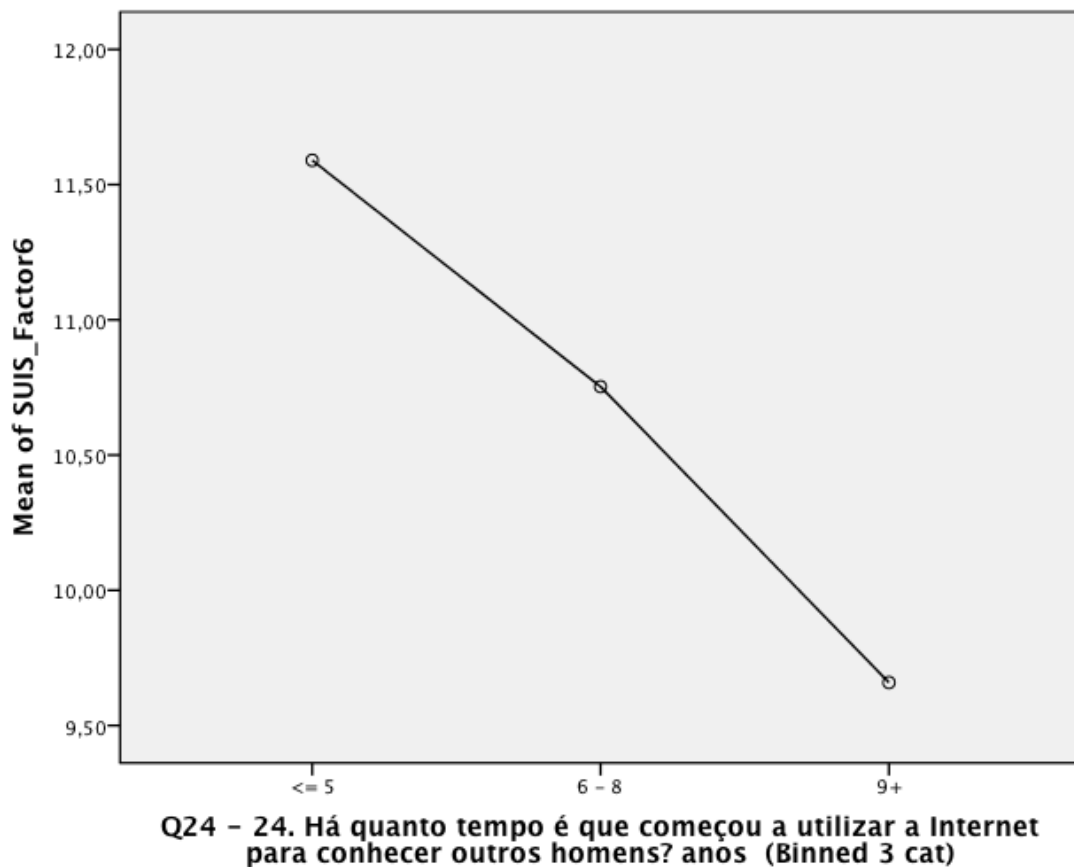
Q24 - 24. Há quanto tempo é que começou a utilizar a Internet para conhecer outros homens? anos (Binned 3 cat)	N	Subset for alpha = 0.05	
		1	2
9+	85	9,6588	
6 - 8	89		10,7528
<= 5	139		11,5899
Sig.		1,000	,157

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 99,355.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Means Plots



H2_a and H2_b: There are differences in the levels of perceived self-change associated with using the Internet to meet sexual partners among users who have met different numbers of sexual partners online over (a) the previous year and (b) the previous three months

For SUIS Factor 1 (H2_a)

ONEWAY SUIS_Factor1 BY Q21a_grpd_x3
 /STATISTICS DESCRIPTIVES HOMOGENEITY BROWNFORSYTHE
 /PLOT MEANS
 /MISSING ANALYSIS
 /POSTHOC=TUKEY ALPHA(0.05).

Oneway

Descriptives

SUIS_Factor1

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
1	98	24,7959	6,15263	,62151	23,5624	26,0294	9,00	36,00
2-4	113	26,2124	7,23885	,68097	24,8631	27,5617	9,00	41,00
>5	102	26,8627	6,87518	,68074	25,5123	28,2132	13,00	45,00
Total	313	25,9808	6,82611	,38583	25,2217	26,7400	9,00	45,00

Test of Homogeneity of Variances

SUIS_Factor1

Levene Statistic	df1	df2	Sig.
1,097	2	310	,335

ANOVA

SUIS_Factor1

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	222,986	2	111,493	2,414	,091
Within Groups	14314,899	310	46,177		
Total	14537,885	312			

Robust Tests of Equality of Means

SUIS_Factor1

	Statistic ^a	df1	df2	Sig.
Brown-Forsythe	2,441	2	308,687	,089

a. Asymptotically F distributed.

Post Hoc Tests

Multiple Comparisons

Dependent Variable: SUIS_Factor1

Tukey HSD

(I) Men met online last year grouped into 3 cats	(J) Men met online last year grouped into 3 cats	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1	2-4	-1,41647	,93800	,288	-3,6255	,7925
	>5	-2,06683	,96120	,082	-4,3305	,1968
2-4	1	1,41647	,93800	,288	-,7925	3,6255
	>5	-,65036	,92810	,763	-2,8360	1,5353
>5	1	2,06683	,96120	,082	-,1968	4,3305
	2-4	,65036	,92810	,763	-1,5353	2,8360

Homogeneous Subsets

SUIS_Factor1

Tukey HSD

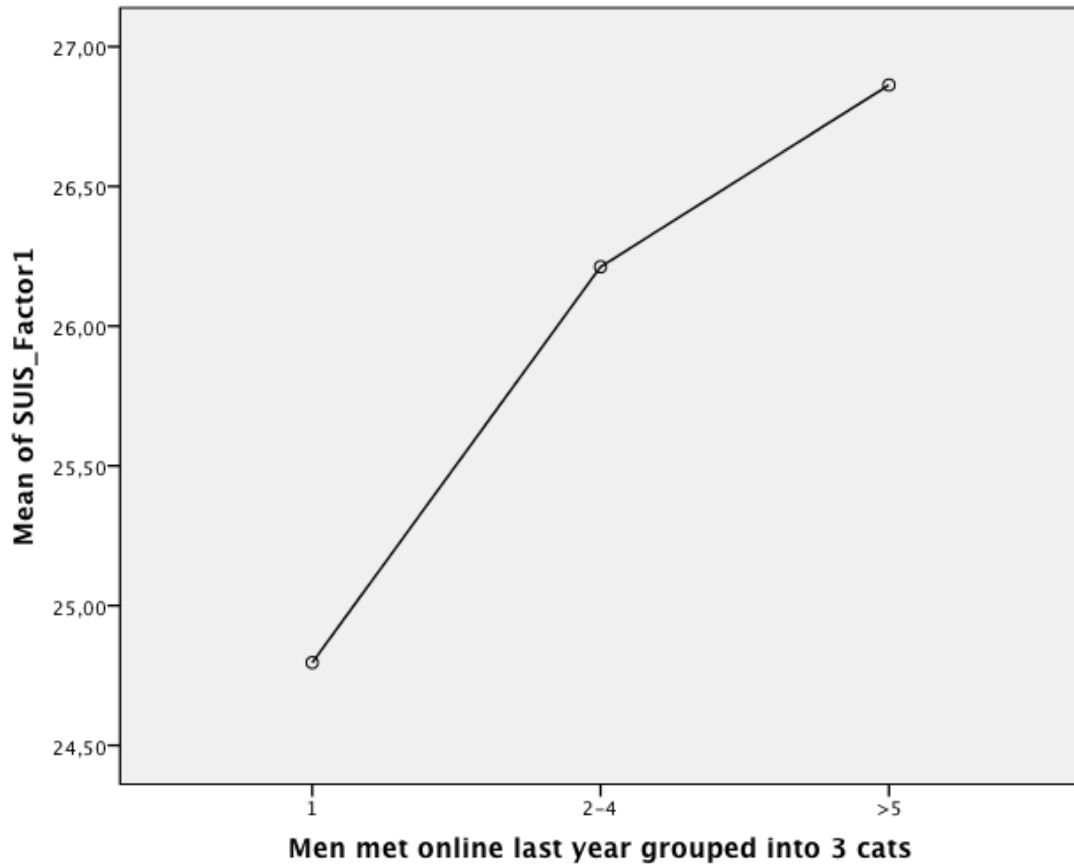
Men met online last year grouped into 3 cats	N	Subset for alpha = 0.05
		1
1	98	24,7959
2-4	113	26,2124
>5	102	26,8627
Sig.		,074

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 103,959.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Means Plots



For SUI5 Factor 2 (H2a)

```

ONEWAY SUI5_Factor6 BY Q21a_grpd_x3
/STATISTICS DESCRIPTIVES HOMOGENEITY BROWNFORSYTHE
/PLOT MEANS
/MISSING ANALYSIS
/POSTHOC=TUKEY ALPHA(0.05).
    
```

Oneway

Descriptives

SUI5_Factor6

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
1	98	11,0204	3,12284	,31545	10,3943	11,6465	5,00	18,00
2-4	113	10,7345	3,40697	,32050	10,0995	11,3695	5,00	19,00
>5	102	10,7451	3,32910	,32963	10,0912	11,3990	5,00	22,00
Total	313	10,8275	3,28686	,18578	10,4619	11,1930	5,00	22,00

Test of Homogeneity of Variances

SUIS_Factor6

Levene Statistic	df1	df2	Sig.
,949	2	310	,388

ANOVA

SUIS_Factor6

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5,317	2	2,658	,245	,783
Within Groups	3365,367	310	10,856		
Total	3370,684	312			

Robust Tests of Equality of Means

SUIS_Factor6

	Statistic ^a	df1	df2	Sig.
Brown-Forsythe	,246	2	309,334	,782

a. Asymptotically F distributed.

Post Hoc Tests

Multiple Comparisons

Dependent Variable: SUIS_Factor6

Tukey HSD

(I) Men met online last year grouped into 3 cats	(J) Men met online last year grouped into 3 cats	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1	2-4	,28589	,45480	,805	-,7852	1,3570
	>5	,27531	,46606	,825	-,8223	1,3729
2-4	1	-,28589	,45480	,805	-1,3570	,7852
	>5	-,01058	,45000	1,000	-1,0704	1,0492
>5	1	-,27531	,46606	,825	-1,3729	,8223
	2-4	,01058	,45000	1,000	-1,0492	1,0704

Homogeneous Subsets

SUIS_Factor6

Tukey HSD

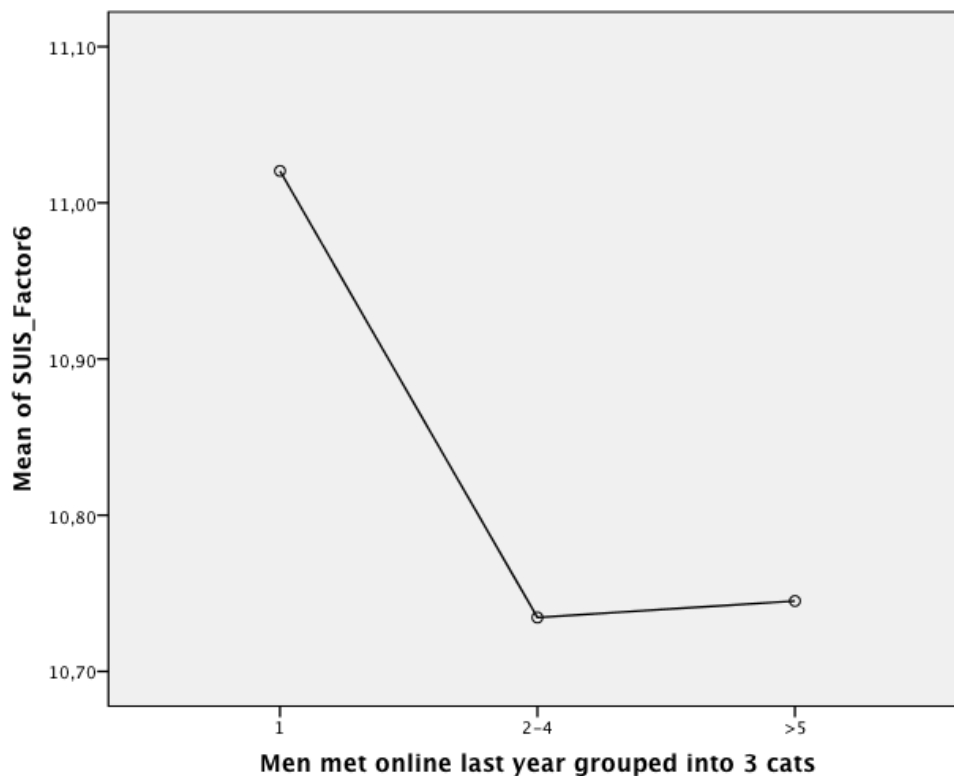
Men met online last year grouped into 3 cats	N	Subset for alpha = 0.05
		1
2-4	113	10,7345
>5	102	10,7451
1	98	11,0204
Sig.		,806

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 103,959.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Means Plots



For SUIS Factor 1 (H2_b)

ONEWAY SUIS_Factor1 BY Q22a__grpd
 /STATISTICS DESCRIPTIVES HOMOGENEITY BROWNFORSYTHE
 /PLOT MEANS
 /MISSING ANALYSIS
 /POSTHOC=TUKEY ALPHA(0.05).

Oneway

Descriptives

SUIS_Factor1

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
0	91	24,9011	6,77422	,71013	23,4903	26,3119	9,00	41,00
1	111	25,7928	6,49632	,61660	24,5708	27,0148	9,00	40,00
>=2	111	27,0541	7,08884	,67284	25,7206	28,3875	12,00	45,00
Total	313	25,9808	6,82611	,38583	25,2217	26,7400	9,00	45,00

Test of Homogeneity of Variances

SUIS_Factor1

Levene Statistic	df1	df2	Sig.
,959	2	310	,385

ANOVA

SUIS_Factor1

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	237,865	2	118,933	2,578	,078
Within Groups	14300,020	310	46,129		
Total	14537,885	312			

Robust Tests of Equality of Means

SUIS_Factor1

	Statistic ^a	df1	df2	Sig.
Brown-Forsythe	2,579	2	302,878	,077

a. Asymptotically F distributed.

Post Hoc Tests

Multiple Comparisons

Dependent Variable: SUIS_Factor1

Tukey HSD

(I) Online partners last 3 months grouped	(J) Online partners last 3 months grouped	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
0	1	-,89169	,96046	,623	-3,1536	1,3702
	>=2	-2,15296	,96046	,066	-4,4149	,1090
1	0	,89169	,96046	,623	-1,3702	3,1536
	>=2	-1,26126	,91168	,351	-3,4083	,8858
>=2	0	2,15296	,96046	,066	-,1090	4,4149
	1	1,26126	,91168	,351	-,8858	3,4083

Homogeneous Subsets

SUIS_Factor1

Tukey HSD

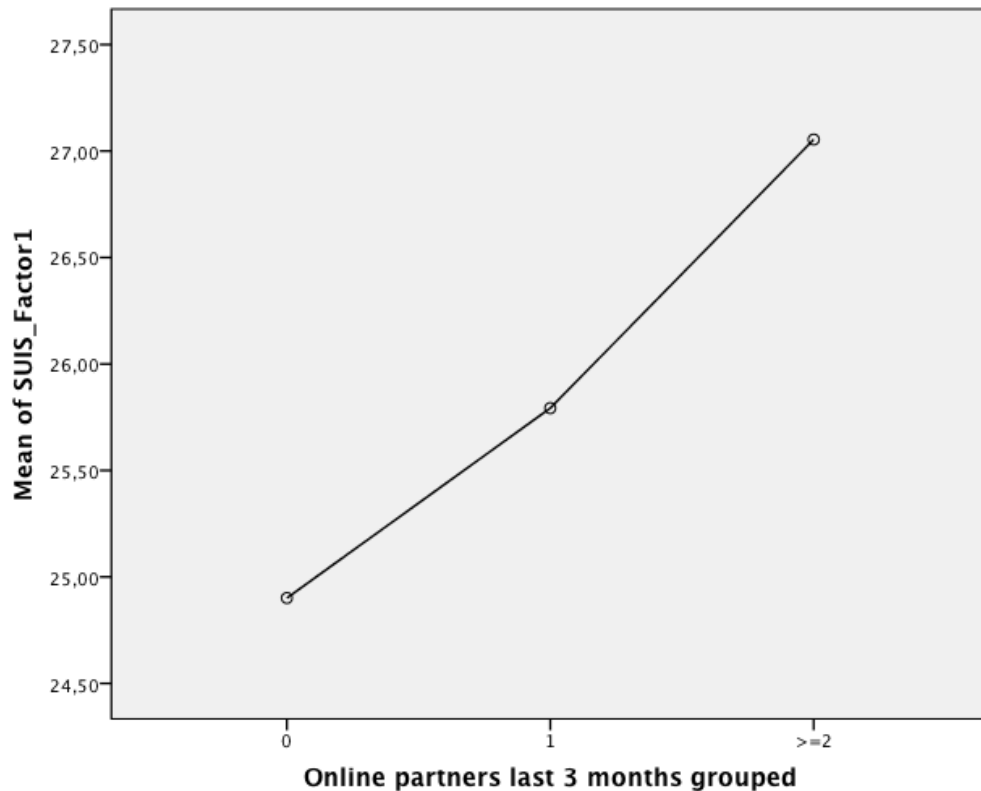
Online partners last 3 months grouped	N	Subset for alpha = 0.05
		1
0	91	24,9011
1	111	25,7928
>=2	111	27,0541
Sig.		,060

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 103,423.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Means Plots



For SUIS Factor 2 (H2_b)

```

ONEWAY SUIS_Factor6 BY Q22a_grpd
/STATISTICS DESCRIPTIVES HOMOGENEITY BROWNFORSYTHE
/PLOT MEANS
/MISSING ANALYSIS
/POSTHOC=TUKEY ALPHA(0.05).
    
```

Oneway

Descriptives

SUIS_Factor6

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
0	91	11,2527	3,25779	,34151	10,5743	11,9312	5,00	17,00
1	111	10,9640	3,24717	,30821	10,3532	11,5748	5,00	19,00
>=2	111	10,3423	3,31798	,31493	9,7182	10,9665	5,00	22,00
Total	313	10,8275	3,28686	,18578	10,4619	11,1930	5,00	22,00

Test of Homogeneity of Variances

SUIS_Factor6

Levene Statistic	df1	df2	Sig.
,339	2	310	,713

ANOVA

SUIS_Factor6

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	44,650	2	22,325	2,081	,127
Within Groups	3326,034	310	10,729		
Total	3370,684	312			

Robust Tests of Equality of Means

SUIS_Factor6

	Statistic ^a	df1	df2	Sig.
Brown-Forsythe	2,083	2	304,450	,126

a. Asymptotically F distributed.

Post Hoc Tests

Multiple Comparisons

Dependent Variable: SUIS_Factor6

Tukey HSD

(I) Online partners last 3 months grouped	(J) Online partners last 3 months grouped	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
0	1	,28878	,46321	,807	-,8021	1,3797
	>=2	,91040	,46321	,123	-,1805	2,0013
1	0	-,28878	,46321	,807	-1,3797	,8021
	>=2	,62162	,43968	,335	-,4138	1,6571
>=2	0	-,91040	,46321	,123	-2,0013	,1805
	1	-,62162	,43968	,335	-1,6571	,4138

Homogeneous Subsets

SUIS_Factor6

Tukey HSD

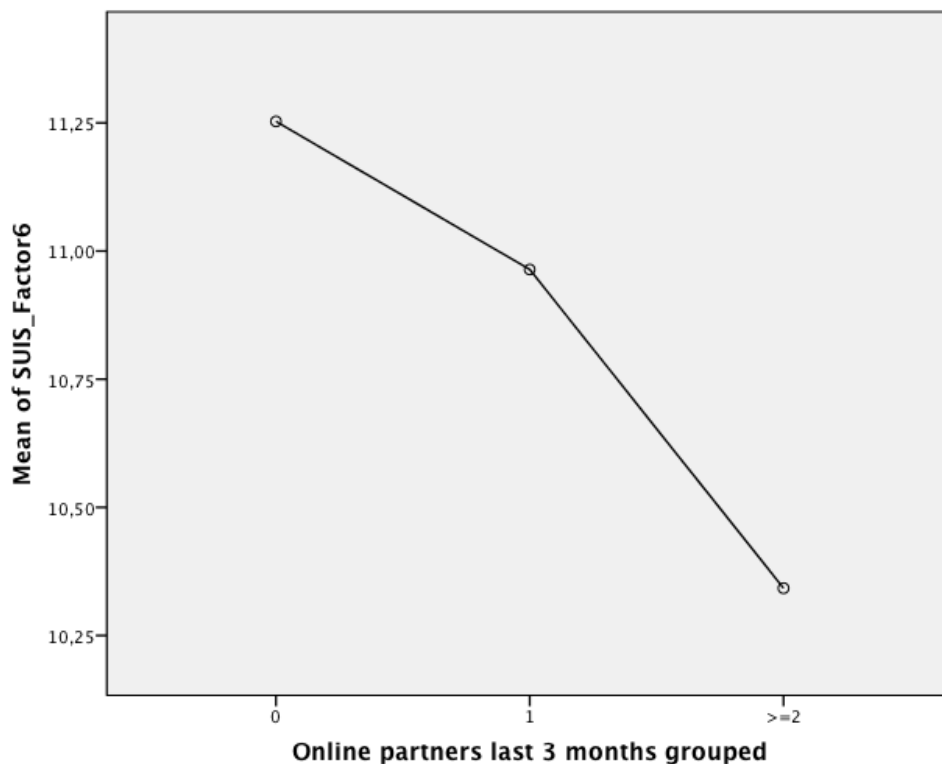
Online partners last 3 months grouped	N	Subset for alpha = 0.05
		1
>=2	111	10,3423
1	111	10,9640
0	91	11,2527
Sig.		,114

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 103,423.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Means Plots



H3: There are differences in the levels of perceived self-change associated with using the Internet to meet sexual partners among users with different frequencies of accessing the Internet for this purpose

For SUIS Factor 1

ONEWAY SUIS_Factor1 BY Q30_dict
 /STATISTICS DESCRIPTIVES HOMOGENEITY BROWNFORSYTHE
 /PLOT MEANS
 /MISSING ANALYSIS
 /POSTHOC=TUKEY ALPHA(0.05).

Oneway

Warnings

Post hoc tests are not performed for SUIS_Factor1 because there are fewer than three groups.

Descriptives

SUIS_Factor1

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Frequent use	236	26,3390	6,86244	,44671	25,4589	27,2190	9,00	45,00
Infrequent use	77	24,8831	6,63716	,75638	23,3767	26,3896	9,00	37,00
Total	313	25,9808	6,82611	,38583	25,2217	26,7400	9,00	45,00

Test of Homogeneity of Variances

SUIS_Factor1

Levene Statistic	df1	df2	Sig.
,083	1	311	,773

ANOVA

SUIS_Factor1

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	123,056	1	123,056	2,655	,104
Within Groups	14414,829	311	46,350		
Total	14537,885	312			

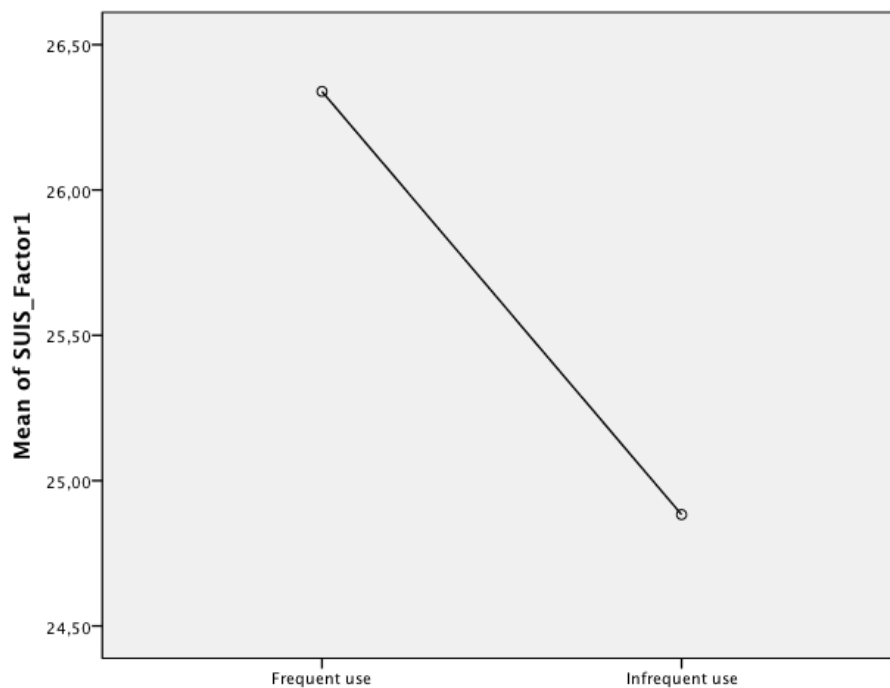
Robust Tests of Equality of Means

SUIS_Factor1

	Statistic ^a	df1	df2	Sig.
Brown-Forsythe	2,747	1	133,029	,100

a. Asymptotically F distributed.

Means Plots



Q30 Frequencia utilização de sites dicotômica freq_infreq

For SUIS Factor 2

ONEWAY SUIS_Factor6 BY Q30_dict
 /STATISTICS DESCRIPTIVES HOMOGENEITY BROWNFORSYTHE
 /PLOT MEANS
 /MISSING ANALYSIS
 /POSTHOC=TUKEY ALPHA(0.05).

Oneway

Warnings

Post hoc tests are not performed for SUIS_Factor6 because there are fewer than three groups.

Descriptives

SUIS_Factor6

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Frequent use	236	10,9237	3,39375	,22091	10,4885	11,3590	5,00	22,00
Infrequent use	77	10,5325	2,93609	,33460	9,8661	11,1989	5,00	16,00
Total	313	10,8275	3,28686	,18578	10,4619	11,1930	5,00	22,00

Test of Homogeneity of Variances

SUIS_Factor6

Levene Statistic	df1	df2	Sig.
2,266	1	311	,133

ANOVA

SUIS_Factor6

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	8,888	1	8,888	,822	,365
Within Groups	3361,796	311	10,810		
Total	3370,684	312			

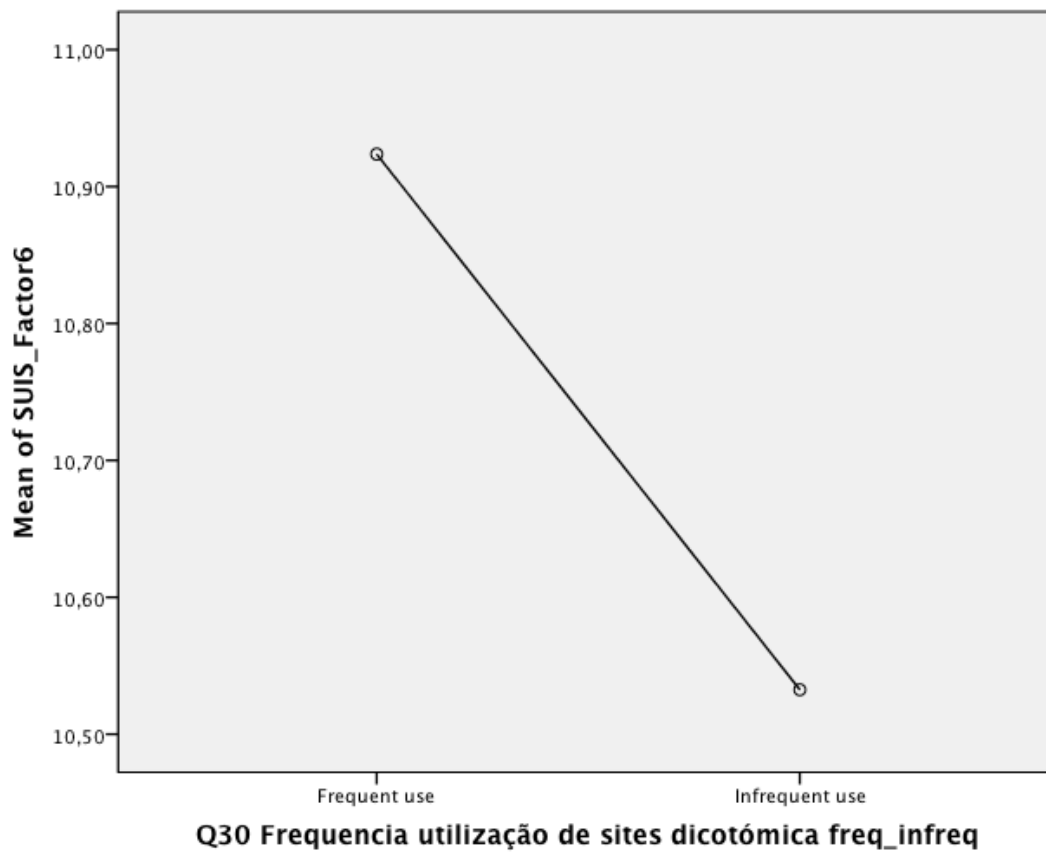
Robust Tests of Equality of Means

SUIS_Factor6

	Statistic ^a	df1	df2	Sig.
Brown-Forsythe	,952	1	147,628	,331

a. Asymptotically F distributed.

Means Plots



H4: There are differences in the levels of perceived self-change associated with using the Internet to meet sexual partners among users of different age groups

For SUIS Factor 1

ONEWAY SUIS_Factor1 BY Age_grpd
 /STATISTICS DESCRIPTIVES HOMOGENEITY BROWNFORSYTHE
 /PLOT MEANS
 /MISSING ANALYSIS
 /POSTHOC=TUKEY ALPHA(0.05).

Oneway

Descriptives

SUIS_Factor1

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
18-25	104	26,4519	6,15792	,60383	25,2544	27,6495	9,00	39,00
26-35	122	25,7951	6,68282	,60503	24,5973	26,9929	9,00	41,00
36-45	58	27,1379	6,90143	,90620	25,3233	28,9526	10,00	44,00
>=46	29	22,7586	8,67531	1,61097	19,4587	26,0585	11,00	45,00
Total	313	25,9808	6,82611	,38583	25,2217	26,7400	9,00	45,00

Test of Homogeneity of Variances

SUIS_Factor1

Levene Statistic	df1	df2	Sig.
2,310	3	309	,076

ANOVA

SUIS_Factor1

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	406,041	3	135,347	2,959	,033
Within Groups	14131,844	309	45,734		
Total	14537,885	312			

Robust Tests of Equality of Means

SUIS_Factor1

	Statistic ^a	df1	df2	Sig.
Brown-Forsythe	2,543	3	124,159	,059

a. Asymptotically F distributed.

Post Hoc Tests

Multiple Comparisons

Dependent Variable: SUIS_Factor1

Tukey HSD

(I) Age groups	(J) Age groups	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
18-25	26-35	,65684	,90256	,886	-1,6745	2,9882
	36-45	-,68601	1,10827	,926	-3,5488	2,1767
	>=46	3,69330*	1,42014	,048	,0250	7,3616
26-35	18-25	-,65684	,90256	,886	-2,9882	1,6745
	36-45	-1,34285	1,07861	,599	-4,1290	1,4433
	>=46	3,03646	1,39711	,133	-,5724	6,6453
36-45	18-25	,68601	1,10827	,926	-2,1767	3,5488
	26-35	1,34285	1,07861	,599	-1,4433	4,1290
	>=46	4,37931*	1,53804	,024	,4065	8,3522
>=46	18-25	-3,69330*	1,42014	,048	-7,3616	-,0250
	26-35	-3,03646	1,39711	,133	-6,6453	,5724
	36-45	-4,37931*	1,53804	,024	-8,3522	-,4065

*. The mean difference is significant at the 0.05 level.

Homogeneous Subsets

SUIS_Factor1

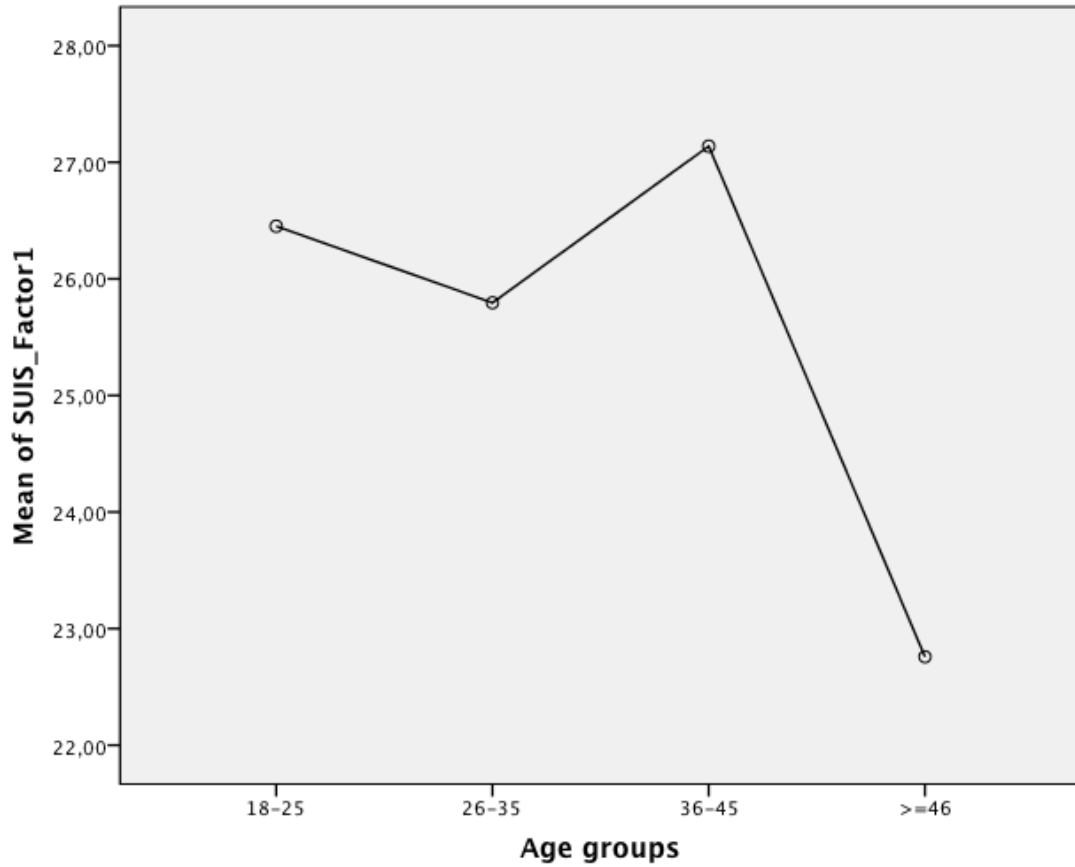
Tukey HSD

Age groups	N	Subset for alpha = 0.05	
		1	2
>=46	29	22,7586	
26-35	122	25,7951	25,7951
18-25	104		26,4519
36-45	58		27,1379
Sig.		,078	,711

Means for groups in homogeneous subsets are displayed.

- a. Uses Harmonic Mean Sample Size = 57,524.
- b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Means Plots



For SUIIS Factor 2

```
ONEWAY SUIIS_Factor6 BY Age_grpd  
/STATISTICS DESCRIPTIVES HOMOGENEITY BROWNFORSYTHE  
/PLOT MEANS  
/MISSING ANALYSIS  
/POSTHOC=TUKEY ALPHA(0.05).
```

Oneway

Descriptives

SUIS_Factor6

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
18-25	104	11,7596	3,65900	,35879	11,0480	12,4712	5,00	22,00
26-35	122	10,6639	3,12445	,28287	10,1039	11,2240	5,00	18,00
36-45	58	9,9828	2,51655	,33044	9,3211	10,6445	5,00	15,00
>=46	29	9,8621	3,20406	,59498	8,6433	11,0808	5,00	18,00
Total	313	10,8275	3,28686	,18578	10,4619	11,1930	5,00	22,00

Test of Homogeneity of Variances

SUIS_Factor6

Levene Statistic	df1	df2	Sig.
3,395	3	309	,018

ANOVA

SUIS_Factor6

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	162,041	3	54,014	5,202	,002
Within Groups	3208,643	309	10,384		
Total	3370,684	312			

Robust Tests of Equality of Means

SUIS_Factor6

	Statistic ^a	df1	df2	Sig.
Brown-Forsythe	5,517	3	186,120	,001

a. Asymptotically F distributed.

Post Hoc Tests

Multiple Comparisons

Dependent Variable: SUIS_Factor6

Tukey HSD

(I) Age groups	(J) Age groups	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
18-25	26-35	1,09568	,43007	,055	-,0152	2,2066
	36-45	1,77686*	,52809	,005	,4128	3,1409
	>=46	1,89755*	,67669	,027	,1496	3,6455
26-35	18-25	-1,09568	,43007	,055	-2,2066	,0152
	36-45	,68118	,51395	,547	-,6464	2,0088
	>=46	,80187	,66572	,624	-,9177	2,5215
36-45	18-25	-1,77686*	,52809	,005	-3,1409	-,4128
	26-35	-,68118	,51395	,547	-2,0088	,6464
	>=46	,12069	,73287	,998	-1,7724	2,0137
>=46	18-25	-1,89755*	,67669	,027	-3,6455	-,1496
	26-35	-,80187	,66572	,624	-2,5215	,9177
	36-45	-,12069	,73287	,998	-2,0137	1,7724

*. The mean difference is significant at the 0.05 level.

Homogeneous Subsets

SUIS_Factor6

Tukey HSD

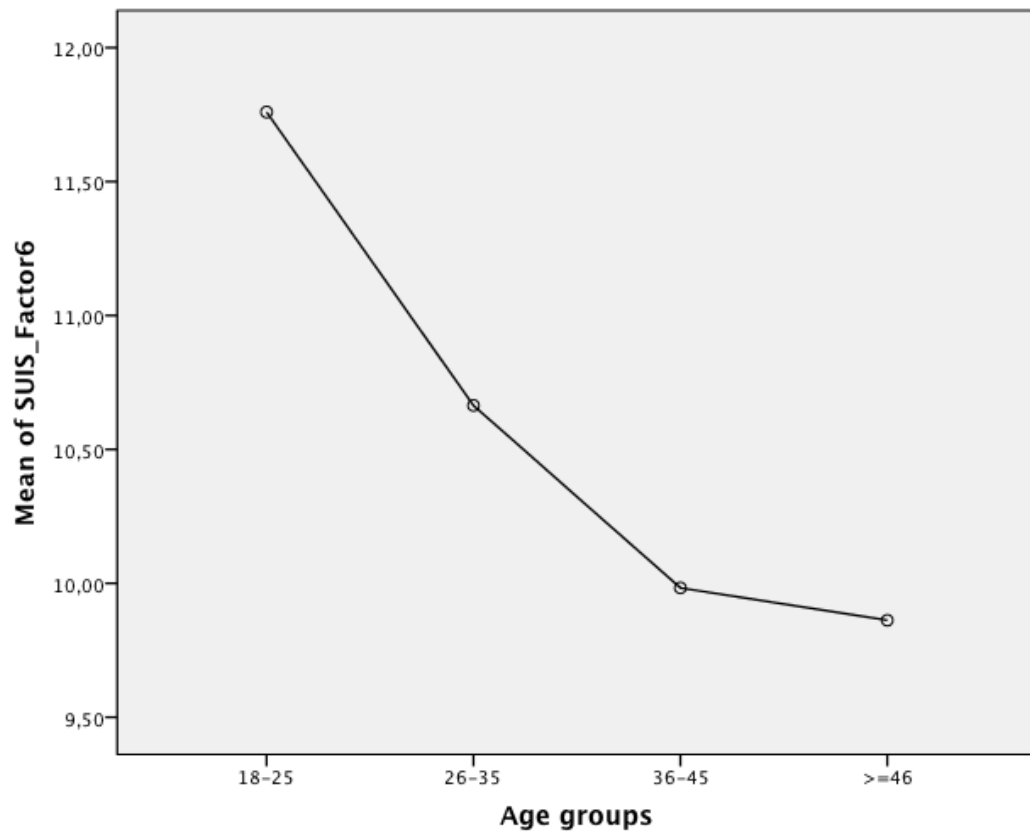
Age groups	N	Subset for alpha = 0.05	
		1	2
>=46	29	9,8621	
36-45	58	9,9828	
26-35	122	10,6639	10,6639
18-25	104		11,7596
Sig.		,542	,264

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 57,524.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Means Plots



H5: There are differences in the levels of perceived self-change associated with using the Internet to meet sexual partners among users of different relationship status

For SUIS Factor 1

ONEWAY SUIS_Factor1 BY Q13
 /STATISTICS DESCRIPTIVES HOMOGENEITY BROWNFORSYTHE
 /PLOT MEANS
 /MISSING ANALYSIS
 /POSTHOC=TUKEY ALPHA(0.05).

Oneway

Warnings

Post hoc tests are not performed for SUIS_Factor1 because there are fewer than three groups.

Descriptives

SUIS_Factor1

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Sim	155	25,6581	6,78466	,54496	24,5815	26,7346	9,00	45,00
Não	158	26,2975	6,87329	,54681	25,2174	27,3775	9,00	44,00
Total	313	25,9808	6,82611	,38583	25,2217	26,7400	9,00	45,00

Test of Homogeneity of Variances

SUIS_Factor1

Levene Statistic	df1	df2	Sig.
,008	1	311	,927

ANOVA

SUIS_Factor1

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	31,989	1	31,989	,686	,408
Within Groups	14505,896	311	46,643		
Total	14537,885	312			

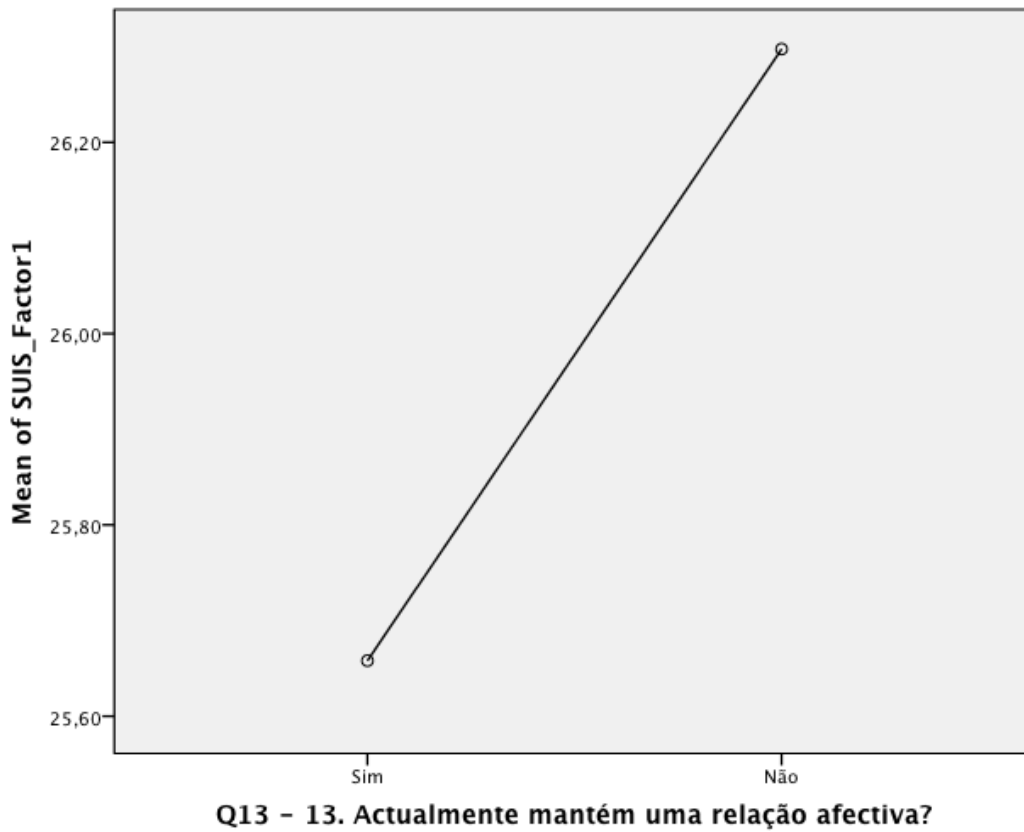
Robust Tests of Equality of Means

SUIS_Factor1

	Statistic ^a	df1	df2	Sig.
Brown-Forsythe	,686	1	310,988	,408

a. Asymptotically F distributed.

Means Plots



For SUIS Factor 2

ONEWAY SUIS_Factor6 BY Q13

/STATISTICS DESCRIPTIVES HOMOGENEITY BROWNFORSYTHE

/PLOT MEANS

/MISSING ANALYSIS

/POSTHOC=TUKEY ALPHA(0.05).

Oneway

Warnings

Post hoc tests are not performed for SUIS_Factor6 because there are fewer than three groups.

Descriptives

SUIS_Factor6

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Sim	155	10,1871	3,19250	,25643	9,6805	10,6937	5,00	20,00
Não	158	11,4557	3,26650	,25987	10,9424	11,9690	5,00	22,00
Total	313	10,8275	3,28686	,18578	10,4619	11,1930	5,00	22,00

Test of Homogeneity of Variances

SUIS_Factor6

Levene Statistic	df1	df2	Sig.
,226	1	311	,635

ANOVA

SUIS_Factor6

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	125,920	1	125,920	12,069	,001
Within Groups	3244,764	311	10,433		
Total	3370,684	312			

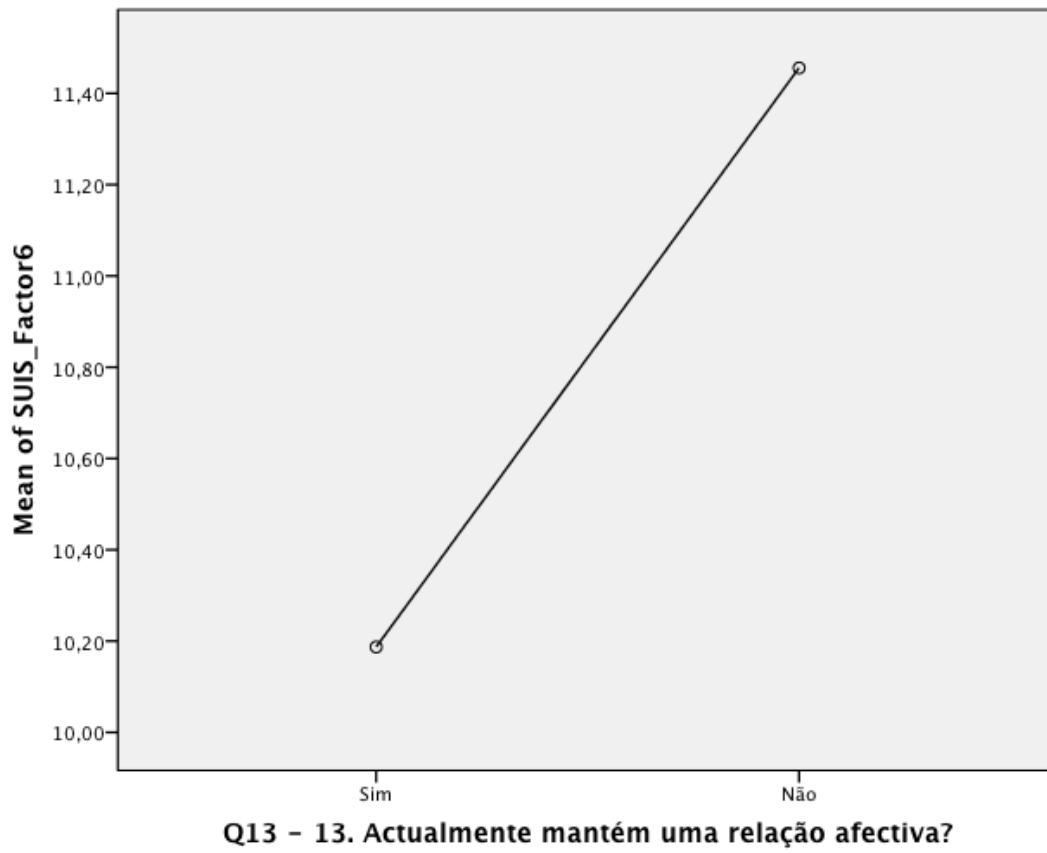
Robust Tests of Equality of Means

SUIS_Factor6

	Statistic ^a	df1	df2	Sig.
Brown-Forsythe	12,074	1	310,996	,001

a. Asymptotically F distributed.

Means Plots



H6: There are differences in the levels of perceived self-change associated with using the Internet to meet sexual partners among users of different sexual orientations

For SUIS Factor 1

ONEWAY SUIS_Factor1 BY Q17

/STATISTICS DESCRIPTIVES HOMOGENEITY BROWNFORSYTHE

/PLOT MEANS

/MISSING ANALYSIS

/POSTHOC=TUKEY ALPHA(0.05).

Oneway

Warnings

Post hoc tests are not performed for SUIS_Factor1 because there are fewer than three groups.

Descriptives

SUIS_Factor1

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Homossexual / Gay	247	25,8178	6,61078	,42063	24,9893	26,6463	9,00	44,00
Bisexual	66	26,5909	7,60157	,93569	24,7222	28,4596	11,00	45,00
Total	313	25,9808	6,82611	,38583	25,2217	26,7400	9,00	45,00

Test of Homogeneity of Variances

SUIS_Factor1

Levene Statistic	df1	df2	Sig.
4,099	1	311	,044

ANOVA

SUIS_Factor1

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	31,129	1	31,129	,667	,415
Within Groups	14506,756	311	46,646		
Total	14537,885	312			

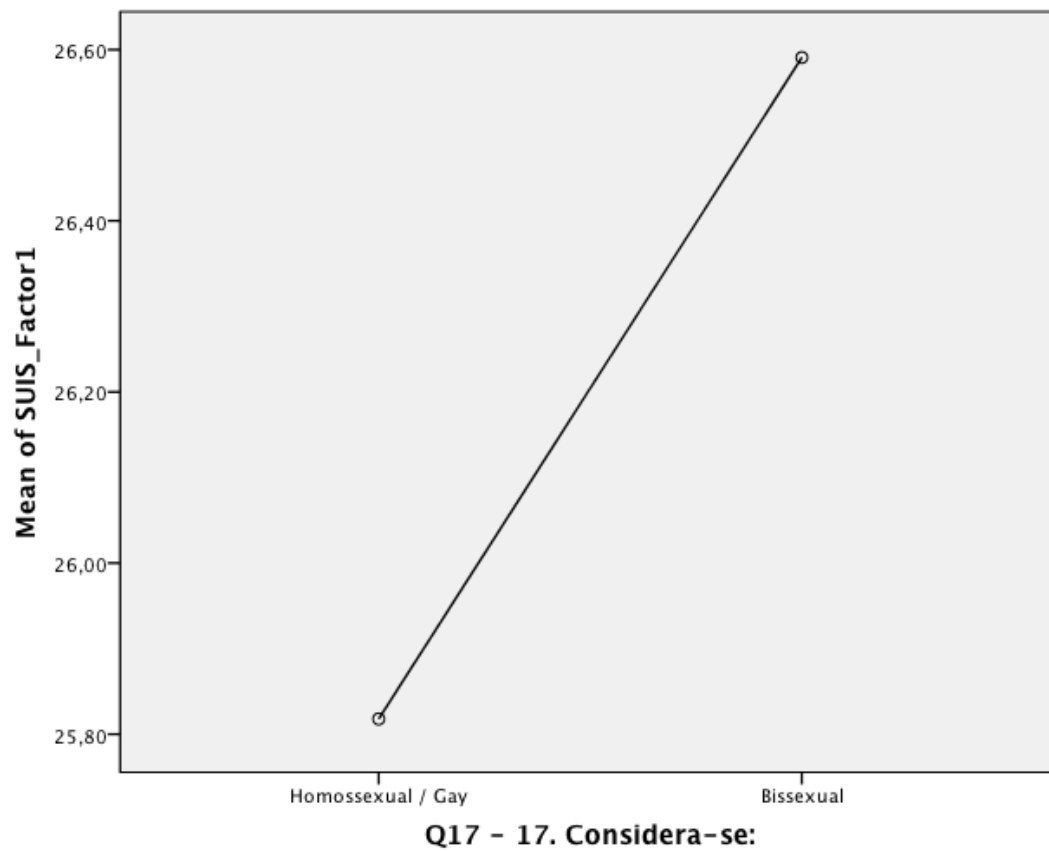
Robust Tests of Equality of Means

SUIS_Factor1

	Statistic ^a	df1	df2	Sig.
Brown-Forsythe	,568	1	92,924	,453

a. Asymptotically F distributed.

Means Plots



For SUI5 Factor 2

```
ONEWAY SUI5_Factor6 BY Q17  
/STATISTICS DESCRIPTIVES HOMOGENEITY BROWNFORSYTHE  
/PLOT MEANS  
/MISSING ANALYSIS  
/POSTHOC=TUKEY ALPHA(0.05).
```

Oneway

Warnings

Post hoc tests are not performed for SUIS_Factor6 because there are fewer than three groups.

Descriptives

SUIS_Factor6

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Homossexual / Gay	247	10,7368	3,22458	,20518	10,3327	11,1410	5,00	22,00
Bisexual	66	11,1667	3,51517	,43269	10,3025	12,0308	5,00	20,00
Total	313	10,8275	3,28686	,18578	10,4619	11,1930	5,00	22,00

Test of Homogeneity of Variances

SUIS_Factor6

Levene Statistic	df1	df2	Sig.
,426	1	311	,514

ANOVA

SUIS_Factor6

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	9,622	1	9,622	,890	,346
Within Groups	3361,061	311	10,807		
Total	3370,684	312			

Robust Tests of Equality of Means

SUIS_Factor6

	Statistic ^a	df1	df2	Sig.
Brown-Forsythe	,806	1	96,232	,372

a. Asymptotically F distributed.

Means Plots

