THE ROLE OF PSYCHOLOGICAL FLEXIBILITY AND SELF-COMPASSION IN THE LONGITUDINAL RELATIONSHIP BETWEEN EMOTIONAL SCHEMAS AND MENTAL HEALTH

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Resumo

A persistência de sintomas psicológicos, mesmo após tratamentos eficazes, revela limitações nos modelos tradicionais centrados na sintomatologia. A identificação dos mecanismos subjacentes ao sofrimento e à ausência de bem-estar tornou-se crucial para o avanço das estratégias em saúde mental. Os esquemas emocionais têm sido associados a maior sofrimento psicológico e menor bem-estar, pelo que, compreender os processos que modulam o impacto destes esquemas torna-se essencial para desenvolver estratégias mais eficazes e direcionadas. Este estudo analisou o papel mediador da flexibilidade psicológica e da autocompaixão na relação longitudinal entre esquemas emocionais e saúde mental positiva e negativa. Participaram 303 adultos portugueses, que completaram medidas de autorresposta sobre esquemas emocionais (LESS), flexibilidade psicológica (CompACT), autocompaixão (SELFCS) e saúde mental (MHC-SF e BSI-18), em dois momentos com um intervalo de seis meses. Através de análise de trajetórias (*path analysis*), e controlando a saúde mental de base, idade e sexo, os resultados mostraram que esquemas emocionais desadaptativos estavam associados a menor flexibilidade psicológica e autocompaixão, o que, por sua vez, previa maior sofrimento psicológico e menor bem-estar. A dimensão avaliação negativa da emoção revelou efeitos indiretos por ambos os mediadores. A dimensão reavaliação influencia a saúde mental apenas via autocompaixão, enquanto uma visão simplista da emoção se associou a melhores resultados através da flexibilidade psicológica. Estes resultados evidenciam o impacto duradouro dos esquemas emocionais na saúde mental e sustentam o desenvolvimento de estratégias mais específicas e eficazes que visem reduzir os efeitos negativos dos esquemas emocionais desadaptativos na saúde mental.

Palavras-chave: esquemas emocionais, flexibilidade psicológica, autocompaixão, saúde mental

Abstract

Persistent psychological symptoms, even in the context of effective treatments, highlight the limitations of traditional symptom-focused models. Advancing mental health requires identifying the underlying mechanisms that sustain psychological distress and hinder well-being. Emotional schemas have been associated with greater psychological suffering and lower well-being. Understanding the processes through which these schemas impact is essential for designing more targeted and effective strategies. This study examined the longitudinal relationship between emotional schemas and both positive and negative mental health, investigating the mediating roles of psychological flexibility and self-compassion. A sample of 303 Portuguese adults completed self-report measures assessing emotional schemas (LESS), psychological flexibility (CompACT), self-compassion (SELFCS), and mental health (MHC-SF and BSI-18) at two time points, six months apart. Using path analysis and controlling for baseline mental health, age, and sex, the results revealed that maladaptive emotional schemas were significantly associated with lower psychological flexibility and self-compassion, which in turn predicted increased psychological distress and decreased well-being. Negative evaluation of emotions showed indirect effects through both mediators. Difficulties in reappraisal influenced mental health exclusively via reduced self-compassion, while a simplistic view of emotions was associated with improved outcomes via increased psychological flexibility. These results underscore the enduring influence of emotional schemas on mental health and highlight the transformative potential of interventions that cultivate psychological flexibility and self-compassion. By elucidating their mediating roles, the study provides a foundation for developing more targeted and effective strategies to mitigate the impact of maladaptive emotional schemas on psychological distress and psychological well-being.

Keywords: emotional schemas, psychological flexibility, self-compassion, mental health

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Introduction

The increasing prevalence of mental health difficulties represents a significant public health concern, affecting individual well-being and societal development (Bhugra et al., 2013). Recent data indicate that one in eight people worldwide lives with a mental health condition, highlighting the urgency and global scale of this issue (World Health Organization, 2024). Mental health problems are associated with significant personal, social, and economic costs, contributing to increased disability, impaired functioning, and reduced quality of life (Patel et al., 2018; Vigo et al., 2016). New psychosocial stressors, such as digital overload, job insecurity, and chronic work pressure, further strain individuals' psychological resources (Chisholm et al., 2016; Huppert & So, 2013). In this context, promoting positive mental health has become increasingly important, not only to prevent mental illness but also to enhance resilience and functional capacity in daily life (Keyes, 2005; Winzer et al., 2014).

This evolving perspective has led researchers and clinicians to advocate for a more comprehensive understanding of mental health that encompasses both the alleviation of distress and the promotion of psychological well-being, emphasizing a dual-continuum model, moving beyond the traditional view that defined mental health merely as the absence of illness (Fonte et al., 2020; Keyes, 2002). According to this model, mental health encompasses not only the absence of psychological symptoms (negative mental health) but also the presence of well-being (positive mental health) as two distinct yet interrelated constructs (Keyes, 2002; Winzer et al., 2014). Positive mental health includes psychological, emotional, and social well-being and is linked to greater life satisfaction, better functioning, and a reduced risk of developing mental disorders (Diener, 1984; Winzer et al., 2014). On the other hand, negative mental health refers to the presence of psychological symptoms such as anxiety, depression, somatization, and interpersonal difficulties, which can result in distress, low self-esteem, and social withdrawal (Canavarro, 2007; Keyes, 2005; Nazaré et al., 2017). Embracing this two-dimensional approach is essential for understanding the full spectrum of mental health and promoting both the prevention of illness and the enhancement of well-being.

Despite the availability of effective treatments, many individuals continue to experience persistent symptoms and inadequate relief (Cuijpers et al., 2014; Hofmann & Hayes, 2019; Kazdin & Rabbitt, 2013), highlighting the need for a deeper understanding of the mechanisms that sustain well-being and mental health deterioration over time. Although traditional interventions, such as disorder-specific cognitive-behavioral therapies (CBT), have shown

efficacy, they often provide only short-term relief and fail to target the underlying psychological processes that contribute to the development and maintenance of mental health conditions (Borkovec, 2002; Hayes & Strosahl, 2004). Among these mechanisms, emotional processing has gained increasing recognition as central to both the etiology and treatment of psychological disorders, highlighting their relevance in transdiagnostic models of psychopathology and intervention (Edwards & Wupperman, 2019). Accordingly, a growing body of literature emphasizes the need for integrative and transtheoretical constructs that reflect clients' emotional experiences in psychotherapy, regardless of therapeutic orientation (Edwards & Wupperman, 2019; Faustino & Vasco, 2023). Within this context, emotional schemas, psychological flexibility, and self-compassion have emerged as key psychological processes that shape how emotional experiences are processed and regulated concerning mental health.

Emotional Schemas

Emotional schemas are not merely fleeting thoughts or surface-level feelings; they represent fundamental, underlying cognitive and emotional structures (Leahy, 2002)**.** Defined as enduring cognitive-affective structures that influence how individuals interpret and respond to emotional experiences they function as interpretive filters that shape beliefs about the controllability, and social acceptability of emotions and play a critical role in emotion processing and regulation (Edwards & Wupperman, 2019; Faustino & Vasco, 2023; Leahy, 2002, 2015, 2019). These schemas are thought to emerge through repeated emotional experiences across development, particularly within early caregiving relationships (Edwards & Wupperman, 2019; Leahy, 2002). When emotions are consistently invalidated, neglected, or punished by caregivers or significant others, individuals may internalize the belief that certain emotions are dangerous, shameful, or socially unacceptable (Edwards & Wupperman, 2019; Greenberg, 2008; Leahy, 2002, 2015). Over time, such interpretations consolidate into patterns that shape future emotional experiences. As such, emotional schemas are considered relatively stable mental structures that shape how emotions are processed.

Maladaptive emotional schemas can create self-perpetuating cycles of negative emotionality, contributing to the persistence of mental health challenges. Several empirical studies have linked maladaptive emotional schemas to symptoms of anxiety, depression, and other disorders (Faustino & Vasco, 2023; Khaleghi et al., 2017; Leahy, 2002, 2015, 2019; Rezaei et al., 2016; Tirch et al., 2012). Although much of the empirical literature has focused on early maladaptive schemas (Riso et al., 2006; Thimm, 2010, 2017), similar associations are

increasingly evident in the emotional schema literature, particularly regarding their links to psychological symptoms and emotional avoidance (da Silva et al., 2023; Leahy, 2018; Sebastião & Neto, 2025; Tirch et al., 2012). Research also suggests that maladaptive emotional schemas are negatively associated with self-compassion and psychological flexibility and positively correlated with symptoms of distress (Faustino et al., 2020). Silberstein et al. (2012) state that more adaptive emotional schemas are associated with greater psychological flexibility.

Although emotional schemas tend to persist over time, they can be modified through structured therapeutic strategies that address both emotional beliefs and regulatory patterns. Effective interventions should aim to challenge dysfunctional schemas and promote more adaptive emotional beliefs while attending to cultural and generational differences in emotional expression (Edwards & Wupperman, 2019; Faustino et al., 2020; Faustino & Vasco, 2023; Gross, 2002). Transforming these ingrained patterns may require cultivating psychological flexibility and self-compassion—key elements that help regulate emotions, promote resilience, and foster meaningful change (Hayes et al., 2006; Neff, 2003a). These two constructs were selected in the present study as mediators due to their roles as modifiable self-regulatory processes that shape how individuals respond to emotional experiences. Unlike broader trait-based variables, both psychological flexibility and self-compassion represent dynamic, trainable mechanisms that have been consistently associated with reduced psychopathology and greater well-being (Kashdan & Rottenberg, 2010; MacBeth & Gumley, 2012). Their inclusion aligns with contemporary transdiagnostic models of intervention and supports the hypothesis that maladaptive emotional schemas may impact mental health primarily through disruptions in emotional openness and self-relating (Faustino & Vasco, 2020; Leahy, 2019).

Psychological Flexibility

Psychological flexibility is the process targeted in Acceptance and Commitment Therapy (ACT), refers to the ability to fully contact the present moment and one's internal experiences (e.g., thoughts, emotions, bodily sensations), while persisting or changing behaviour in the service of personally held values—even in the presence of psychological discomfort (Hayes, 2016; Hayes et al., 2006). It consists of six interrelated processes: acceptance, cognitive defusion, present-moment awareness, self-as-context, values clarification, and committed action (Hayes et al., 2011). These processes enable individuals to engage with difficult emotions and thoughts without rigid coping strategies such as avoidance

or suppression, thereby fostering openness, emotional acceptance, and adaptive engagement with internal experiences (Bond et al., 2011; Fonseca et al., 2020; Gloster et al., 2020).

Research consistently shows that greater psychological flexibility is associated with lower psychological distress and higher well-being (Kashdan & Rottenberg, 2010; Leahy, 2019; Yasinski et al., 2020). Unlike emotional schemas, which tend to be stable and can be conceptualized as mental structures, psychological flexibility can be seen as states of mind, meaning a dynamic capacity that fluctuates with context, allowing individuals to adapt more fluidly to challenging emotional situations (Faustino & Vasco, 2023; Gloster et al., 2020; Hayes et al., 2006, 2011; Kashdan & Rottenberg, 2010; Leahy, 2002, 2015, 2019).

Therefore, when individuals with maladaptive emotional schemas also exhibit low psychological flexibility, this lack of adaptability exacerbates the negative impact of those schemas and they become trapped in rigid, schema-driven reactions, increasing their vulnerability to anxiety, depression, and difficulties in emotional regulation (Faustino et al., 2020; Kashdan & Rottenberg, 2010; Leahy, 2012; Silberstein et al., 2012). Psychological flexibility can counteract these tendencies by promoting more constructive engagement with emotional experiences. It may function as a key mediating mechanism in the relationship between maladaptive emotional schemas and mental health outcomes, buffering the negative emotional impact of these maladaptive schemas, promoting healthier emotional engagement, and reducing distress (Bond et al., 2011; Kashdan & Rottenberg, 2010; Silberstein et al., 2012; Tirch et al., 2012). These findings suggest that psychological flexibility may determine the degree to which emotional schemas dictate rigid and maladaptive responses versus more flexible and adaptive ones (Hayes et al., 2006; Kashdan & Rottenberg, 2010; Silberstein et al., 2012). It represents a clinically relevant and modifiable target in transdiagnostic interventions (Hayes et al., 2011).

Self-compassion

Similarly, self-compassion, defined as a kind, accepting, and mindful stance toward oneself during times of failure or suffering, has been shown to promote psychological well-being and buffer against psychopathology (Germer & Neff, 2013; Neff, 2003a). According to Neff's model, self-compassion encompasses three interrelated components: self-kindness (vs. self-judgment), common humanity (vs. isolation), and mindfulness (vs. over-identification with negative emotions). Self-compassion is best understood as a state-like response that arises in the context of emotional struggle, particularly when individuals confront personal failure or

suffering (Neff, 2003b). Together, these components foster a more balanced emotional perspective and reduce the impact of self-criticism and shame, central features of maladaptive emotional schemas (Neff, 2003a). Self-compassion helps people accept their emotions and stay emotionally balanced, making it easier to cope with distress without avoiding feelings or becoming overwhelmed by them (Neff, 2003b; Sirois, 2014).

Empirically, self-compassion has been associated with lower levels of depression, anxiety, stress, and self-criticism, and higher levels of emotional resilience, motivation, and life satisfaction (MacBeth & Gumley, 2012; Neff & Germer, 2017). Like psychological flexibility, self-compassion is not a static trait but a modifiable process that can be activated in moments of emotional distress, making it particularly valuable in both clinical and preventive mental health interventions, as it can be cultivated to foster more adaptive emotional responses (Germer & Neff, 2013; Neff, 2003b).

Recent research has shown that maladaptive emotional schemas are negatively associated with self-compassion and positively correlated with symptoms of distress (Faustino et al., 2020; Faustino & Vasco, 2020), with self-compassion acting as a buffer against shame and self-criticism—core features of maladaptive schemas (Neff, 2003b). These findings suggest that self-compassion may serve as a mediating mechanism in the relationship between emotional schemas and negative mental health outcomes (Faustino et al., 2020; Faustino & Vasco, 2020), reducing the internalization of maladaptive emotional beliefs through a more compassionate internal dialogue and offering a flexible, adaptive tool for navigating emotional difficulties.

Emotional Schemas, Psychological Flexibility and Self-Compassion

Considering this integrative perspective, emotional schemas, psychological flexibility, and self-compassion represent distinct yet interconnected psychological processes that collectively contribute to a comprehensive understanding of mental health. Emotional schemas influence how individuals appraise and interpret emotional experiences and are conceptualized as relatively stable mental structures that develop through early learning and repeated emotional patterns (Leahy, 2002). In contrast, psychological flexibility and self-compassion function as dynamic regulatory processes—adaptive, context-sensitive capacities that shape how individuals respond to emotional appraisals by supporting flexible, values-based, and compassionate engagement with emotional experiences (Hayes et al., 2006, 2011; Neff, 2003b). Moreover, these regulatory processes may mediate the relationship between emotional schemas

and mental health, providing mechanisms through which beliefs about emotions translate into psychological outcomes (Faustino & Vasco, 2023; Yasinski et al., 2020).

The Present Study

While previous research has established a clear association between maladaptive emotional schemas and poorer mental health, the mechanisms through which this relationship operates remain less clear (Faustino et al., 2020; Khaleghi et al., 2017; Leahy, 2002, 2012, 2015, 2019; Rezaei et al., 2016). Understanding these mechanisms, while adopting a broader conceptualization of mental health that includes both positive and negative dimensions, incorporating Keyes' dual-continuum model (Keyes, 2002), is particularly relevant, as prior studies have largely focused on psychological distress. Clarifying these pathways not only contributes to theoretical refinement but also offers valuable practical implications, supporting the development of targeted clinical and preventive interventions aimed at disrupting maladaptive emotional patterns and enhancing psychological well-being.

Psychological flexibility fosters adaptive emotion regulation, helping individuals with rigid schemas manage emotional stressors more effectively, while self-compassion reduces self-critical tendencies and promotes healthier emotional responses (Hayes et al., 2006; Neff, 2003a). Investigating their mediating roles can clarify how emotional schemas influence both positive and negative mental health, offering insights for more targeted and effective therapeutic interventions (Leahy, 2002). In the present study is expected that higher levels of psychological flexibility will likely reduce the negative impact of maladaptive emotional schemas on mental health, leading to lower levels of psychological distress and higher levels of well-being (Silberstein et al., 2012; Tirch et al., 2012) and increased self-compassion is expected to reduce the negative effects of maladaptive emotional schemas (Faustino et al., 2020) and has been empirically linked to lower psychopathology and greater well-being (MacBeth & Gumley, 2012; Neff, 2003a).

Emotional schemas are conceptualized as enduring interpretive structures that guide how individuals process emotional experiences. According to Leahy (2002), these schemas are maintained through cognitive biases (e.g., selective attention to negative emotions) and behavioral patterns (e.g., avoidance), making them self-reinforcing over time and resistant to spontaneous change. Despite this theoretical foundation, empirical studies assessing their temporal stability remain limited.

Thus, this research aims to achieve the following objectives:

1) examine the role of psychological flexibility and self-compassion in the longitudinal relationship between emotional schemas and mental health (positive and negative), while controlling for baseline mental health, and;

2) analyse emotional schema stability over six months.

By using a longitudinal design, the present research offers a more comprehensive understanding of how stable interpretive structures (emotional schemas) impact modifiable self-regulatory processes (psychological flexibility and self-compassion) that influence psychological functioning over time.

Beyond its theoretical contributions, this study offers practical implications for clinical and preventive mental health interventions. By clarifying the mediating roles of psychological flexibility and self-compassion, the findings may support the development of targeted strategies that both reduce psychological distress and enhance positive mental health. These insights can inform personalized treatments for individuals with maladaptive emotional schemas and guide broader initiatives in educational, workplace, and community settings, promoting mental health as a multidimensional construct.

Method

Participants

Data were collected at two different moments from Portuguese-speaking participants with reading and writing proficiency (Annex C). The Time 1 (T1) sample included 666 individuals, and 583 completed all the questionnaires of interest. Participants aged 16–93 (M = 44.8, SD = 19.60) were mostly female (375, 64.3%). The majority of participants were in a marital or civil union (265, 45.5%) and were full-time employees (266, 45.6%). Most with a typical education level for Portugal - high school (168, 28.8%) or BA (236, 40.5%). At Time 2 (T2), the sample included 303 participants with a mean age of 47.3 years (SD = 18.4). Participants were predominantly female, and most were in a marital or civil union, full-time employees, and held a university degree. The final sample in the present study was 303 individuals. For a more detailed analysis of the sample's characteristics, see Table 1.

Table 1

Sociodemographic Characteristics of Participants (n = 303)

Characteristic	*n*	%
Gender		
Male	90	29.7
Female	212	70.0
Other	1	.3
Marital status		
Single	112	37.0
Married/ civil union	149	49.2
Divorced	30	9.9
Widow	12	4.0
Educational Level		
4 years or less	6	2.0
6 years	1	0.3
9 years	23	7.6
12 years	86	28.4
Bachelor's degree	118	38.9
Master's degree	58	19.1
PhD or superior	11	3.6
Employment		
Working full time	144	47.5
Working part time	19	6.3
Unemployed	24	7.9
Student	31	10.2
Retired	85	28.1

Measures

Emotional schemas

The Leahy Emotional Schema Scale (LESS), developed by Leahy (2002) and validated for the Portuguese population by da Silva et al. (2023), is a self-report instrument designed to

assess beliefs and attitudes about emotions, collectively referred to as emotional schemas. The scale consists of 42 items rated on a six-point Likert scale, ranging from 1 (very untrue of me) to 6 (very true of me). The Portuguese version organizes the items into five components: negative evaluation of emotions, difficulties in reappraisal, difficulties in naturalizing emotion, need to be rational, and simplistic view of emotion (da Silva et al., 2023). The first component, negative evaluation of emotions, encompasses dimensions such as the need for control, incomprehension, non-acceptance, and the experience of secondary emotions in response to one's emotional state. The second dimension, difficulties in reappraisal, reflects a cognitive aspect of emotion regulation and refers to deficits in the ability to reinterpret or reframe emotional experiences - “When I feel something that bothers me, I try to think...”. The third, difficulties in naturalizing emotion, captures a lack of acceptance and a perception that one’s emotional experiences deviate from normative human responses. The fourth, need to be rational, reflects a tendency to devalue emotions in favor of logic and rationality. Lastly, the simplistic view of emotion is associated with the perspective that emotions are often categorized in binary terms such as "good" or "bad," or reduced to overly simplistic explanations, and includes rumination (da Silva et al., 2023). In the present study, the LESS scale demonstrated the following internal consistency values: negative evaluation of emotions (ϖ = .93 (T1), ϖ =.94 (T2)), difficulties in reappraisal (ϖ = .69 (T1), ϖ = .61 (T2)), difficulties in naturalizing emotion (ϖ = .52 (T1), ϖ = .58 (T2)), need to be rational (ϖ = .68 (T1), ϖ = .72 (T2)), and simplistic view of emotion (ϖ = .68 (T1), ϖ = .72 (T2)).

Psychological Flexibility

The Comprehensive Assessment of Acceptance and Commitment Therapy Processes (CompACT), developed by Francis et al. (2016) and validated for the Portuguese population by Trindade et al. (2022), is a self-report instrument designed to measure the core processes of psychological flexibility. The scale comprises 18 items rated on a 7-point Likert scale, ranging from 0 (strongly disagree) to 6 (strongly agree), with higher scores indicating greater psychological flexibility. The CompACT includes three subscales: openness to experience, which assesses the willingness to experience internal events without avoidance or control; behavioral awareness, which captures mindful attention to present-moment experiences; and valued action, which evaluates the extent to which individuals engage in actions consistent with their personal values. The measure provides a total psychological flexibility score, which was used in the present study and demonstrated good internal consistency (ω = .84).

Self-Compassion

The Self-Compassion Scale (SELFCS), developed by Neff (2003b, 2003a) and adapted for the Portuguese population by Castilho & Gouveia (2011), is a self-report instrument consisting of 26 items rated on a 5-point Likert scale, ranging from 1 (almost never) to 5 (almost always). The scale measures six interrelated components of self-compassion, organized into three positive and three negative dimensions. The positive dimensions include self-kindness (treating oneself with care and understanding), common humanity (recognizing that personal suffering is part of the shared human condition), and mindfulness (maintaining balanced awareness of painful thoughts and feelings) (Castilho & Gouveia, 2011). The negative dimensions include self-judgment (harsh self-criticism), isolation (feeling alone in one's suffering), and over-identification (becoming absorbed in negative emotional states) (Castilho & Gouveia, 2011). Higher total scores reflect greater levels of self-compassion. The measure provides a total self-compassion score, which was used in the present study and demonstrated a very good internal consistency ($\omega = .93$).

Positive Mental Health

The Mental Health Continuum–Short Form (MHC-SF), developed by Keyes in 2002 and validated for the Portuguese population by Fonte et al. (2020), is a 14-item self-report instrument. It is used to assess positive mental health across three domains: emotional well-being (e.g., life satisfaction, positive affect), psychological well-being (e.g., autonomy, personal growth), and social well-being (e.g., social contribution, integration). Items are rated on a 6-point scale ranging from 1 (never) to 6 (every day), with higher total scores reflecting higher levels of overall well-being (Fonte et al., 2020). In the present study, the total well-being score was used, and the measure exhibited very good internal consistency in both T1 and T2 assessments ($\omega = .92$ for both time points).

Negative Mental Health

The Brief Symptom Inventory-18 (BSI-18), developed by Derogatis (2001) and adapted for the Portuguese population by Nazaré et al. (2017), is a brief self-report measure designed to assess psychological symptoms experienced over the previous seven days. The scale consists of 18 items rated on a 5-point Likert scale ranging from 0 (not at all) to 4 (extremely), and it includes subscales for somatization, depression, and anxiety (Canavarro, 2007; Nazaré et al., 2017). In the present study, only the Global Severity Index (GSI) was used, which reflects the

overall level of psychological distress, with higher scores indicating more severe psychopathological symptoms (Canavarro, 2007; Nazaré et al., 2017). The BSI-18 demonstrated very good internal consistency in the current sample (ω = .93(T1), ω = .94(T2)).

Procedure

This study is a secondary analysis, using Sebastião & Neto (2025) research data, approved by the ethical committee of ISPA—Instituto Universitário and other participating organizations where data were collected. Data collection took place both online and in person at hospitals, senior universities, and patient organizations. Informed consent was obtained from all participants before completing the survey. The online survey, hosted on Qualtrics, was shared through social networks. Combining paper-based and web-based questionnaires ensured inclusivity, enabling participation from individuals who might not otherwise have access, thereby capturing a diverse sample in terms of sociodemographic characteristics.

Data collection occurred in two phases: from January to July 2022 (T1) and from July 2022 to March 2023 (T2), with T2 conducted approximately six months after T1. The model controlled for positive mental health (T1), negative mental health (T1), and sociodemographic variables (sex and age) to mitigate potential confounding effects, thereby enhancing the precision of the estimates regarding the relationships between the primary variables of interest.

Data analysis

Descriptive statistics, independent samples *t*-tests, and Pearson's correlations were conducted using SPSS (IBM Corp, 2024), with a significance level set at .05. To examine the mediating role of psychological flexibility and self-compassion in the longitudinal relationship between emotional schemas and mental health outcomes, a mediation analysis was conducted. In the mediation model, emotional schemas assessed at T1 served as the predictor variable. Psychological flexibility and self-compassion at T2 were included as mediators, and both positive and negative mental health outcomes at T2 were defined as dependent variables. Baseline levels of positive and negative mental health (T1), as well as relevant sociodemographic covariates (sex and age), were statistically controlled. To test the hypothesized model, a mediation analysis was conducted using JASP for Mac (0.19.3), based on the lavaan package (Rosseel, 2012), with parameter estimation performed via maximum likelihood. The significance of indirect effects was evaluated using the bias-corrected percentile bootstrap method, as recommended by Biesanz et al. (2010), with 10,000 resamples. Mediation

was considered present when the 95% bias-corrected bootstrapped confidence interval for an indirect effect did not include zero. To evaluate the temporal stability of emotional schemas over time, paired samples t-tests were conducted for each of the five schema dimensions, comparing baseline (T1) and follow-up (T2) means.

Results

Table 2 presents the means, standard deviations, and Pearson correlation coefficients for emotional schemas (measured at T1), psychological flexibility and self-compassion (T2), and positive and negative mental health outcomes assessed at T1 and T2. As shown, all emotional schema dimensions were significantly correlated with psychological flexibility, self-compassion, and mental health variables in the expected directions ($\rho < .01$), except simplistic view of emotion, which was only significantly correlated with negative mental health at T1. Specifically, higher levels of maladaptive emotional schemas were associated with lower psychological flexibility, lower self-compassion, lower positive mental health, and higher negative mental health. Psychological flexibility and self-compassion were both positively correlated with positive mental health and negatively correlated with negative mental health, showing significant associations ($\rho < .01$). Additionally, positive mental health was strongly and negatively correlated with psychological symptoms ($\rho < .01$).

Associations between demographic variables and mental health outcomes were also examined. An independent samples t-test revealed a significant difference in psychological symptoms between women (M = 18.56, SD = 15.10) and men (M = 14.36, SD = 12.80), t(300) = -2.31, p = .021, d = .29. Females reported significantly higher psychological distress than males. Age was positively associated with positive mental health, r(300) = .15, $\rho = .012$, indicating that older participants reported slightly higher levels of well-being (annex D). In contrast, age was negatively correlated with psychological symptoms, r(300) = –.21, $\rho < .001$, suggesting that younger participants experienced higher levels of psychological distress (annex E). Sex and age will be included as control variables in the following analyses due to their significant associations with key psychological outcomes.

Table 2

Bivariate correlations and descriptive statistics

	1	2	3	4	5	6	7	8	9	10	11
1 NEE[a] (T1)											
2 DR[a] (T1)	.235**										
3 DNE[a] (T1)	.421**	-.018									
4 NR[a] (T1)	.469**	-.138*	.287**								
5 SVE[a] (T1)	.218**	-.321**	.117*	.246**							
6 PF (T2)	-.635**	-.195**	-.206**	-.301**	-.029						
7 SC (T2)	-.668**	-.425**	-.234**	-.214**	-.006	.643**					
8 PMH (T2)	-.458**	-.383**	-.141*	-.219**	.055	.548**	.618**				
9 NMH (T2)	.586**	.260**	.210**	.168**	.054	-.647**	-.635**	-.577**			
10 PMH (T1)	-.492**	-.465**	-.122*	-.151**	.054	.486**	.589**	.746**	-.466**		
11 NMH (T1)	.654**	.217**	.230**	.197**	.136*	-.575**	-.562**	-.485**	.784**	-.514**	
Mean	2,74	2,75	3,15	3,35	4,50	41,62	85,99	57,55	17,45	57,85	17,95
Std. Deviation	1,06	0,89	1,04	0,70	1,05	10,08	18,54	14,34	14,74	13,95	14,72
Min.	1.00	1.00	1.00	1.71	1.00	13.00	34.00	23.00	.00	14.00	.00
Máx.	5.62	5.33	5.80	5.29	6.00	65.00	130.00	83.00	71.00	83.00	69.00

Note: n = 303; *ρ <.05; **ρ < .01.

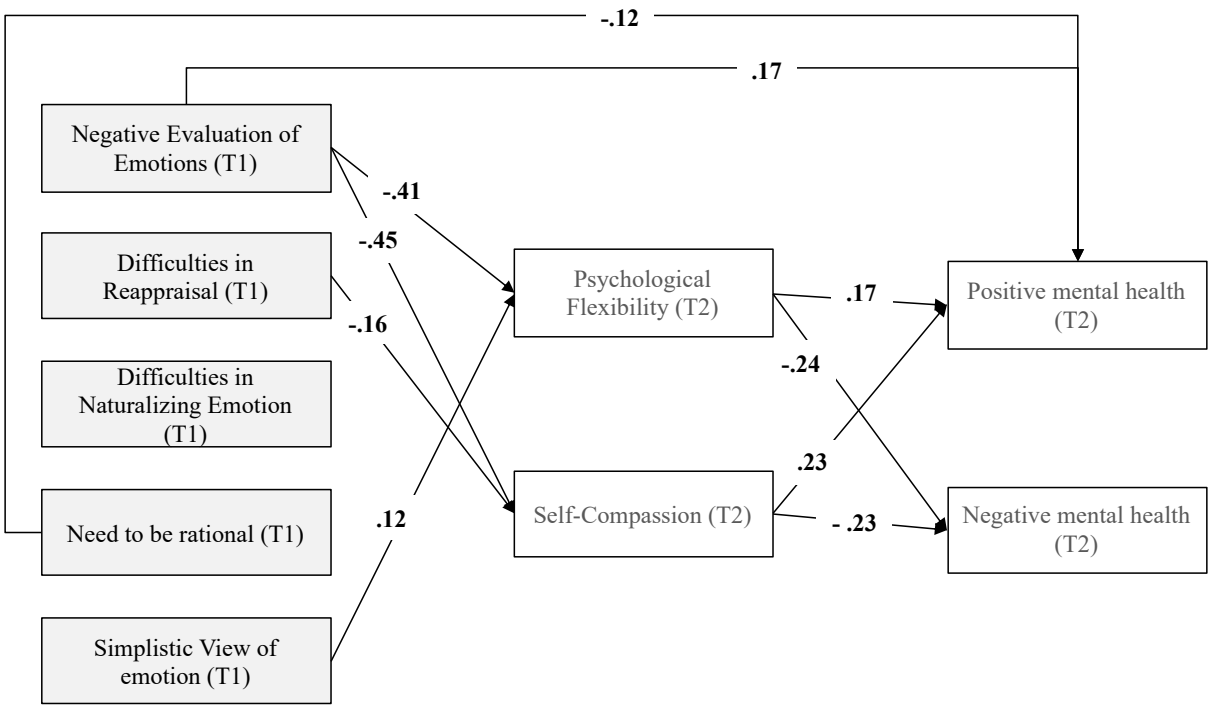
[a] Emotional Schemas dimension

NEE – Negative evaluation of emotions, NBR – Need to be rational, DR – Difficult in reappraisal, SVE – Simplistic view of emotions, PF – Psychological Flexibility; SC – Self-Compassion, PMH – Positive Mental Health; NMH – Negative Mental Health.

The model assessing the mediation role of psychological flexibility and self-compassion in the longitudinal relationship between emotional schemas dimensions and positive and negative mental health was tested, controlling sociodemographic factors and baseline outcomes. The proposed model (Figure 1) explained 69.5% of the negative mental health, 63.7% of the positive mental health, 48.2% of the psychological flexibility, and 57.7% of the self-compassion (Annex F, G, H e I).

Figure 1

Path analysis model



Note. Mediation model illustrating the mediating effects of psychological flexibility and self-compassion on the longitudinal association between emotional schemas (T1) and mental health outcomes (T2).

Solid lines represent statistically significant paths; nonsignificant paths are omitted for parsimony.

Standardized regression coefficients are shown. Covariates include baseline mental health, age, and sex.

As shown in table 3, among the direct effects, two emotional schema dimensions significantly predicted positive mental health outcomes (annex G). Negative evaluation of emotions at T1 was positively associated with well-being at T2. Conversely, a higher need to be rational at T1 was significantly associated with lower levels of well-being at T2. No direct effects of emotional schemas on negative mental health were observed.

Table 3

Direct effects of the path analysis model

Predictor	Positive Mental Health (T2)					NegativeMental Health (T2)				
	Estimate	SE	95% CI		ρ	Estimate	SE	95% CI		ρ
			LL	UL				LL	UL	
NEE (T1)	.170	.064	.028	.316	.008	-.084	.059	-.202	.030	.157
DR (T1)	-.044	.045	-.141	.052	.336	.041	.042	-.046	.132	.320
DNE (T1)	.006	.041	-.079	.087	.883	.021	.037	-.046	.089	.582
NBR (T1)	-.118	.042	-.214	-.022	.006	-.016	.039	-.092	.061	.690
SVE (T1)	.013	.040	-.067	.089	.738	.002	.036	-.073	.084	.958

Note. Delta method standard errors, bias-corrected percentile bootstrap confidence intervals, ML estimator. CI = confidence interval; LL = lower limit; UL = upper limit. NEE – Negative evaluation of emotions, NBR – Need to be rational, DR – Difficult in reappraisal, SVE – Simplistic view of emotions

Table 4 presents significant indirect effects that were observed through the mediating roles of psychological flexibility and self-compassion (annex H). Specifically, negative evaluation of emotions at T1 was indirectly associated with higher negative mental health at T2 via self-compassion and psychological flexibility and lower positive mental health through both mediators. Difficulties in reappraisal were also associated with higher negative mental health and lower positive mental health through decreased self-compassion. Simplistic view of emotions was associated with lower negative mental health and greater positive mental health, both mediated by psychological flexibility.

No statistically significant changes were observed for any of the emotional schema dimensions (Table 5). Moderate to strong positive correlations were found between T1 and T2 scores across all dimensions, indicating a consistent pattern of temporal stability in participants' endorsement of these emotional schemas.

Table 4

Indirect effects of the path analysis model

	via Psychological Flexibility					via Self-compassion				
Predictor	Estimate	SE	95% CI		ρ	Estimate	SE	95% CI		ρ
			LL	UL				LL	UL	
Positive Mental Health										
NEE (T1)	-.069	.024	-.136	-.022	.004	-.104	.029	-.178	-.047	<.001
DR (T1)	.013	.010	-.005	.043	.183	-.037	.014	-.074	-.013	.010
DNE (T1)	.005	.008	-.009	.027	.523	-.007	.011	-.031	.011	.505
NBR (T1)	-.012	.009	-.037	.004	.208	.006	.011	-013	.031	.554
SVE (T1)	.021	.010	.005	.049	.041	.012	.010	-.009	.042	.245
Negative Mental Health										
NEE (T1)	.097	.025	.054	.157	<.001	.101	.027	.053	.169	<.001
DR (T1)	-.018	.013	-.051	.010	.163	.036	.014	.012	.076	.008
DNE (T1)	-.007	.011	-.032	.015	.519	.007	.010	-.011	.030	.503
NBR (T1)	.016	.012	-.006	.048	.189	-.006	.011	-.031	.012	.554
SVE (T1)	-.029	.012	-.059	-.008	.021	-.012	.010	-.036	.009	.240

Note. Delta method standard errors, bias-corrected percentile bootstrap confidence intervals, ML estimator. CI = confidence interval; LL = lower limit; UL = upper limit. NEE – Negative evaluation of emotions, NBR – Need to be rational, DR – Difficult in reappraisal, SVE – Simplistic view of emotions

Table 5

Descriptive Statistics, t-Tests, Correlations for Emotional Schema Dimensions (T1 and T2)

Dimension	T1 Mean (SD)	T2 Mean (SD)	*t*	*p*	95% CI of Mean Difference	Cohen's *d*	*R*
Negative Evaluation of Emotions	2.74 (1.06)	2.74 (1.07)	0.16	.872	[–0.073, 0.086]	0.009	.780

Dimension	T1 Mean (SD)	T2 Mean (SD)	*t*	*p*	95% CI of Mean Difference	Cohen's *d*	*R*
Difficulties in Reappraisal	2.75 (0.89)	2.78 (0.87)	-0.58	.564	[–0.122, 0.068]	-0.033	.550
Difficulties in Naturalizing Emotions	3.15 (1.04)	3.15 (1.06)	-0.08	.939	[–0.117, 0.108]	-0.004	.572
Need to Be Rational	3.35 (0.70)	3.33 (0.72)	0.59	.559	[–0.052, 0.097]	0.034	.566
Simplistic View of Emotions	4.50 (1.05)	4.53 (1.06)	-0.42	.676	[–0.137, 0.089]	-0.024	.545

Discussion

The present study investigated the longitudinal relationship between emotional schemas and mental health outcomes (positive and negative), with a specific focus on the mediating roles of psychological flexibility and self-compassion, while statistically controlling for baseline mental health and demographic variables. A dimensional approach was employed, analyzing five distinct emotional schema dimensions, which allowed for a more nuanced understanding of how specific maladaptive beliefs, such as negative evaluation of emotions or difficulties in reappraisal, individually contribute to psychological outcomes and regulatory processes. This methodological distinction enhances the interpretability of the findings and supports the clinical relevance of targeting psychological flexibility and self-compassion interventions.

The results strongly support the proposed mediation model, highlighting the central role of self-compassion and psychological flexibility in the pathway between emotional schemas and mental health, specifically in negative evaluation of emotions, difficulties in reappraisal, and a simplistic view of emotions. These mediators appear to be key mechanisms through which maladaptive emotional beliefs impact psychological functioning over time. Importantly, the findings suggest that different emotional schemas may influence mental health through distinct mediating pathways; for instance, difficulties in reappraisal were associated with self-compassion, whereas simplistic views of emotion were mediated by psychological flexibility.

Negative evaluation of emotions was found to exert indirect effects on both positive and negative mental health via psychological flexibility and self-compassion. This suggests that individuals who perceive their emotions as unacceptable or incomprehensible (e.g., "There are things about myself that I just don't understand") are more likely to experience diminished emotional openness (e.g. "I don't accept my feelings") and reduced self-kindness (e.g. "I shouldn't have some of the feelings I have"), which may increase psychological distress and lower well-being. This schema undermines psychological flexibility by promoting experiential avoidance, such as attempts to suppress or escape from emotional discomfort, a core barrier in Acceptance and Commitment Therapy (Hayes et al., 2006). It also undermines self-compassion by fostering emotional self-criticism and invalidation, which directly oppose self-kindness and emotional acceptance (Neff, 2003a). These results are consistent with previous research identifying avoidance and self-critical thinking as transdiagnostic processes linking maladaptive emotional beliefs to mental health difficulties (Borkovec, 2002; Hayes et al., 2006; Hofmann & Hayes, 2019; Leahy, 2019). Taken together, these findings reinforce the view that negative evaluation of emotions influences how individuals regulate affective experiences and how they relate to themselves during emotional distress, thereby impacting both positive and negative mental health outcomes through distinct yet complementary mediators.

The relationship between difficulties in reappraisal and mental health (positive and negative) occurred exclusively through self-compassion, reinforcing prior research suggesting that maladaptive emotional schemas may undermine compassionate self-relating, thereby increasing vulnerability to psychological distress (Faustino et al., 2020; Faustino & Vasco, 2020). Difficulties in reappraisal reflect problems in cognitively reframing emotional experiences and are often associated with self-judgment and rumination. Although this dimension conceptually includes elements such as non-acceptance and rumination (e.g. "When I feel down, I try to think about a different way to view things") (da Silva et al., 2023), it was not significantly associated with psychological flexibility in the present study. One possible explanation is that the core processes involved may impair how individuals relate to themselves emotionally, rather than how they behave in the presence of difficult internal experiences. In this sense, difficulties in reappraisal may influence mental health primarily through emotional self-relating (i.e., self-compassion) rather than through behavioral openness or value-directed action (psychological flexibility). The absence of direct effects and the presence of significant indirect paths further emphasize the mediating role of self-compassion as a central psychological process. Specifically, these results highlight self-compassion's function not only

as a buffer against distress but also as a mechanism that fosters more adaptive emotional processing, particularly in the context of rigid or maladaptive beliefs about emotion regulation.

Finally, simplistic view of emotion exerted a significant indirect effect on mental health through psychological flexibility. Although typically conceptualized as a rigid or black-and-white thinking about emotional experiences, this schema was positively associated with psychological flexibility in the current sample. This unexpected finding may suggest that, under certain conditions, simplified interpretations of emotions provide structure or clarity that supports value-based action and present-moment engagement and may, in some cases, function adaptively. Unlike other emotional schema dimensions, simplistic view of emotion did not significantly correlate with psychological flexibility, self-compassion, or mental health in the bivariate analyses. However, it showed an indirect path in the mediation model, suggesting a more subtle or context-specific influence. These findings should therefore be interpreted with caution, as they may reflect complex statistical dynamics or sample-specific variance rather than robust predictive effects. Still, they underscore the complexity of emotional belief systems and the context-dependent ways in which they shape psychological functioning. Further research is needed to clarify whether this pattern reflects a culturally embedded mechanism, a functional adaptation to emotional ambiguity, or a statistical artifact.

Although difficulties in naturalizing emotion—which refers to consensus, capturing no-acceptance and not feeling the same as other individuals—were correlated with all main variables, it did not predict outcomes through the proposed mediators, which may suggest that its influence is more generalized, may operate through alternative psychological pathways, or may have been affected by the low internal consistency of this subscale—an issue that warrants further investigation.

Interestingly, direct effects emerged only for positive mental health—specifically in relation to negative evaluation of emotions and the need to be rational—whereas no emotional schemas showed direct associations with negative mental health. These findings can be interpreted through the lens of the dual-continuum model of mental health (Keyes, 2002), which theorizes that positive and negative mental health are related but distinct constructs. The results suggest that certain emotional schemas may uniquely interfere with aspects of well-being without necessarily leading to psychological distress.

Negative evaluation of emotions showed a small but significant positive direct effect on positive mental health, while need to be rational was directly associated with lower levels of

well-being. The unexpected positive effect of negative evaluation of emotions may reflect a suppression effect, whereby the inclusion of mediators accounts for shared variance between the predictor and the outcome, allowing a previous obscure or counterintuitive direct effect to emerge (MacKinnon et al., 2002). Another possible explanation is that these patterns may reflect a perceived sense of emotional control or culturally reinforced restraint, which, in certain contexts, can temporarily enhance one's sense of well-being (Bonanno et al., 2004; John & Gross, 2004). Cultural norms that valorize rational dominance and emotional suppression may strengthen beliefs that emotional expression is undesirable or a sign of weakness, especially among high-functioning individuals (Edwards & Wupperman, 2019; Gross, 2002). These findings highlight the importance of further exploring how culturally embedded emotional norms influence the relationship between emotional schemas and well-being. Additionally, individuals with higher levels of well-being may sometimes engage in critical emotional self-evaluation not to avoid emotions, but as a mechanism for initiating constructive change. In this context, negative self-appraisal may serve as a motivational trigger for personal development, aligning with the concept of post-adversity growth (Tedeschi & Calhoun, 2004). Interestingly, the positive direct effect observed between negative evaluation of emotions and positive mental health, despite the negative indirect effects, suggests a more complex role for emotional self-evaluation. This may indicate that, in some individuals, critical appraisal of emotions functions less as a maladaptive avoidance pattern and more as a form of purposeful self-regulation or motivation.

In contrast, the negative direct effect of need to be rational suggests that this schema, marked by a rigid devaluation of emotional experience and an overreliance on logic, impacts well-being through a distinct, unmediated pathway. This may reflect a cognitive style that prioritizes analysis while neglecting emotional insight, ultimately limiting emotional openness and undermining key components of positive mental health such as connectedness, autonomy, and meaning (Keyes, 2002; Leahy, 2019). Unlike other schemas that operate through modifiable psychological processes such as self-compassion or flexibility, need to be rational may exert its effects independently of distress symptoms. These effects might be especially relevant in cultural or professional environments where emotional restraint and cognitive control are socially reinforced, yet they may nonetheless hinder the development of fulfilling relationships and authentic emotional expression.

Taken together, these findings underscore the importance of distinguishing between the mechanisms that foster well-being and those that contribute to psychological distress. They

reinforce the value of adopting a process-based approach to mental health, which allows for a more comprehensive understanding of how specific mental structures impact different facets of psychological functioning. While emotional schemas predominantly influence mental health outcomes indirectly, through their effects on self-regulatory processes such as psychological flexibility and self-compassion, certain schema dimensions may also exert distinct direct effects. These unique pathways highlight the need for nuanced clinical interventions that not only target transdiagnostic mediators but also address the specific content and function of maladaptive emotional schemas.

Complementing the primary findings, results support the temporal stability of emotional schemas over the six-month interval, which is consistent with theoretical models that conceptualize emotional schemas as relatively stable mental structures (Leahy, 2002, 2015). Clinically, this underscores the importance of assessing and addressing emotional schemas in psychological interventions, as these patterns may persist without explicit therapeutic focus.

In this context, our findings support the development of individualized interventions that integrate multiple levels of psychological processing. Acceptance and Commitment Therapy (ACT) provides tools to enhance openness to internal experiences and promote value-consistent behavior, reducing maladaptive emotional responses (Hayes, 2016). Complementarily, self-compassion-based approaches promote emotional balance by reducing self-criticism and encouraging kindness and mindful acceptance (Neff, 2003a, 2003b). Emotional Schema Therapy (EST), developed by Leahy (2002, 2015, 2019), combines cognitive-behavioral strategies with elements from both ACT (e.g., mindfulness, cognitive defusion) and self-compassion. It targets maladaptive beliefs about emotions, such as their controllability, social consequences, or undesirability, by increasing emotional awareness, cognitive flexibility, and emotional acceptance. This integrative, transdiagnostic approach has shown effectiveness across a range of disorders, including depression and anxiety (Germer & Neff, 2013; Khaleghi et al., 2017; Leahy et al., 2011, 2019), highlighting the clinical value of addressing both interpretive and regulatory processes in emotion-focused interventions. These interventions encourage individuals to relate to emotional suffering with greater warmth, a sense of common humanity, and balanced awareness. This approach is particularly beneficial for individuals with maladaptive emotional schemas, often marked by patterns of shame, self-criticism, and emotional avoidance. Beyond fostering acceptance of difficult emotional experiences, these interventions promote the intentional cultivation of a compassionate inner dialogue, which can counteract self-critical tendencies and support emotional integration. By

incorporating these compassion-based strategies, therapeutic interventions may gain greater flexibility and precision, offering more effective means of reducing psychopathology and promoting psychological well-being.

This study presents several limitations. First, the use of a convenience sample may limit the generalizability of the results. Although efforts were made to enhance sample diversity by recruiting participants from hospitals, senior universities, and online platforms, the final sample may still underrepresent certain sociodemographic groups. Future research should further explore these mechanisms across diverse populations and with alternative methodological approaches to strengthen generalizability and causal inference. Second, although the sample size was modest, potentially limiting statistical power, the stability of parameter estimates, and the generalizability of findings, the longitudinal design strengthens the methodological rigor of the study. By allowing for the examination of temporal relationships among variables - the dependent variable is measured longitudinally - it enhances the ability to examine change over time and reinforces the interpretation of causal relationships, particularly within the context of mediation analysis (Cole & Maxwell, 2003; Marôco, 2021). In future research, longitudinal studies with extended follow-up periods and cross-lagged panel analyses could provide deeper insight into the directionality and reciprocal influence of emotional schemas, psychological flexibility, self-compassion, and mental health outcomes. Third, the exclusive reliance on self-report instruments introduces potential for response biases, including social desirability, common method variance, and recall bias. Future studies could strengthen validity by incorporating multimethod assessments, such as clinician-rated instruments or behavioral tasks assessing emotional regulation. Fourth, the internal consistency of the LESS subscale 'difficulties in naturalizing emotion' was poor ($\Omega = .517$), limiting the interpretability of findings associated with this dimension. Fifth, while the study controlled for baseline mental health and demographics, it did not account for potential confounding variables, such as personality traits (e.g., neuroticism, conscientiousness) or prior exposure to therapy, which may influence both emotional schemas and psychological functioning. Finally, although the conceptual model emphasized mediating processes, the directionality of effects, while plausible, cannot be definitively established without experimental manipulation. Future research employing cross-lagged panel designs or intervention studies could more precisely test the dynamic and reciprocal nature of these relationships. Moreover, dimensional approaches—like the one used in this study—should be prioritized to identify the most clinically relevant components of emotional schemas and their unique contributions to psychological functioning. Additionally,

experimental studies examining the efficacy of interventions such as EST could clarify their impact on both psychological distress and well-being. Pre-post assessments would provide insight into their capacity to modify emotional schemas and strengthen adaptive regulation over time.

The substantial proportion of variance explained in both positive and negative mental health outcomes reinforces the theoretical robustness and clinical utility of the proposed model. By demonstrating that these mediators consistently explain the relationship between emotional schemas and both well-being and distress, the study adds empirical weight to their role as transdiagnostic processes. Importantly, the findings also identify specific schema dimensions—particularly negative evaluation of emotions, difficulties in reappraisal, and a simplistic view of emotions—as especially relevant intervention targets. These insights support the integration of flexibility- and compassion-based components in psychological treatment for individuals with maladaptive emotional schemas, advancing both clinical precision and therapeutic efficacy.

The substantial proportion of variance explained in both positive and negative mental health outcomes reinforces the theoretical coherence and empirical utility of the proposed model. By demonstrating that psychological flexibility and self-compassion mediate the relationship between specific emotional schemas and mental health, the study provides evidence for the relevance of these processes as transdiagnostic mechanisms. Notably, the schema dimensions of negative evaluation of emotions, difficulties in reappraisal, and a simplistic view of emotions emerged as particularly impactful, suggesting differentiated psychological pathways. These findings highlight the potential of targeting flexibility and self-compassion in future research and intervention development, particularly for individuals with maladaptive emotional schemas.

Conclusion

This study suggests that emotional schemas influence mental health over time through two key transdiagnostic mechanisms: psychological flexibility and self-compassion. Among the five emotional schemas analyzed, negative evaluation of emotions emerged as a predictor, showing significant indirect effects on both positive and negative mental health through both psychological flexibility and self-compassion. In contrast, difficulties in reappraisal influenced outcomes exclusively through reduced self-compassion, while the simplistic view of emotion was associated with better mental health via increased psychological flexibility. Need to be

rational, and difficulties in naturalizing emotion did not show significant indirect effects. The findings have clear clinical implications. Interventions that enhance psychological flexibility and self-compassion may effectively weaken the impact of rigid emotional schemas, supporting symptom reduction and the promotion of well-being. By identifying the most influential emotional schema dimensions, the study offers actionable insights for more targeted and effective therapeutic approaches. Additionally, by including both positive and negative mental health outcomes, the study aligns with the dual-continuum model of mental health (Keyes, 2002), offering a more comprehensive, integrative, and preventative approach for understanding and improving emotional functioning in both clinical and preventive contexts.

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APPENDIX

Annex A - Literature Review

Mental Health

The rising prevalence of mental health difficulties has become a major public health concern worldwide, with far-reaching consequences for individuals, communities, and health systems (Bhugra et al., 2013). According to the World Health Organization (2022), approximately one in eight people globally lives with a mental health condition, including common disorders such as depression and anxiety, as well as more severe illnesses such as bipolar disorder and schizophrenia. This global mental health crisis has intensified in recent decades due to growing social inequality, conflict, environmental instability, and widespread disruptions to access to care (Bhugra et al., 2013). Mental health disorders are now among the leading causes of years lived with disability, particularly in young and working-age populations, and often co-occur with chronic physical conditions, compounding their impact on functioning and healthcare utilization (GBD 2019 Mental Disorders Collaborators, 2022; Vigo et al., 2016; Whiteford et al., 2013). Beyond clinical impairment, mental health conditions are linked to substantial personal, social, and economic consequences. Individuals affected often experience reduced quality of life, interpersonal conflict, and educational and occupational setbacks (Bhugra et al., 2013). At the societal level, mental illness contributes to lost productivity, long-term unemployment, and increased social service dependency (Patel et al., 2018). Global economic analyses estimate that mental health problems may cost the global economy up to $6 trillion annually by 2030 if left unaddressed (Chisholm et al., 2016). Despite these alarming trends, treatment gaps remain pervasive, especially in low- and middle-income countries, where more than 75% of individuals with mental health conditions receive no treatment at all (World Health Organization, 2022).

At the same time, contemporary life has introduced new psychosocial stressors—such as digital overload, job insecurity, and chronic work pressure—that further increase vulnerability to conditions like burnout, anxiety, and depression (Chisholm et al., 2016; Patel et al., 2018). In this evolving landscape, positive mental health has gained relevance not only as an indicator of well-being but also as a protective factor against psychological distress and functional impairment. Empirical evidence suggests that individuals with higher levels of emotional, psychological, and social well-being are less likely to develop mental disorders over

time and recover more quickly from adversity (Huppert & So, 2013; Keyes, 2005). Promoting positive mental health, therefore, is not merely complementary to reducing psychopathology—it is an essential preventive strategy in increasingly demanding social and occupational environments (Huppert & So, 2013; Winzer et al., 2014).

This recognition has challenged the traditional view of mental health as merely the absence of mental illness. Among more comprehensive frameworks, the dual-continuum model proposed by Keyes (2002) has gained substantial empirical and theoretical support. This model conceptualizes mental health as comprising two related but distinct dimensions: the presence of positive mental health (well-being) and the absence of negative mental health (psychological distress or clinical disorders) (Keyes, 2002; Winzer et al., 2014). Positive mental health is characterized by the presence of psychological, emotional, and social well-being (Diener, 1984; Keyes, 2002), and has been associated with greater life satisfaction, stronger interpersonal relationships, and better functional outcomes across multiple domains. Individuals with high levels of positive mental health not only report fewer psychological symptoms but also demonstrate fulfillment in life (Keyes, 2002). Conversely, negative mental health reflects the presence of psychological symptoms such as anxiety, depression, somatization, and interpersonal difficulties, which are often linked to emotional distress, low self-esteem, and social withdrawal (Canavarro, 2007; Nazaré et al., 2017). Importantly, research indicates that the two continua—positive and negative mental health—are only moderately correlated, suggesting that low symptomatology does not necessarily imply well-being, and vice versa (Keyes, 2005). This conceptual shift highlights the need to study the underlying psychological mechanisms that promote symptom reduction and well-being. A deeper understanding of these mechanisms can support earlier risk detection, improve prevention efforts, inform intervention strategies, and ultimately, promote healthier individuals and communities.

This evolving conceptualization of mental health calls for an equivalent evolution in clinical practice, which moves beyond symptom alleviation to actively cultivate psychological well-being by targeting the core mechanisms that sustain or promote mental health. Despite growing recognition of the complexity of mental health, traditional interventions have largely maintained a disorder-specific, symptom-focused orientation. These approaches often rely on diagnostic classification systems such as the DSM or ICD and emphasize the reduction of clinical symptoms as the primary therapeutic goal. While such treatments have shown efficacy, particularly in structured cognitive-behavioral therapies, evidence suggests that many individuals experience only partial improvement, relapse, or chronic residual symptoms

(Kazdin & Rabbitt, 2013). Furthermore, the transdiagnostic nature of many psychological symptoms, such as rumination, emotional avoidance, and self-criticism, challenges the effectiveness of disorder-specific protocols in addressing the shared underlying processes that cut across diagnostic categories (Hofmann & Hayes, 2019; Nolen-Hoeksema & Watkins, 2011). In response to these limitations, the field has shifted toward identifying and targeting the psychological mechanisms that underlie both mental illness and psychological well-being. Rather than focusing narrowly on syndromes or diagnostic thresholds, this emerging perspective emphasizes core psychological processes that operate across contexts and diagnostic boundaries (Hofmann & Hayes, 2019; Insel et al., 2010).

Investigating these processes allows for a more nuanced, dimensional understanding of mental health, aligning with modern dimensional frameworks such as the dual-continuum model (Keyes, 2005), which emphasize the importance of studying core psychological processes over categorical syndromes. Focusing on mechanisms also contributes to the development of more flexible, personalized, and effective clinical interventions, capable of addressing individual differences in how psychological suffering emerges and is maintained. Importantly, this mechanisms-based approach facilitates the study of how and why change occurs, thereby strengthening both clinical application and theoretical advancement. Within this context, emotional schemas, psychological flexibility, and self-compassion have emerged as relevant psychological processes for understanding and addressing mental health outcomes.

Emotional Schemas

Emotions play a central role in human life, influencing overall psychological well-being, with dysregulation contributing to psychiatric disorders and effective regulation being essential for processing experiences, relationships, and stress management (Greenberg, 2008; Sloan, 2006). Although emotions are universal, the way individuals experience and respond to them varies greatly. A significant factor contributing to these individual differences is emotional schemas, which guide how individuals interpret and manage their feelings (Leahy, 2002). Emotional schemas represent a core concept in understanding the intricate relationship between cognition, emotion, and mental health. These are not fleeting feelings but enduring cognitive affective structures—deeply held beliefs, rules, and patterns of thought—that shape how individuals experience, understand, and react to their emotions (Leahy, 2002).

These schemas encompass several dimensions, including beliefs about the nature of emotions (e.g., "Emotions are dangerous," or "Emotions should be controlled"), rules about

expressing emotions (e.g., "It's weak to show sadness," or "I must always be happy"), and appraisals of the self in relation to emotions (e.g., "If I feel anxious, it means I am incompetent") (Leahy, 2002). These beliefs influence how individuals navigate emotional experiences and regulation. Rather than functioning in isolation, they operate as part of a broader system that shapes one's overall emotional functioning. Unlike transient emotional states, emotional schemas are relatively stable and resistant to change, profoundly influencing an individual's emotional landscape (Edwards & Wupperman, 2019; Leahy, 2002).

The concept of schema originates from cognitive theory, which defines it as an internal mental structure that integrates thoughts, emotions, and bodily sensations, providing a framework for interpreting experience and guiding behavioral responses (A. T. Beck et al., 1979). Initially developed to explain cognitive patterns shaped by early life experiences, schemas were conceptualized as latent templates that influence attention, memory, and appraisal processes (Leahy, 2002, 2015, 2019). These mental representations help individuals make sense of their environments, but may also contribute to psychological vulnerability when rigid or maladaptive. While traditional cognitive schemas focus primarily on beliefs about the self, others, and the world, more recent developments have emphasized the need to examine how individuals relate specifically to their emotional experiences. This focus gave rise to the concept of emotional schemas.

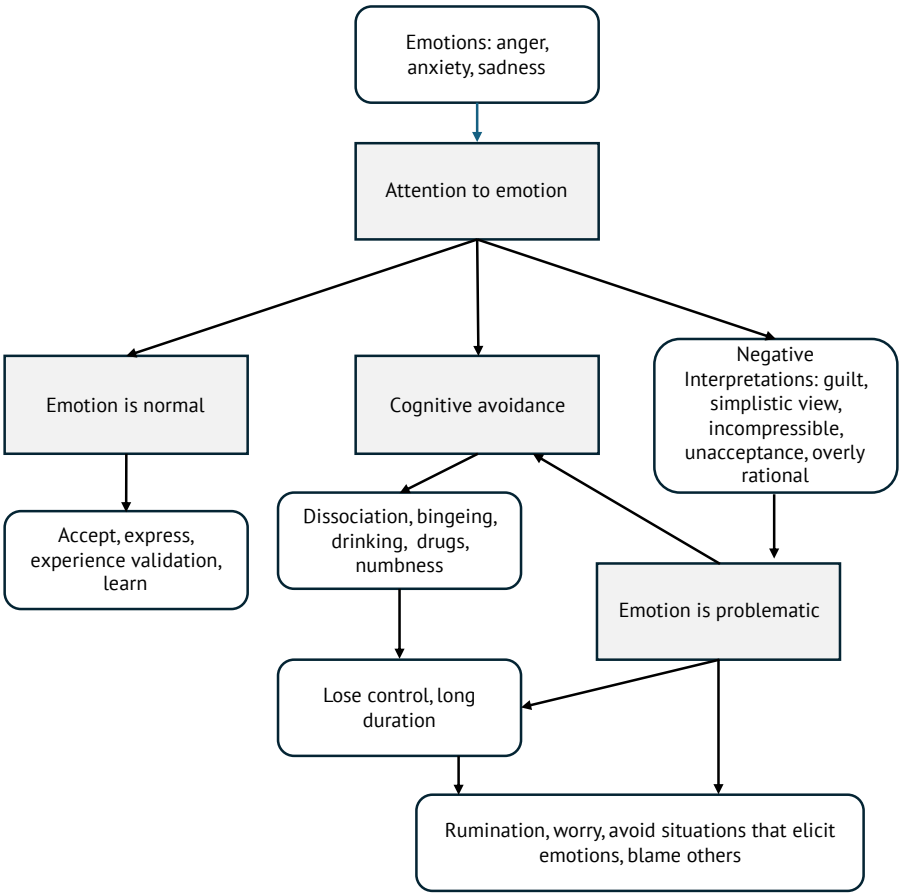
Emotional schemas build upon this foundational concept by focusing on how individuals interpret, appraise, and respond to their emotional experiences. Rather than addressing general cognitive content, emotional schemas concern beliefs about emotions themselves, such as their legitimacy, expression, or controllability (Leahy, 2002). These schemas are shaped by early relational experiences, emotional modeling, and cultural norms and reflect learned associations and regulatory scripts (Edwards & Wupperman, 2019; Gross, 2002). They can also be understood through complementary lenses, including metacognitive theory (how we think about our emotions), meta-emotional theory (how we feel about our feelings), and affective neuroscience (the neural basis of emotional processing and regulation). As mental structures, emotional schemas influence the entire emotion regulation process, from perception and appraisal to expression and behavioral response, contributing to both psychological vulnerability and resilience. This study adopts Leahy's (2002) model of emotional schemas, situated within the broader context of Wells'(2002) metacognitive theory. Leahy emphasizes that individuals often treat their emotions as objects of thought to be judged

or controlled, which may reinforce maladaptive evaluation patterns (Leahy, 2019; Leahy et al., 2019).

Individuals also differ in the specific emotional beliefs they internalize, such as whether emotions should be controlled, avoided, or expressed, which gives rise to varied regulatory patterns and coping strategies (Leahy, 2002, 2019). As mental structures, emotional schemas influence each stage of the emotional process, from awareness and labeling to appraisal and response. For example, someone who views sadness as a sign of weakness may become hypervigilant to signs of vulnerability, suppress emotional expression, or misinterpret their emotional state, leading to ineffective regulation and heightened distress. These interpretive filters shape the perceived meaning and tolerability of affective experiences and may bias individuals toward selective attention to negative emotion or diminished access to positive affect. Such patterns are central to Leahy's model of emotional processing and underscore the importance of addressing emotional schemas in psychological interventions (Figure 2).

Figure 2

The cognitive model of emotions developed by Leahy (2002). Adaptado de Emotional schema therapy de (Leahy, 2015)



Emotional schemas, developed through past emotional and relational experiences, particularly early caregiving, play a central role in shaping both emotional and social functioning (Edwards & Wupperman, 2019; Leahy, 2002). Depending on their content and flexibility, these schemas can range from adaptive to maladaptive (Edwards & Wupperman, 2019). Adaptive schemas promote emotional awareness, openness, and regulatory capacity, whereas maladaptive ones are linked to avoidance, suppression, and distorted interpretations of emotional experiences. These patterns may impair emotional expression and recognition, inhibit positive affect, and contribute to interpersonal difficulties and psychological distress (Edwards & Wupperman, 2019; Leahy, 2002). When emotional experiences are consistently invalidated, neglected, or punished, individuals may come to view certain emotions as threatening, shameful, or socially unacceptable (Greenberg, 2008; Leahy, 2002, 2015). Over time, these interpretations consolidate into stable beliefs that guide future emotional processing. Supporting this view, Riso et al. (2006) found that early maladaptive schemas remained stable over several years, even after controlling for depression severity and neuroticism. Although longitudinal research on emotional schemas is still limited, available evidence suggests they are not fleeting reactions but enduring beliefs that require targeted intervention to change. Understanding this stability is essential for developing interventions that can disrupt entrenched emotional patterns and promote lasting psychological well-being.

The relationship between emotional schemas and psychopathology is extensively studied within the emotional schemas model, with evidence linking emotional schemas to a wide range of mental disorders (Leahy, 2015). According to Leahy's (2012) model, psychological disorders can be understood as maladaptive strategies of emotional regulation, such as rumination, worry, binge eating, suppression, and other forms of experiential avoidance, all driven by dysfunctional responses to emotion. Maladaptive emotional schemas—such as beliefs that emotional expression is dangerous, overwhelming, or socially harmful—have been linked to various forms of psychopathology, including eating, depressive, and anxiety disorders (Brockmeyer et al., 2013; Edwards et al., 2021; Faustino et al., 2020b; Krause et al., 2000). These schemas contribute to heightened psychological distress by reinforcing avoidance, rumination, and impaired emotional regulation (Leahy, 2002). While some maladaptive schemas are common across disorders, others are condition-specific, for instance, viewing intense emotions as dangerous or uncontrollable is linked to generalized anxiety, panic, and posttraumatic stress disorders, while guilt or perceived emotional uncontrollability can hinder emotional acceptance, leading excessive rumination and dysregulation (Leahy, 2002; Naragon-

Gainey, 2010; Olatunji & Wolitzky-Taylor, 2009). The belief that expressing emotions has negative social consequences is observed across multiple disorders, suggesting a common underlying mechanism in various forms of psychopathology (Edwards et al., 2021; Edwards & Wupperman, 2019). Research confirms these associations, showing that emotional schemas are associated with mental health conditions (da Silva et al., 2023; Faustino et al., 2020; Faustino & Vasco, 2020, 2023), such as generalized anxiety disorder (Khaleghi et al., 2017), social anxiety disorder (Morvaridi et al., 2019), bipolar and unipolar disorders (Batmaz et al., 2014; Rahabarian et al., 2016) and depression (Leahy et al., 2019; Rezaei et al., 2016).

Given their broad impact, emotional schemas should be systematically assessed in clinical and research settings, especially within cognitive-behavioral interventions, as they reveal patterns that may prevent therapeutic progress (J. S. Beck, 2021). Unlike traditional cognitive schemas, emotional schemas provide a more nuanced framework for understanding clients' emotional challenges in therapy (da Silva et al., 2023; Leahy, 2002). The transdiagnostic nature of emotional schemas underscores the need for therapeutic interventions targeting these mental structures to enhance emotional regulation and mental health outcomes. Understanding and addressing these schemas offers a valuable framework for enhancing therapeutic effectiveness and promoting long-term psychological well-being (Faustino & Vasco, 2023).

Psychological flexibility

Psychological flexibility has been widely recognized as a core component of mental health, acting as a protective factor against psychological distress and contributing to well-being (Bond et al., 2011; Kashdan & Rottenberg, 2010). It is defined as the ability to remain present, adapt to situational demands, accept internal experiences without avoidance, and take action consistent with personal values, even in the presence of distressing thoughts or emotions (Hayes et al., 2006). Rather than relying on avoidance-based coping or rigid cognitive patterns, psychologically flexible individuals respond to emotional challenges with openness, awareness, and intentionality. Acceptance and Commitment Therapy (ACT) promotes psychological flexibility trough six interrelated processes: acceptance, cognitive defusion, being present, self-as-context, values clarification, and committed action (Hayes et al., 2006, 2011) and has been applied transdiagnostically across a wide range of psychological conditions (Gloster et al., 2020; Hayes, 2016; Hayes et al., 2008; Hayes & Strosahl, 2004). ACT enhances psychological flexibility by training individuals in these six core skills and has demonstrated efficacy in

treating disorders such as anxiety, depression, chronic pain, and stress-related difficulties (A-Tjak et al., 2015; Gloster et al., 2020).

Psychological flexibility is negatively associated with various psychopathological symptoms, including depression, anxiety, and post-traumatic stress disorder (Fonseca et al., 2020; Kashdan & Rottenberg, 2010; Yasinski et al., 2020). For example, individuals with depression often struggle to disengage from negative affect, while those with social or generalized anxiety tend to engage in excessive worry and experiential avoidance. These inflexible patterns limit adaptive functioning and emotional recovery. In contrast, psychological flexibility facilitates resilience, vitality, and a broader repertoire of adaptive responses. Empirical findings reinforce these theoretical claims. Fonseca et al. (2020) showed that psychological flexibility promotes emotional acceptance and constructive coping strategies. Similarly, Yasinski et al. (2020) demonstrated that individuals with higher flexibility exhibit better post-treatment emotion regulation and lower symptom severity. Rather than attempting to suppress or control negative emotions, those with greater psychological flexibility accept their internal experiences and remain engaged in valued life activities. This adaptability promotes mental health across a range of clinical and non-clinical contexts.

Acceptance models focus on fostering a new relationship with emotions, encouraging individuals to experience them without judgment or the need for control (Leahy, 2007). Therapies grounded in experiential principles, such as ACT, emphasize the importance of allowing and accepting emotional experiences while taking action guided by personal values (Fonseca et al., 2020; Gloster et al., 2020). While emotional schemas involve the interpretation, evaluation, and regulation of emotional experiences, psychological flexibility centers on open, non-avoidant engagement with emotions in the service of personal values. This contrast highlights the behavioral and adaptive nature of flexibility, in contrast to the more interpretive and belief-based structure of emotional schemas.

Self-compassion

Another psychological process that has gained substantial empirical and theoretical support for its regulatory role in mental health is self-compassiom (Neff, 2003a).While psychological flexibility emphasizes adaptive behavioral engagement with internal experiences (Hayes et al., 2006; Kashdan & Rottenberg, 2010), self-compassion offers a complementary affective and motivational stance—responding to personal suffering with kindness, acceptance, and emotional balance (Germer & Neff, 2013; Neff, 2003a). Both constructs may contribute to

emotion regulation and psychological well-being, operating through distinct mechanisms: psychological flexibility promotes openness to discomfort in pursuit of personal values, while self-compassion reduces the impact of self-criticism, shame, and emotional avoidance (Barnard & Curry, 2011; Neff, 2003b). Recent findings suggest that these processes may also interact synergistically, fostering well-being and buffering the effects of maladaptive mental structures (Marshall & Brockman, 2016).

Although compassion has long been explored in Western psychology in relation to others, the concept of self-compassion has only recently gained attention, emerging from Buddhist philosophy, which views compassion as encompassing both the self and others (Brach, 2003; Goetz et al., 2010; Neff, 2003b). Self-compassion, as defined by Neff (2003a), involves adopting a kind, accepting, and mindful stance toward oneself in the face of failure, suffering, or perceived inadequacy. Rather than engaging in harsh self-criticism or avoidance, self-compassion enables individuals to treat themselves with kindness and understanding during challenging moments, allowing them to process difficult emotions with understanding, acceptance, and emotional clarity (Neff, 2003a, 2023). Applied to the self, compassion involves being present with one's pain, recognizing it as part of a shared human experience, and offering support through nurturing or protective responses, depending on the context (Neff, 2021, 2023). Self-compassion involves a genuine concern for one's own well-being and motivates constructive efforts to improve one's personal circumstances, rather than fostering passivity (Neff, 2024). Neff conceptualizes self-compassion as a dynamic, multifaceted construct composed of three interrelated components: (1) emotional responses to suffering (self-kindness vs. self-judgment), (2) cognitive understanding of one's experience (common humanity vs. isolation), and (3) attentional focus on distress (mindfulness vs. over-identification) (Neff, 2003a, 2016). These elements function as an integrated system, enabling individuals to relate to their suffering in a balanced and constructive way (Neff, 2023). By reducing emotional reactivity and increasing self-soothing capacities, self-compassion plays a key role in fostering psychological well-being (Neff & Germer, 2017).

According to Neff (2003b), self-compassion is best conceptualized as a mental state response that arises in moments of personal suffering, failure, or perceived inadequacy. Rather than representing a fixed trait, self-compassion fluctuates depending on context and can be actively cultivated. It is considered a dynamic coping strategy that is mobilized in response to stress, promoting adaptive regulation by allowing individuals to acknowledge their pain without over-identifying with it. This conceptualization is supported by empirical research

demonstrating that self-compassion levels can vary across situations and be increased through targeted interventions (Germer & Neff, 2013; Neff, 2023). Neurophysiological studies have shown that activating self-compassion reduces threat-related brain responses and increases affiliative responses, supporting its utility in emotional regulation (Klimecki et al., 2014; Longe et al., 2010). Furthermore, research has linked self-compassion training with improvements in affect regulation, stress recovery, and reductions in anxiety and depression symptoms (Ferrari et al., 2019; Sirois, 2014). This state-like quality of self-compassion means that individuals may vary in how self-compassionate they are across situations, and interventions can enhance its expression by developing the underlying competencies of self-kindness, common humanity, and mindfulness.

Self-compassion has been consistently associated with mental health, demonstrating robust associations with lower levels of psychopathology and higher levels of well-being (Barnard & Curry, 2011; Germer & Neff, 2013; Neff, 2003a; Raes, 2011). Meta-analytic evidence from MacBeth & Gumley (2012) found a strong negative correlation between self-compassion and psychopathology, with higher levels of self-compassion linked to significantly lower depression, anxiety, and psychological distress. These findings are further supported by empirical studies showing associations between self-compassion and reduced anxiety (Hoge et al., 2013; Kaniuka et al., 2020) and depression (Kaniuka et al., 2020; Raes, 2011). Specifically, depression has been associated with elevated self-judgment, isolation, and over-identification, and with lower levels of self-kindness and mindfulness (Barnard & Curry, 2011; Neely et al., 2009). Beyond mitigating psychopathology, self-compassion is positively associated with psychological well-being. A meta-analysis by Zessin et al. (2015) reported moderate positive correlations between self-compassion and subjective well-being indicators such as positive affect and life satisfaction. Supporting studies demonstrate that self-compassion is positively associated with multiple indicators of psychological well-being, such as happiness, optimism, wisdom, curiosity and exploration, personal initiative, and emotional intelligence (Neff, 2023; Neff et al., 2007). Neff (2003b) demonstrated that individuals high in self-compassion report fewer negative cognitive patterns such as self-criticism and rumination, and greater emotional resilience, social connectedness, and emotional intelligence (Heffernan et al., 2010; Hollis-Walker & Colosimo, 2011; Neff et al., 2007). Longitudinal research by Neff et al. (2005) demonstrated associations with increased optimism, curiosity, happiness, and conscientiousness, and decreased emotional dysregulation. Taken together, these findings provide compelling evidence for the clinical relevance of self-compassion as a modifiable,

protective process that fosters emotional resilience, mitigates psychological distress, and enhances subjective well-being.

Emotional Schemas, Psychological Flexibility, and Self-Compassion

While previous research has established a clear association between maladaptive emotional schemas and compromised mental health (Edwards & Wupperman, 2019; Faustino & Vasco, 2023; Leahy et al., 2019), the underlying mechanisms through which this relationship unfolds require further investigation. Maladaptive emotional schemas can limit an individual's capacity for psychological flexibility: For instance, someone who holds the schema that "emotions are a sign of weakness" might develop a strong tendency to avoid or suppress their feelings, directly undermining acceptance, a core component of psychological flexibility (Edwards & Wupperman, 2019). According to Silberstein et al. (2012), adaptive emotional schemas—such as comprehension, acceptance, emotional expression, and value-based beliefs—are positively associated with psychological flexibility, whereas maladaptive schemas, including invalidation, blame, rumination, and simplistic emotional thinking, are linked to reduced flexibility. These findings suggest that emotional schemas help determine whether individuals respond to affective experiences with openness and regulation or avoidance and rigidity. Furthermore, Tirch et al. (2012) highlighted the central role of psychological flexibility in reducing psychological distress associated with maladaptive emotional processing. Rigid emotional beliefs, by limiting openness to internal experiences and constraining value-based action, can impair adaptive functioning, underscoring the importance of targeting psychological flexibility in therapeutic interventions.

In this regard, acceptance and commitment therapy offers a promising clinical approach. A comprehensive meta-analysis by Gloster et al. (2020) confirmed its effectiveness across a broad spectrum of psychological and physical conditions, including anxiety, depression, substance use, chronic pain, and transdiagnostic groups. Notably, this therapy was found to be generally superior to waitlist, placebo, and treatment-as-usual conditions, and comparable in efficacy to other established interventions such as cognitive-behavioral therapy. These findings support acceptance and commitment therapy as a robust, process-based intervention that directly enhances psychological flexibility, making it particularly well-suited for individuals struggling with maladaptive emotional schemas.

Recent research has further elucidated the relationship between emotional schemas and self-compassion, suggesting that beliefs about emotions may shape an individual’s capacity for

self-kindness and emotional acceptance. Faustino et al. (2020) identified a negative correlation between maladaptive emotional schemas and self-compassion, suggesting that individuals with maladaptive emotional schemas, perceiving emotions as dangerous, uncontrollable, or shameful, tend to report lower levels of self-compassion. These beliefs may reinforce self-criticism and emotional avoidance, impairing adaptive regulation and increasing vulnerability to psychological distress. Moreover, the same study demonstrated that self-compassion mediates the relationship between emotional schemas and negative mental health, highlighting its potential role in mitigating the effects of maladaptive emotional patterns on mental health. By fostering a compassionate self-attitude, individuals may be better equipped to navigate emotional experiences without engaging in maladaptive strategies such as rumination or suppression. Self-compassion thus serves as a protective mechanism against the negative impact of rigid and judgmental emotional schemas. This link has practical implications for interventions, as cultivating self-compassion may help reshape dysfunctional beliefs about emotions and enhance emotion regulation (Faustino et al., 2020). These findings further support the notion that self-compassion plays a central role in regulating the influence of emotional schemas on psychological functioning and may serve as a modifiable target for intervention in emotion-focused therapies.

A substantial body of empirical research suggest that clinical interventions grounded in self-compassion demonstrate an effective approach to managing distressing thoughts and emotions, fostering both psychological and physical well-being, reducing internal and external shame, negative social comparison, submissive behavior, depression, and anxiety (Neff, 2003a). These improvements are achieved through the cultivation of self-kindness, emotional acceptance, and perspective-taking, which counteract the rigid and punitive emotional patterns commonly seen in individuals with maladaptive emotional schemas. From this perspective, self-compassion is not only a psychological strength but also a powerful therapeutic tool that enables individuals to respond more adaptively to distressing emotional states (Barnard & Curry, 2011; Germer & Neff, 2013; Neff, 2023; Neff et al., 2005; Neff & Germer, 2017).

In summary, existing literature provides robust evidence for the relevance of emotional schemas in mental health and highlights the critical roles of psychological flexibility and self-compassion in emotion regulation and well-being. However, the specific mediating mechanisms through which these constructs influence the relationship between emotional schemas and mental health, particularly over time, remain insufficiently understood. The present study seeks to address this gap by adopting a longitudinal approach.

Annex B – Informed consent

Time 1

Consentimento Informado

Objetivo do Estudo

A presente investigação encontra-se a ser desenvolvida por Rita Sebastião (aluna do programa doutoral de Psicologia) e Vasco Costa (aluno do mestrado em Psicologia) no ISPA - Instituto Universitário de Ciências Psicológicas, Sociais e da Vida, e tem o apoio da Fundação para a Ciência e Tecnologia (2021.09423.BD). A investigação é da responsabilidade de Rita Sebastião, sob supervisão do Professor Doutor David Neto. O nosso estudo visa compreender o impacto que algumas experiências relacionadas à pandemia e características pessoais têm no bem-estar e ajustamento. Numa primeira fase, solicitamos que preencha uma série de questionários online. Posteriormente, gostaríamos de voltar a contar com a sua participação para um breve seguimento (opcional).

Condições do Estudo

A sua participação, que será muito valorizada, consiste no preenchimento de um questionário, que lhe tomará no máximo 20 minutos.

Participação Voluntária

A participação no presente estudo é estritamente voluntária, ou seja, poderá escolher participar ou não. Caso decida participar, poderá interromper ou desistir a qualquer momento, sem qualquer prejuízo.

Riscos e Benefícios

Não existem riscos significativos expectáveis associados à sua participação no estudo.

As suas respostas contribuirão para o desenvolvimento do conhecimento na presente área e, ainda, poderá beneficiar de um dos 3 vouchers Sonae (20€ cada) que serão sorteados para quem preencha de forma completa e válida o questionário e partilhe o seu e-mail, na etapa seguinte.

Confidencialidade, Privacidade e Anonimato

Os dados destinam-se apenas ao tratamento estatístico e nenhuma resposta será analisada ou reportada individualmente. É garantida a confidencialidade de todos os dados recolhidos. E serão utilizados exclusivamente para fins de investigação científica.

Caso tenha alguma questão, acerca da sua participação no estudo, sinta-se à vontade para a esclarecer, contactando através do seguinte e-mail: rsebastiao@ispa.pt

Time 2

Consentimento Informado

Objetivo do Estudo

A presente investigação encontra-se a ser desenvolvida por Rita Sebastião (aluna do programa doutoral de Psicologia do ISPA - Instituto Universitário de Ciências Psicológicas, Sociais e da Vida), e tem o apoio da Fundação para a Ciência e Tecnologia (2021.09423.BD). A investigação é da responsabilidade de Rita Sebastião, sob supervisão do Professor Doutor David Neto. Após ter concluído a primeira parte da nossa investigação, neste seguimento, procuramos compreender o efeito, ao longo do tempo, de experiências relacionadas à pandemia e características pessoais no bem-estar e ajustamento. Solicitamos que preencha os questionários online apresentados.

Condições do Estudo

A sua participação, que será muito valorizada, consiste no preenchimento de um questionário, que lhe tomará no máximo 15 minutos.

Participação Voluntária

A participação no presente estudo é estritamente voluntária, ou seja, poderá escolher participar ou não. Caso decida participar, poderá interromper ou desistir a qualquer momento, sem qualquer prejuízo.

Riscos e Benefícios

Não existem riscos significativos expectáveis associados à sua participação no estudo.

As suas respostas contribuirão para o desenvolvimento do conhecimento na presente área e, ainda, poderá beneficiar de um dos 5 vouchers Sonae (20€ cada) que serão sorteados para quem preencha de forma completa e válida o questionário.

Confidencialidade, Privacidade e Anonimato

Os dados destinam-se apenas ao tratamento estatístico e nenhuma resposta será analisada ou reportada individualmente. É garantida a confidencialidade de todos os dados recolhidos. E serão utilizados exclusivamente para fins de investigação científica.

Caso tenha alguma questão, acerca da sua participação no estudo, sinta-se à vontade para a esclarecer, contactando através do seguinte e-mail: rsebastiao@ispa.pt

Annex C – Sociodemographic questionnaire

Questionário Sociodemográfico

1. Sexo (assinale com um x a opção que lhe corresponde)

Masculino	
Feminino	
Outro	

2. Idade:_____anos

3. Escolaridade (assinale com um x a opção que lhe corresponde)

4 anos ou menos anos	
6 anos	
9 anos	
12 anos	
Licenciatura/Bacharelato	
Mestrado	
Doutoramento ou superior	

4. Estatuto professional (assinale com um x todas as opções que lhe correspondem)

A trabalhar a tempo inteiro	
A trabalhar a tempo parcial	
Desempregado	
Estudante	
Reformado/pensionista	

5. Estado Civil (assinale com um x a opção que lhe corresponde)

Solteiro	
Casado/ União de facto	
Divorciado/ Separado	
Viúvo	

Annex D - Gender differences in mental health and psychological symptomatology

SPSS Outputs - Results of independent samples t-tests comparing male and female participants on positive mental health and negative mental health at T2

	Sexo	N	Mean	Std. Deviation	Std. Error Mean
MHCSF_Total_T2_2	Masculino	90	57.3556	13.82337	1.45711
	Feminino	212	57.7547	14.51348	.99679
BSI_Total_T2	Masculino	90	14.3556	12.79862	1.34909
	Feminino	212	18.5613	15.09750	1.03690

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means							
						Significance		Mean	Std. Error	95% Confidence Interval of the Difference	
		F	Sig.	t	df	One-Sided p	Two-Sided p	Difference	Difference	Lower	Upper
MHCSF_Total_T2_2	Equal variances assumed	.403	.526	-.222	300	.412	.825	-.39916	1.80062	-3.94260	3.14428
	Equal variances not assumed			-.226	175.572	.411	.821	-.39916	1.76544	-3.88337	3.08505
BSI_Total_T2	Equal variances assumed	3.337	.069	-2.313	300	.011	.021	-4.20577	1.81842	-7.78423	-.62730
	Equal variances not assumed			-2.472	196.312	.007	.014	-4.20577	1.70153	-7.56140	-.85013

Independent Samples Effect Sizes

		Standardizer[a]	Point Estimate	95% Confidence Interval Lower	Upper
MHCSF_Total_T2_2	Cohen's d	14.31222	-.028	-.274	.219
	Hedges' correction	14.34812	-.028	-.274	.218
	Glass's delta	14.51348	-.028	-.274	.219
BSI_Total_T2	Cohen's d	14.45370	-.291	-.538	-.043
	Hedges' correction	14.48996	-.290	-.537	-.043
	Glass's delta	15.09750	-.279	-.526	-.030

a. The denominator used in estimating the effect sizes.
Cohen's d uses the pooled standard deviation.
Hedges' correction uses the pooled standard deviation, plus a correction factor.
Glass's delta uses the sample standard deviation of the control (i.e., the second) group.

SPSS Outputs - Results of independent samples t-tests comparing male and female participants on positive mental health and negative mental health at T1

Group Statistics

	Sexo	N	Mean	Std. Deviation	Std. Error Mean
MHCSFTot	Masculino	90	56.5778	13.84422	1.45931
	Feminino	212	58.4434	14.00175	.96164
BSITotal	Masculino	90	14.5000	13.31996	1.40405
	Feminino	212	19.2689	14.97861	1.02873

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means							
						Significance		Mean	Std. Error	95% Confidence Interval of the Difference	
		F	Sig.	t	df	One-Sided p	Two-Sided p	Difference	Difference	Lower	Upper
MHCSFTot	Equal variances assumed	.003	.959	-1.063	300	.144	.289	-1.86562	1.75570	-5.32067	1.58943
	Equal variances not assumed			-1.067	169.589	.144	.287	-1.86562	1.74767	-5.31560	1.58437
BSITotal	Equal variances assumed	2.202	.139	-2.613	300	.005	.009	-4.76887	1.82504	-8.36037	-1.17737
	Equal variances not assumed			-2.740	187.423	.003	.007	-4.76887	1.74059	-8.20253	-1.33521

Independent Samples Effect Sizes

		Standardizer[a]	Point Estimate	95% Confidence Interval Lower	Upper
MHCSFTot	Cohen's d	13.95520	-.134	-.380	.113
	Hedges' correction	13.99021	-.133	-.379	.113
	Glass's delta	14.00175	-.133	-.380	.114
BSITotal	Cohen's d	14.50634	-.329	-.576	-.080
	Hedges' correction	14.54273	-.328	-.575	-.080
	Glass's delta	14.97861	-.318	-.566	-.070

a. The denominator used in estimating the effect sizes.
Cohen's d uses the pooled standard deviation.
Hedges' correction uses the pooled standard deviation, plus a correction factor.
Glass's delta uses the sample standard deviation of the control (i.e., the second) group.

Annex E – Results of Pearson correlation coefficients between age, positive mental health and negative mental health at T2

Correlations

		Idade (anos)	MHCSF_Total_T2_2	BSI_Total_T2
Idade (anos)	Pearson Correlation	1	.145*	-.214**
	Sig. (2-tailed)		.012	<.001
	Sum of Squares and Cross-products	101784.772	11484.659	-17515.195
	Covariance	338.155	38.155	-58.190
	N	302	302	302
MHCSF_Total_T2_2	Pearson Correlation	.145*	1	-.577**
	Sig. (2-tailed)	.012		<.001
	Sum of Squares and Cross-products	11484.659	62066.851	-36795.406
	Covariance	38.155	205.519	-121.839
	N	302	303	303
BSI_Total_T2	Pearson Correlation	-.214**	-.577**	1
	Sig. (2-tailed)	<.001	<.001	
	Sum of Squares and Cross-products	-17515.195	-36795.406	65606.957
	Covariance	-58.190	-121.839	217.242
	N	302	303	303

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Annex F – JASP output: R-squared results

	R^2
BSI_Total_T2	0.695
MHCSF_Total_T2_2	0.637
SCS_Total_T2	0.577
COMPACT_TOTAL_T2_2	0.482
QEE_NEE_T1	0.465
QEE_DR_T1	0.236
QEE_DNE_T1	0.119
QEE_NBR_T1	0.063
QEE_SVE_T1	0.049

Annex G – JASP Output: Direct effects

Direct effects

			Estimate	Std. Error	z-value	p	95% Confidence Interval Lower	95% Confidence Interval Upper
QEE_NEE_T1	→	BSI_Total_T2	−0.084	0.059	−1.417	0.157	−0.202	0.030
QEE_DR_T1	→	BSI_Total_T2	0.041	0.042	0.995	0.320	−0.046	0.132
QEE_DNE_T1	→	BSI_Total_T2	0.021	0.037	0.550	0.582	−0.046	0.089
QEE_NBR_T1	→	BSI_Total_T2	−0.016	0.039	−0.399	0.690	−0.092	0.061
QEE_SVE_T1	→	BSI_Total_T2	0.002	0.036	0.053	0.958	−0.073	0.084
QEE_NEE_T1	→	MHCSF_Total_T2_2	0.170	0.064	2.636	0.008	0.028	0.316
QEE_DR_T1	→	MHCSF_Total_T2_2	−0.044	0.045	−0.962	0.336	−0.141	0.052
QEE_DNE_T1	→	MHCSF_Total_T2_2	0.006	0.041	0.147	0.883	−0.079	0.087
QEE_NBR_T1	→	MHCSF_Total_T2_2	−0.118	0.042	−2.768	0.006	−0.214	−0.022
QEE_SVE_T1	→	MHCSF_Total_T2_2	0.013	0.040	0.334	0.738	−0.067	0.089

Note. Delta method standard errors, bias-corrected percentile bootstrap confidence intervals, ML estimator.

Annex H – JASP Output: Indirect effects

Indirect effects

					Estimate	Std. Error	z-value	p	95% Confidence Interval Lower	95% Confidence Interval Upper
QEE_NEE_T1	→	SCS_Total_T2	→	BSI_Total_T2	0.101	0.027	3.741	< .001	0.053	0.169
QEE_NEE_T1	→	COMPACT_TOTAL_T2_2	→	BSI_Total_T2	0.097	0.025	3.835	< .001	0.054	0.157
QEE_DR_T1	→	SCS_Total_T2	→	BSI_Total_T2	0.036	0.014	2.635	0.008	0.012	0.076
QEE_DR_T1	→	COMPACT_TOTAL_T2_2	→	BSI_Total_T2	−0.018	0.013	−1.396	0.163	−0.051	0.010
QEE_DNE_T1	→	SCS_Total_T2	→	BSI_Total_T2	0.007	0.010	0.670	0.503	−0.011	0.030
QEE_DNE_T1	→	COMPACT_TOTAL_T2_2	→	BSI_Total_T2	−0.007	0.011	−0.646	0.519	−0.032	0.015
QEE_NBR_T1	→	SCS_Total_T2	→	BSI_Total_T2	−0.006	0.011	−0.592	0.554	−0.031	0.012
QEE_NBR_T1	→	COMPACT_TOTAL_T2_2	→	BSI_Total_T2	0.016	0.012	1.314	0.189	−0.006	0.048
QEE_SVE_T1	→	SCS_Total_T2	→	BSI_Total_T2	−0.012	0.010	−1.174	0.240	−0.036	0.009
QEE_SVE_T1	→	COMPACT_TOTAL_T2_2	→	BSI_Total_T2	−0.029	0.012	−2.309	0.021	−0.059	−0.008
QEE_NEE_T1	→	SCS_Total_T2	→	MHCSF_Total_T2_2	−0.104	0.029	−3.543	< .001	−0.178	−0.047
QEE_NEE_T1	→	COMPACT_TOTAL_T2_2	→	MHCSF_Total_T2_2	−0.069	0.024	−2.892	0.004	−0.136	−0.022
QEE_DR_T1	→	SCS_Total_T2	→	MHCSF_Total_T2_2	−0.037	0.014	−2.573	0.010	−0.074	−0.013
QEE_DR_T1	→	COMPACT_TOTAL_T2_2	→	MHCSF_Total_T2_2	0.013	0.010	1.331	0.183	−0.005	0.043
QEE_DNE_T1	→	SCS_Total_T2	→	MHCSF_Total_T2_2	−0.007	0.011	−0.667	0.505	−0.031	0.011
QEE_DNE_T1	→	COMPACT_TOTAL_T2_2	→	MHCSF_Total_T2_2	0.005	0.008	0.639	0.523	−0.009	0.027
QEE_NBR_T1	→	SCS_Total_T2	→	MHCSF_Total_T2_2	0.006	0.011	0.592	0.554	−0.013	0.031
QEE_NBR_T1	→	COMPACT_TOTAL_T2_2	→	MHCSF_Total_T2_2	−0.012	0.009	−1.259	0.208	−0.037	0.004
QEE_SVE_T1	→	SCS_Total_T2	→	MHCSF_Total_T2_2	0.012	0.010	1.162	0.245	−0.009	0.042
QEE_SVE_T1	→	COMPACT_TOTAL_T2_2	→	MHCSF_Total_T2_2	0.021	0.010	2.045	0.041	0.005	0.049

Note. Delta method standard errors, bias-corrected percentile bootstrap confidence intervals, ML estimator.

Annex I – JASP Output: Path Coefficients

							95% Confidence Interval	
			Estimate	Std. Error	z-value	p	Lower	Upper
SCS_Total_T2	→	BSI_Total_T2	−0.228	0.052	−4.420	< .001	−0.341	−0.126
COMPACT_TOTAL_T2_2	→	BSI_Total_T2	−0.235	0.047	−5.041	< .001	−0.342	−0.138
QEE_NEE_T1	→	BSI_Total_T2	−0.084	0.059	−1.417	0.157	−0.202	0.030
QEE_DR_T1	→	BSI_Total_T2	0.041	0.042	0.995	0.320	−0.046	0.132
QEE_DNE_T1	→	BSI_Total_T2	0.021	0.037	0.550	0.582	−0.046	0.089
QEE_NBR_T1	→	BSI_Total_T2	−0.016	0.039	−0.399	0.690	−0.092	0.061
QEE_SVE_T1	→	BSI_Total_T2	0.002	0.036	0.053	0.958	−0.073	0.084
SCS_Total_T2	→	MHCSF_Total_T2_2	0.234	0.057	4.101	< .001	0.113	0.359
COMPACT_TOTAL_T2_2	→	MHCSF_Total_T2_2	0.169	0.051	3.317	< .001	0.055	0.281
QEE_NEE_T1	→	MHCSF_Total_T2_2	0.170	0.064	2.636	0.008	0.028	0.316
QEE_DR_T1	→	MHCSF_Total_T2_2	−0.044	0.045	−0.962	0.336	−0.141	0.052
QEE_DNE_T1	→	MHCSF_Total_T2_2	0.006	0.041	0.147	0.883	−0.079	0.087
QEE_NBR_T1	→	MHCSF_Total_T2_2	−0.118	0.042	−2.768	0.006	−0.214	−0.022
QEE_SVE_T1	→	MHCSF_Total_T2_2	0.013	0.040	0.334	0.738	−0.067	0.089
QEE_NEE_T1	→	SCS_Total_T2	−0.445	0.063	−7.045	< .001	−0.570	−0.322
QEE_DR_T1	→	SCS_Total_T2	−0.156	0.048	−3.277	0.001	−0.251	−0.061
QEE_DNE_T1	→	SCS_Total_T2	−0.030	0.044	−0.678	0.498	−0.113	0.052
QEE_NBR_T1	→	SCS_Total_T2	0.027	0.046	0.598	0.550	−0.059	0.112
QEE_SVE_T1	→	SCS_Total_T2	0.052	0.043	1.218	0.223	−0.043	0.149
QEE_NEE_T1	→	COMPACT_TOTAL_T2_2	−0.412	0.070	−5.908	< .001	−0.543	−0.273
QEE_DR_T1	→	COMPACT_TOTAL_T2_2	0.076	0.053	1.453	0.146	−0.048	0.201
QEE_DNE_T1	→	COMPACT_TOTAL_T2_2	0.032	0.049	0.651	0.515	−0.067	0.123
QEE_NBR_T1	→	COMPACT_TOTAL_T2_2	−0.069	0.051	−1.361	0.173	−0.172	0.037
QEE_SVE_T1	→	COMPACT_TOTAL_T2_2	0.122	0.047	2.597	0.009	0.029	0.216
SexoDummy	→	QEE_NEE_T1	−0.174	0.095	−1.837	0.066	−0.371	0.013
Idade	→	QEE_NEE_T1	−0.004	0.002	−1.585	0.113	−0.008	6.657×10^{-4}
BSITotal	→	QEE_NEE_T1	0.037	0.003	10.778	< .001	0.030	0.045
MHCSFTot	→	QEE_NEE_T1	−0.014	0.004	−3.842	< .001	−0.022	−0.005
SexoDummy	→	QEE_DR_T1	−0.203	0.113	−1.791	0.073	−0.429	0.028
Idade	→	QEE_DR_T1	−0.007	0.003	−2.370	0.018	−0.012	−0.002
BSITotal	→	QEE_DR_T1	−0.003	0.004	−0.609	0.542	−0.011	0.006
MHCSFTot	→	QEE_DR_T1	−0.032	0.004	−7.565	< .001	−0.041	−0.024
SexoDummy	→	QEE_DNE_T1	−0.201	0.122	−1.652	0.098	−0.427	0.030
Idade	→	QEE_DNE_T1	0.013	0.003	4.150	< .001	0.007	0.019
BSITotal	→	QEE_DNE_T1	0.020	0.004	4.511	< .001	0.011	0.029
MHCSFTot	→	QEE_DNE_T1	−0.001	0.005	−0.266	0.790	−0.011	0.009
SexoDummy	→	QEE_NBR_T1	−0.279	0.126	−2.223	0.026	−0.541	−0.027
Idade	→	QEE_NBR_T1	0.003	0.003	0.953	0.340	−0.003	0.009
BSITotal	→	QEE_NBR_T1	0.014	0.005	3.044	0.002	0.005	0.023
MHCSFTot	→	QEE_NBR_T1	−0.004	0.005	−0.746	0.456	−0.015	0.007
SexoDummy	→	QEE_SVE_T1	−0.128	0.127	−1.010	0.313	−0.378	0.122
Idade	→	QEE_SVE_T1	−0.004	0.003	−1.370	0.171	−0.010	0.002
BSITotal	→	QEE_SVE_T1	0.016	0.005	3.366	< .001	0.008	0.024
MHCSFTot	→	QEE_SVE_T1	0.013	0.005	2.800	0.005	0.003	0.023
SexoDummy	→	SCS_Total_T2	−0.017	0.087	−0.193	0.847	−0.194	0.169
Idade	→	SCS_Total_T2	0.005	0.002	2.060	0.039	2.874×10^{-4}	0.009
BSITotal	→	SCS_Total_T2	−0.007	0.004	−1.899	0.058	−0.014	1.244×10^{-4}
MHCSFTot	→	SCS_Total_T2	0.016	0.004	4.537	< .001	0.008	0.025
SexoDummy	→	COMPACT_TOTAL_T2_2	−0.033	0.095	−0.345	0.730	−0.228	0.179
Idade	→	COMPACT_TOTAL_T2_2	0.003	0.003	1.368	0.171	−0.001	0.008
BSITotal	→	COMPACT_TOTAL_T2_2	−0.015	0.004	−3.697	< .001	−0.024	−0.006
MHCSFTot	→	COMPACT_TOTAL_T2_2	0.013	0.004	3.279	0.001	0.004	0.022
SexoDummy	→	BSI_Total_T2	0.079	0.073	1.081	0.280	−0.060	0.216
Idade	→	BSI_Total_T2	0.002	0.002	0.825	0.410	−0.002	0.006
BSITotal	→	BSI_Total_T2	0.041	0.003	12.790	< .001	0.033	0.048
MHCSFTot	→	BSI_Total_T2	0.004	0.003	1.334	0.182	−0.003	0.012
SexoDummy	→	MHCSF_Total_T2_2	−0.057	0.080	−0.718	0.473	−0.220	0.103
Idade	→	MHCSF_Total_T2_2	−0.003	0.002	−1.517	0.129	−0.007	7.965×10^{-4}
BSITotal	→	MHCSF_Total_T2_2	−0.004	0.003	−1.104	0.269	−0.012	0.004
MHCSFTot	→	MHCSF_Total_T2_2	0.040	0.003	11.631	< .001	0.032	0.048

Note. Delta method standard errors, bias-corrected percentile bootstrap confidence intervals, ML estimator.