PERFORMANCE IN THE FACE OF INTERNAL EVENTS.

RELATIONSHIP BETWEEN PSYCHOLOGICAL FLEXIBILITY AND INDIVIDUAL WORK PERFORMANCE.

OLEKSANDRA ZABOLOTNA

Orientador de Dissertação:

PROFESSOR DOUTOR LUÍS ANDRADE

Coordenador de Seminário de Dissertação:

PROFESSOR DOUTOR LUÍS ANDRADE

Tese submetida como requisito parcial para a obtenção do grau de:

MESTRE EM PSICOLOGIA
Especialidade em Psicologia Social e das Organizações

2019

Dissertação de Mestrado realizada sob a orientação do Professor Doutor Luís Andrade, apresentada no ISPA– Instituto Universitário – Ciências Psicológicas, Sociais e da Vida, para obtenção de grau de Mestre na especialidade de Psicologia Social e das Organizações.

AKNOWLEDGEMENTS

When meditating on the past 5 years, marked as getting a degree in Organizational Psychology, simple – is not the word that comes to mind. After all, it involved two countries, two universities, three languages, uncounted number of flights, lots of paperwork and one marriage to come to this significant point in time. In the very first place my thanks go out to my God, Who made it all possible and through Whom all things work out for my good.

I am thankful to Universytet Opolski where it all had started, for the life changing experience of Erasmus+, where I have first fallen in love with Portugal. Small things in life have led to great results.

To ISPA - *Instituto Universitário – Ciências Psicológicas, Sociais e da Vida* I am thankful for the opportunities given to me; first of all in Erasmus program and then in accepting me as the student of ISPA. My experience is forever marked with positive feelings and understanding of the profound knowledge gained here. To all the teaching staff who influenced my life and shared their knowledge and experience in the area of Organizational Psychology, thank you.

My gratitude is extended to my professor and advisor Dr. Luís Andrade, whose guidance and support have been of great importance in conducting this research and the process of writing this thesis. I appreciate your knowledge, advice and encourage during this time. I am also thankful for your attitude of welcome and acceptance, for not differentiating me among other students, and for your faith in me, regardless of cultural and language differences.

I would like to thank my colleague, with whom we waded through this stage – Monica – thank you for your encouragement, help, support and friendship.

To my husband and my family – a great thank you for your love, patience and understanding, for your unquestionable support and assistance. I would not have done this without you.

To all my friends, who have been there for me.

…we are not looking for the easy ways…

ABSTRACT

The goal of the study was to investigate the relationship between Psychological Flexibility and Individual Work Performance that has not been studied previously and, thus, to try and add to the growing body of knowledge in the area of Organizational Psychology. The level of Psychological Flexibility of individuals was measured using the Work-related Acceptance and Action questionnaire *(WAAQ)* developed by Bond, Lloyd and Guenole (2013) and Individual Work Performance Scale *(IWPQ)* developed by Koopmans et al., (2014) was used to assess the levels of Contextual and Task performance, and Counterproductive Work behavior of participants. It has been our goal to verify whether executing management position at work has a moderating effect on the abovementioned relationship.

One hundred and three (N=103) individuals agreed to voluntarily participate in this study, from which 46,6% (n=48) were male and 53,4% (n=55) were female. The sample showed to be international, with participants from 16 different countries. In terms of age, the sample ranged from 20 to 67 years old, where majority of participants fell between 20 to 30 years old, making 45.6% of the total. The 28,2% (n=29) of respondents declared to execute a management function at their workplace.

The first hypothesis has been confirmed, showing that Psychological Flexibility is strongly and positively correlated with such dimensions of Individual Work Performance as Contextual and Task Performance, and negatively correlated with Counterproductive work behavior. The second hypothesis has not been confirmed and executing management position at work had no moderating effect on the abovementioned relationship.

Keywords: *Psychological Flexibility, Individual Work Performance, management position*.

TABLE OF CONTENTS

INDEX OF TABLES

INDEX OF FIGURES

INTRODUCTION

Organizations are composed of individuals and only reach their objectives if each employee is investing in the overall performance of the company. Performance of each individual is influenced by various factors. Internal events, such as positive or negative moods and emotions may impact one's effectiveness and ability to make sound judgments (George, 2000). Various psychological models research and propose instruments that an individual can utilize to be able to manage a set of circumstances in which he is found and have control over own behavior, thoughts and emotions (Block and Block, 2014; Newman and Lorenz, 2003; Salovey and Mayer, 1990; Scheier and Carver, 1988, etc.). Inability to do so may result not only in reduced levels of performance, but also in a decrease of one's psychological health.

Psychological ill-being of an employee that is often manifested through depression, fatigue and anxiety promotes cognitive deficit and impairs one's motivation and ability to perform (Ford, Cerasoli, Higgins, and Decesare, 2011). Unfavorable experiences that go along with these manifestations may cause rumination, stress, negative thoughts, significant decrease of effectiveness, attempts to regulate one's emotions and, consequently, deprive cognitive abilities of an individual (Beal, Weiss, Barros, and MacDermid, 2005; Gross & Muñoz, 1995; Noelen-Hoeksema, Wisco, & Lyubomirsky, 2008). For instance, Bond and Bunce's research results have pointed out that individuals who are suppressing or avoiding difficult private events are more likely to have lower levels of mental health and productivity (Bond and Bounce, 2003). In their meta-analysis Ford et al., (2011) have substantiated that psychological well-being correlates with job performance, and more strongly with task performance than contextual performance.

Emotions are greatly involved in cognitive processes of an individual and his behavior. Moods are generally defined as feeling states of extensive duration but lower intensity; whereas feelings, are fast passing, high-potency states that were activated by a specific trigger (George, 2000; Salovey & Mayer, 1990). Both affect us daily. Several studies have demonstrated positive and negative influence of feelings, moods and emotions on effectiveness of leaders. Owing to negative emotions leaders may process information more thoroughly (Sinclair & Mark, 1992) and better mobilize their attentive resources (Frijda, 1988), where positive emotions may increase creativity, self-confidence and promote socialization in the workplace (George, 2000). At the same time negative internal events create opposite effects on leadership performance.

Bond, Flaxman and Bunce (2008) argue that psychological acceptance (also known as flexibility), that represents one's willingness to encounter private events, such as feelings, emotions, thoughts or memories, without the need to avoid or suppress them, is an individual characteristic that can predict stress and promote work-related health. Furthermore, Psychological Flexibility enables people to address such internal events with the help of mindfulness, observing them in a non-judgmental manner, which in turn promotes mental health (Bond, Lloyd, and Guenole, 2013) and performance (Bond and Bunce, 2003).

The relative newness of Psychological Flexibility at work and its effect on employee and leader performance became the driving force in creation of this study. The goal of this research is to verify whether Psychological Flexibility correlates with Individual Work Performance and, if so, whether there is a moderating effect of executing a management position on this relationship.

LITERATURE REVIEW

Psychological Flexibility

Definition and Context

Psychological Flexibility as a concept emanated in the area of clinical psychology as one of the components of psychological health, and exists inside the Acceptance and Commitment Therapy (ACT) proposed by Hayes, Strosahl and Wilson (1999).

Being psychologically flexible portends the ability of an individual to focus on being present in the given moment, and based on the opportunities and resources available, act towards achieving one's goals and values despite the difficult or unwanted private events (Bond, Flaxman, & Bunce, 2008). This high-level construct greatly depends on the context in which the individual is found. Based on the interactions between the psychological content, the present moment, and the value-based contingencies, the psychologically healthy response allows an individual to persist in or alter his behavior in order to achieve his goals (Bond, Hayes, and Barnes-Holmes, 2006). Psychological inflexibility, on the other hand, would manifest in strong dominance of psychological reactions over set goals and values (Bond et al., 2011).

Acceptance and Commitment Therapy (ACT) is a relatively new approach to contextual cognitive behavior therapy, that was designed with the goal to positively influence mental health and effectiveness of behavior of individuals through enhancement of their Psychological Flexibility (Bond, Lloyd, Flaxman, & Archer, 2016). ACT is set to improve one's ability to predict and control internal psychological events in order to achieve defined goals and values (Hayes et al., 2006).

ACT model of behavioral change

According to Hayes et al., (2006) Acceptance and Commitment Therapy consists of the six main processes that create Psychological Flexibility:

1) *Acceptance*. Acceptance is presented as a substitute to experiential avoidance. Instead of running away from unpleasant internal events, an individual is presented with a chance to accept and be actively aware of those experiences, thus discontinuing their harmful suppression

and its destructive effects. Acceptance means using one's limited resources on completing the goal-oriented task by being present in the given moment, instead of spending these resources on avoidance or control of internal events.

2) *Cognitive Defusion*. Authors state that "ACT attempts to change the way one interacts with or relates to thoughts by creating contexts in which their unhelpful functions are diminished". Defusion leads to the decrease of ligature with the unpleasant internal experience, which in turn, lowers the desire to avoid it.

3) *Contact with the present moment.* Instead of avoiding the unwanted experiences, an individual is invited to be present in their context, be more flexible and act accordingly to the situation and their goals and values. By using the right language, events, experiences and feelings are described rather than judged. Being present means changing one's focus to the events happening at this very time and getting in touch with the stimuli surrounding these events (Fletcher & Hayes, 2005).

4) *Self as a Context* is a process that allows an individual to find meaning of self outside the literal context of words (Hayes & Batten, 2000), a stable fact that will not change no matter the experiences and psychological events that this individual is experiencing. As a result, the person is able to accept and cognitively defuse the situation and understand that "self" is different from private events. This is achieved through the use of metaphors, mindfulness and experiential exercises.

5) *Values*. The abovementioned processes are serving the objective of bringing the individual on the path of effectuating their personal goals and values. An individual is invited to select values and areas of most importance according to his life's directions, and using the Committed Action process work towards attaining them.

6) *Committed Action*. After the identification of values, the individual is asked to set attainable behavior-specific goals and commit to achieving short, mid and long-term milestones.

All six processes overlay, are interconnected and have the promotion and development of Psychological Flexibility as their goal. The first 4 stages are Mindfulness and Acceptance processes, the latter are Commitment and Behavior Change process (Figure 1).

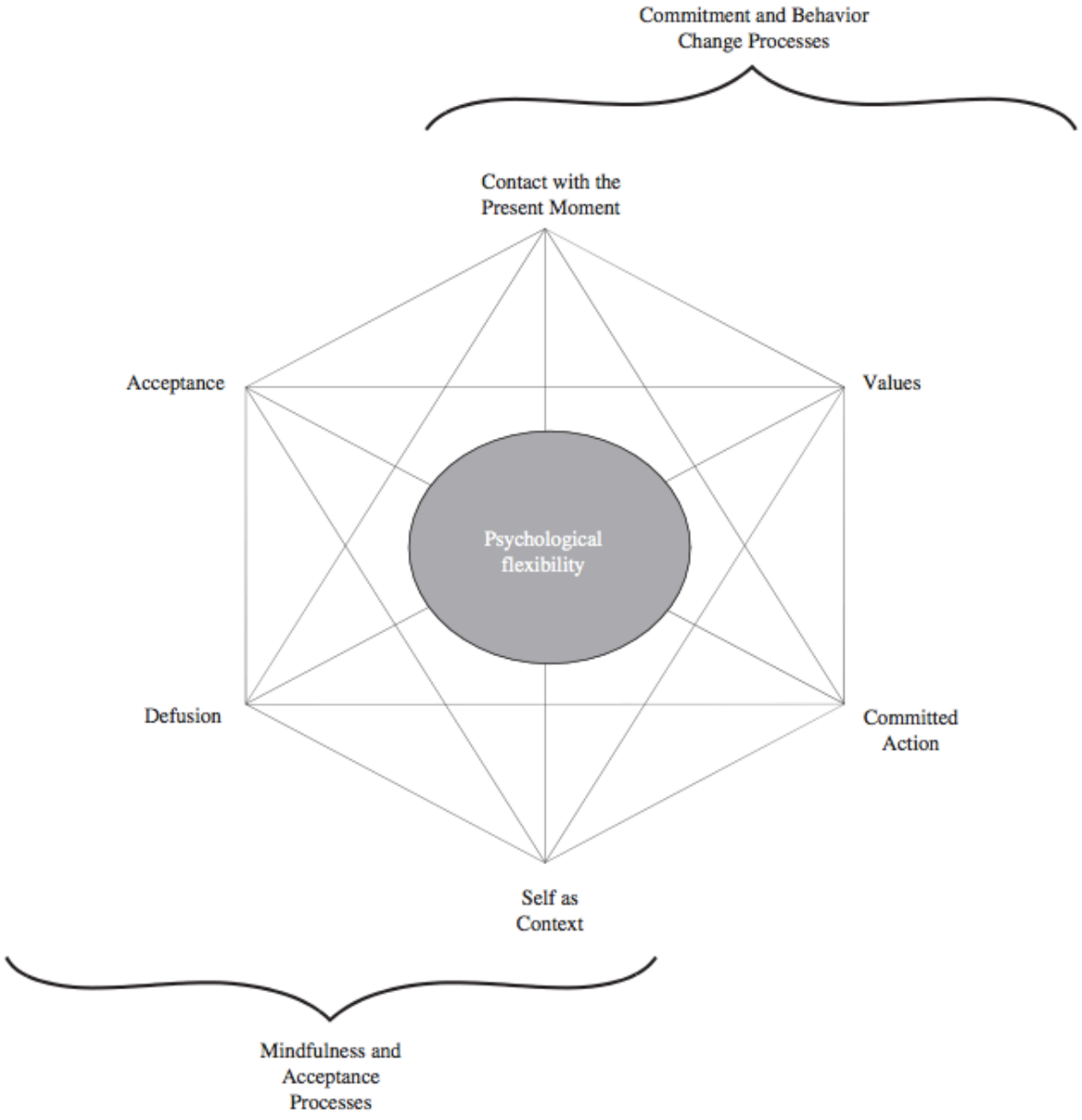


Figure 1 - *Six Core Processes of Acceptance and Commitment Therapy (Hayes et al., 2006).*

Mindfulness

Being one of the components of Psychological Flexibility, Mindfulness is an important concept to understand. Mindfulness has been defined as "a state of being attentive and aware of what is taking place in the present" (Brown & Ryan, 2003). Awareness of the present situation or environment is a behavior that conforms to standards of normal functioning, nonetheless,

scientists agree that individuals differ in their disposition and willingness to be attentive and aware, and that this ability can vary depending on a number of factors (Brown & Ryan, 2003).

Mindfulness by Bishop et al., (2003) is defined as "a process of regulating attention to bring quality of non-elaborative awareness to current experience and a quality of relating to one's experience within an orientation of curiosity, experiential openness and acceptance". When this process is a part of Psychological Flexibility an individual is able to observe his thoughts, feelings, emotions and sensations without elaborating, judging or controlling them. Success on the stage of Mindfulness and Acceptance processes allows proceeding to Commitment and Behavior Change processes.

The definition proposed by Fletcher and Hayes (2005) in the domain of ACT describes Mindfulness as interconnected relationship between the processes of acceptance, defusion, contact with the present moment, and self as a context (as shown by the lines on Figure 1).

Committed action and Behavior Change process

The second group of practices in order to achieve Psychological Flexibility is related to committed actions and behavior change based on one's values and goals. Acceptance and Commitment theory tends to redirect person's behavior in order to achieve their goals and values, which are actively lived out moment by moment (Hayes, Pistorello, and Levin, 2012). An individual takes on the responsibility and commits to the change of behaviors in order to attain his goals and values.

Acceptance and Action Questionnaire

In order to measure a number of ACT processes that have to do with Psychological Flexibility Hayes et al., (2004) have created an Acceptance and Action Questionnaire (AAQ) that is intended to be used in population-based studies.

In the meta-analysis of 32 studies Hayes et al., (2006), investigated the relationship between Acceptance and Action Questionnaire and various quality of life aftereffects. The study showed that higher levels of Psychological Flexibility are associated with higher levels of quality of life outcomes, which was found through negative correlations between Psychological Flexibility and depression, anxiety, stress, PTS, pain, performance at work, etc. In 2011, Bond et al., have developed a second version of Acceptance and Action Questionnaire (AAQ-II).

After the creation of general AAQ scale several specific measurements have also been developed (for example, an Acceptance and Action Diabetes Questionnaire (AADQ) by Gregg, 2004, etc.).

Recently the questionnaire has been translated into other languages and adapted to various cultures (e.g.: Spanish version by Marial, 2004; Dutch version by Boelen and Reijntjes, 2008; Persian version by Abasi, Fti, Molodi, and Zarabi, 2013; Brazilian version by Barbosa and Murta, 2015; Chinese version by Zhang, Chung, Si, and Liu, 2014; Columbian version by Ruiz, Suárez-Falcón, Cárdenas-Sierra, Durán, Guerrero, and Riaño-Hernández, 2016).

Psychological Flexibility and Similar Concepts

Emotional Intelligence.

Emotional Intelligence is a division of Social Intelligence (Thorndike, 1920), that has been defined as the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions (Salovey & Mayer, 1990). Salovey and Mayer (1990) define three divisions of emotional intelligence: appraisal and expression of emotions, regulation of emotions, and use of emotions to solve problems.

Appraisal and expression of emotions in self and others (verbal or non-verbal) aid normal and healthy functioning within society, and require such skills as the ability to detect, process, understand and express emotions and feelings. Perceiving non-verbal expressions of emotions that come from inside others helps better interaction, social adaptation and ability to relate to other individuals (Salovey and Mayer, 1990).

Regulation of emotions and moods in self and others causes adaptive and strengthened states of the person's mood. Emotions can be used to solve problems, as, when controlled, they facilitate flexible planning, creative thinking and motivation (Salovey and Mayer, 1990).

Goleman (1999) has further investigated the topic of Emotional Intelligence and has put it in the surface of theory of performance for employees and leaders. In his theory and research, the author stated that competencies that are based on emotional intelligence combine cognitive and emotional skills and matter for every level of employees, more so for those who have a higher position in the company (Goleman, 2001).

Psychological Flexibility involves not only a person's emotions, but also other internal events, such as memories, thoughts, images, etc. While Emotional Intelligence deals with emotions of self and others around you, Psychological Flexibility has to do only with one's internal experiences.

Emotion Regulation

Gross and Munoz (1995) substantiate in their work that emotion regulation is a crucial part of mental well-being of an individual. They define emotion regulation as "the manipulation in self or others of either emotion antecedents or one or more of the components of an emotional response - behavioral, subjective, or physical". Thus they distinguish two ways in which emotion regulation manifests: antecedent-focused and response-focused.

Antecedent-focused emotion regulation regards the modification of external or internal environments prior to emotion take place. Examples of such regulation are avoiding physical environments that may trigger negative emotions or, on the contrary, stimulating positive emotions by putting oneself or others into an environment that generates positive emotions, directing one's attention to a certain aspect of an environment in order to change the emotional value of a stimulus, etc.

Response-focused emotion regulation happens after an emotion process has been triggered. In practice it is achieved by such processes as suppression and inhibition of emotions (Gross, 1998).

Gross and Munoz (1995) have hypothesized that emotion regulation is necessary in order to be productive in one's workplace. They argue that productivity and efficiency at work is succored by actively regulating one's thoughts that may take away the employee's attention, thus exercising antecedent-focused Emotion Regulation. Furthermore, response-focused Emotion Regulation is required in order to follow an organization's rules and culture (Gross & Munoz, 1995).

Demonstrating Psychologically Flexible response to arising internal events means that the person is accepting their emotions and other internal events without the need to suppress them or alter their behavior. In such way mindfulness components of Psychological Flexibility are activated.

Big Five Model

The Big Five model of personality is a model validated by Costa and McCrae (1987) that consists of five personality dimensions: Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness to experience (Table 1).

Studies conducted by Bond et al., (2013) show that some Big Five factors of personality correlate with work-related Psychological Flexibility, such as: significant and positive correlation with Conscientiousness (r=.29), and significant and positive correlation with Openness to experience (r=.29), and significant negative correlation with Neuroticism (r=-.32). Gloster et al., (2011) also found significant and negative correlation between PF and Neuroticism (r=-.63); significant and positive correlation between Extraversion, Conscientiousness and Openness to new experiences (r=.49, r=.35, and r=.18).

Table 1 *– Brief Description of Big Five Dimensions Based on Costa and McCrae (1987)*

Neuroticism (N)	• Reflects the ability to deal with difficult situations and susceptibility to experiencing "hard" emotions, such as fear, sadness, and hostility. • Opposite to Emotional stability • Behaviors take origin in negative affect • Includes disturbed thoughts, actions that go along with emotional distress Descriptive adjectives: impatient, worrying, insecure, temperamental, impulse-ridden, etc.
Extraversion (E)	• Reflects the quality and intensity of interpersonal relationships, attitude towards others, the need for action, and search for impressions. • Opposite to Introversion Descriptive adjectives: sociable, affectionate, cheerful, friendly, talkative, person-oriented etc.
Openness to Experience (O)	• Reflects the readiness to accept new experiences, ideas, values and concepts. Descriptive adjectives: original, imaginative, daring, curious, independent, etc.
Agreeableness (A)	• Is reflected in trust towards others, shines, sometimes in tendency to give way to others. • Opposite to antagonism (disagreeableness) Descriptive adjectives: trusting, sympathetic, selfless, straightforward, etc.
Conscientiousness (C)	• Is revealed as responsibility and perseverance, prudence in planning and undertaking new tasks. • Opposite to Undirectedness Descriptive adjectives: careful, hardworking, self-disciplined, persevering, reliable, etc.

Latzman and Masuda (2013) conducted a research where they investigated the relationship between the three variables: Psychological Flexibility, Big Five and Mindfulness. Their findings show that Mindfulness and Psychological Inflexibility (the inverse of Psychological Flexibility) are negatively correlated with each other (r=-.48); Psychological Inflexibility was strongly and positively associated with Neuroticism (r=.64) and negatively correlated with Conscientiousness (r=-.51).

In contrast to aspects of personality presented by Big Five, Psychological Flexibility is an individual characteristic that can be trained and modified in order to actively encourage various work-related benefits (Bond, Hayes, & Barnes-Holmes, 2013; Bond, Lloyd, & Guenole, 2013).

Psychological Flexibility at Workplace

Authors state that Acceptance and Commitment Therapy is applicable to any context of human life, including the workplace (Bond et al., 2015). The objective of ACT is to foster Psychological Flexibility of individuals; meaning to lower the impact of negative internal events by empowering people to define and attain the goals that they value (Bond & Bunce, 2003).

Psychological Flexibility at work signify that employees are able to base their work-related behavior for the most part on their values and goals, rather than on the internal events (such as feelings, thoughts, memories, etc.), reinforcements and/or punishments (Bond et al., 2011). Such Flexibility permits an individual to face unpleasant experiences with mindfulness. In this way, the first four stages of ACT are applied and an individual doesn't have to spend his cognitive and attention resources on experiential avoidance, suppression of negative thoughts, and controlling of unwanted experiences, but in turn direct them toward noticing and taking advantage of the available opportunities for achieving the set goals and values. Psychologically Flexible people are able to put their resources to use within their work environment.

In 2013 Bond, Lloyd and Guenole have developed a Work-Related Acceptance and Action questionnaire (WAAQ) that measures Psychological Flexibility in a specific context of work domain.

Psychological Flexibility and Performance

Since Psychological Flexibility can be applied to various contexts of human life, including work-related sphere, Bond and Hayes (2002) have theorized that the processes involved in ACT are able to increase individual's performance and job satisfaction, given that performing well is valued by this individual. If the person values being productive at work, then being Psychologically Flexible would mean that, no matter the internal events, this person will be cognizant of the resources available at hand and will direct them toward achieving that what is valued. The internal experiences this individual may have will be approached in a mindful way, recognized and accepted, while goal-oriented mindset will permit the worker to understand how to be more productive at the task at hand with the resources at hand.

One of the aspects of performance is the ability to innovate, valued highly in the current environment of rapid change and industrial development. In one of the studies, Bond and Bunce (2000) have observed that application of therapies that promoted Psychological Flexibility had improved the inclination towards innovation of the participants. The results have also shown that this inclination has been achieved due to the increased levels of Psychological Acceptance of the group and not by altering the context (Bond & Bunce, 2000).

In 2003 Bond and Bunce investigated the role of acceptance and job control in mental health, job satisfaction, and work performance. Their longitudinal study has shown that acceptance has a mediating effect on mental health and innovation, and that that those individuals who do not tend to avoid their internal events or control them, have more attention resources and can perform better, if they have good performance at work as their goal (Bond & Bunce, 2003). Later, when Bond, Flaxman, and Bunce (2008) have replicated this quasi-experiment and investigated the influence of Psychological Flexibility on work redesign, they have demonstrated that individuals with higher levels of Psychological Flexibility were more aware of their ability for job control. This research had shown that call center workers with higher levels of Psychological Flexibility perceived greater job control and as a result may have lower levels of psychological distress and less absence occasions then those with lower levels of Psychological Flexibility (Bond, Flaxman, & Bunce, 2008).

In another longitudinal study Bond and Flaxman (2006) have researched the degree to which Psychological Flexibility and job control predict the ability of a call center workers to

learn new skill at work, their performance and mental health. Their study showed that the more Psychologically Flexible individuals were, the better mental health and performance they had. In contrast to the study of Bond and Bunce (2003) who measured performance by the number of errors in computer input, in this study Bond and Flaxman (2006) used the target-based performance measures.

In one of the most recent studies conducted by Kuo et al. (2018), Psychological Flexibility has been proposed to be an individual characteristic that precedes proactive behavior at work. Authors substantiated that Psychological Flexibility is positively related to proactive work behavior ($p<.05$), meaning that individuals with higher levels of Psychological Flexibility tend to act proactively at their workplaces (Kuo et al., 2018).

The research conducted by Ruiz and Odriozola-Gonzalez (2017) has focused on the predictive and moderating effect of Psychological Flexibility and the development of Job Burnout Syndrome. This cross-sectional study among Spanish employees (N=209) has delivered many results, among other, showing that work-related Psychological Flexibility significantly predicts work efficacy, and acts as a moderator in the relationship between such dimensions of Job Burnout as emotional exhaustion and cynicism, meaning that exhaustion in people with lower levels of Psychological Flexibility would more easily lead to the development of cynicism (Ruiz and Odriozola-Gonzalez, 2017).

Work-related stress can be generated by the job-inherent factors, and inability to properly respond to negative internal events may lead to increased levels of stress of the individual. In their study, Bond and Bunce (2000) investigated the ability of ACT interventions to reduce the levels of work-related stress through the process of acceptance. They have shown that changes in the willingness to accept present events, added to goal-orientedness, and enhanced participants' abilities to effectively manage work-related stress.

One of the recent studies by Novaes, Ferreira, and Valentini (2018) has investigated the moderating effect of Psychological Flexibility on the relationships between job demands and resources and subjective workplace well-being among Brazilian workers (N=4,867). Among other results, their research showed that Psychological Flexibility at work moderated the relationship of work overload with satisfaction, and negative affects (Novaes, Ferreira, & Valentini, 2018).

Individual Work Performance

Individual Work Performance is an important construct of organizational psychology. Former research has focused on lowering the number of absence days or losses in productivity due to sick leaves (Koopmans et al., 2014), as well as identifying the variables that influence productivity and ways of toggling them to reach greater results. It should be said that, even though these terms have often been used as synonyms in the past, performance isn't equal to productivity (Koopmans et al., 2011). The definition of productivity varies depending on the context, but it mostly has to do with the relation of output to input, and is almost synonymous to results (Koopmans, 2011; Tangen, 2005). Performance, on the other hand, is a broader concept that includes factors that are not related to costs, such as quality, speed, delivery and flexibility (Tangen, 2005). Performance has been defined by Campbell (1990) as "observable things people do that are relevant for the goals of the organization". When referring to performance, we cannot simply evaluate the result of someone's work, as multiple factors that may be outside of the employee's scope of work can influence the outcome of the work or the worker himself (Motowidlo, Borman, & Schmit, 1997).

Several conceptual frameworks of Individual Work Performance have been developed in the past three decades, and all of them agree that performance has to do with work-related behavior of the individual (Borman & Motowidlo, 1993; Campbell, 1990; Murphy, 1990, etc.).

Borman and Motowidlo (1993) have argued that job performance is a behavior that is episodic, multidimensional and subject to evaluation. Authors defined its two components as Task performance and Contextual performance. In their works they have described Task performance as behaviors and actions of the employees that have direct influence on the technical essence of the job, where technical tasks are performed or technical requirements are maintained. Contextual performance, on the contrary, was used as the term to describe actions and behaviors of employees that help sustain organization's social and psychological environment in which the technical core functions.

A theory that demonstrates the differences between Contextual and Task performance has been offered by Motowidlo, Borman, and Schmit in 1997, where the authors show that one is based on personality variables, and the other one on the variables of one' cognitive abilities; and both require a corresponding set of knowledge, habits and skills (Figure 2). In this theory Task

performance is realized through application of skills, knowledge and habits that directly affect the technical core and derive from persons cognitive abilities. Contextual performance is demonstrated through application of skills, habits and knowledge that has to do with social and organizational domains, and is hinged on individual's personality.

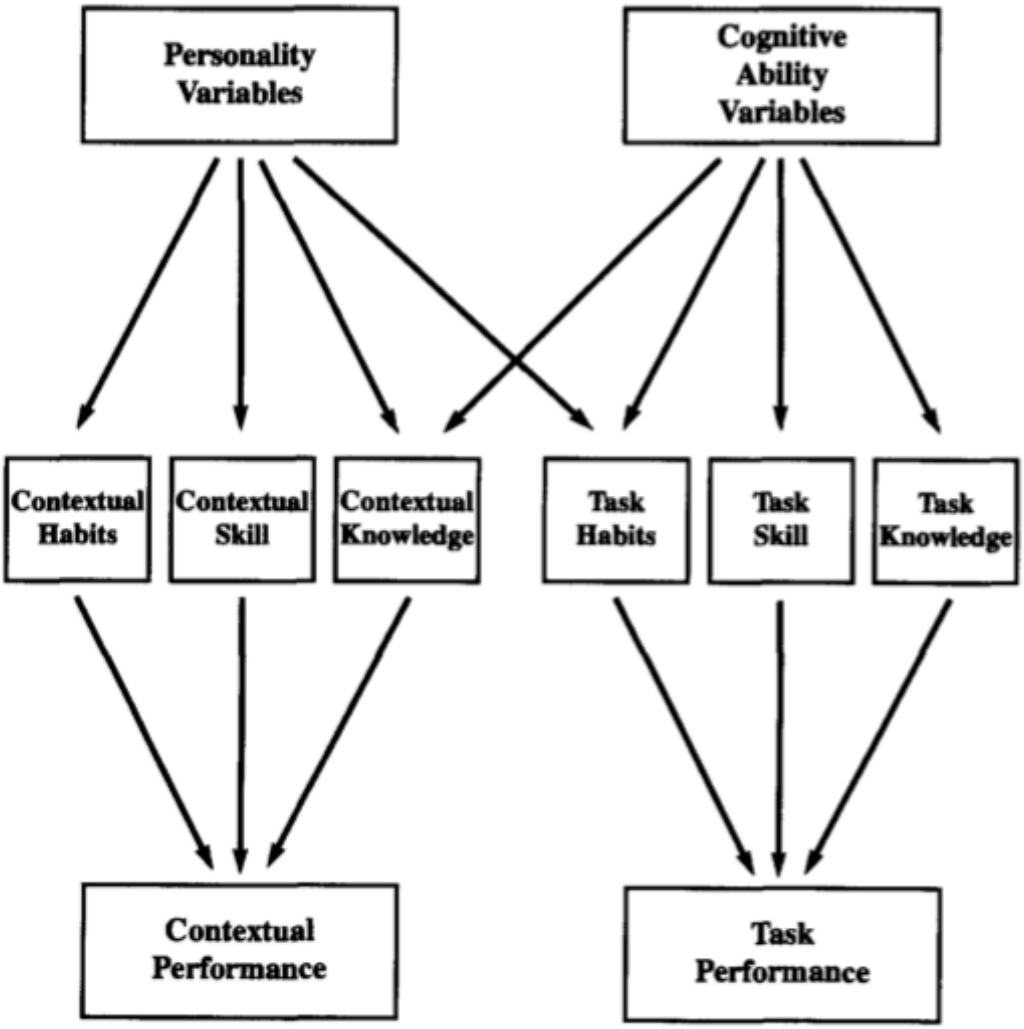


Figure 2 – *A Theory of Individual Differences in Task and Contextual Performance (Motowidlo, Borman, & Schmit,1997).*

Organizational Citizenship Behavior has also appeared in literature defined by Organ as "individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and that in the aggregate promotes the effective functioning of the organization" (as cited in Podsakoff et al., 2000).

Employee behavior that has a negative effect on the organization's effectiveness also had been included into the job performance definitions. Counterproductive behavior has been defined by Robinson and Bennett (1995) as voluntary actions that violate organizational norms and, in turn, jeopardizes other employees and the organization itself. Examples of such behavior are absenteeism, turnover, damage of goods, substance abuse, etc. (Viswesvaran & Ones, 2000).

Later, researchers have suggested that performance consisted of three extensive dimensions: Task performance, Contextual performance, and Counterproductive work behavior (Rotundo and Sackett, 2002; Viswesvaran & Ones, 2000).

Individual Work Performance dimensions

Task performance.

Campbell defined Task Performance as "proficiency with which an individual performs a central job task" (1990). Even though job task can differ depending on the type of job that one is performing, Task performance is usually described through quality and quantity of work, skills and knowledge (Campbell, 1990: Rotundo and Sackett, 2002). This type of performance refers to behaviors and actions of a worker that are directed to contribute to organizational goals, it is the main or core task for the job. Task performance may include such examples as machine operation, sales, product distribution, code writing, stock replenishment etc.

Contextual performance.

Individual work performance is more than simply accomplishing the work goals. Organization is a living organism consisting of individuals, interacting on a social, organizational and psychological levels. Thus contextual performance is an important component of individual performance that consists of behaviors reinforcing each of these levels. These are behaviors and actions directed to contribute to organizational effectiveness through supporting the environment in which that job task is done. Such activities may include taking initiative to do the task that is not normally a part of the job, collaboration with coworkers to get things done, persisting in the task with enthusiasm, acting in accordance with organizational rules, etc. (Borman & Motowidlo, 1997; Campbell, 1990).

In their systematic review Koopmans et al., (2011) suggest that Contextual performance has appeared in the literature under various names, such as interpersonal relations, organizational citizenship behavior, extra-role performance, and non-job-specific task proficiency.

Counterproductive work behavior

Counterproductive Work Behavior, on the other hand, is a "voluntary behaviors that harm the wellbeing of the organization" (Rotundo & Sackett, 2002). These are intentional negative actions of employees that do not contribute to the organizational goals, but on the contrary, serve as obstacles in achieving them. Examples of Counterproductive Work Behaviors are absenteeism, work-avoidance behaviors, theft, drug abuse, etc. (Koopmans et al., 2011).

In order to measure the dimensions of Individual Work Performance, Koopmans et al., have developed the Individual Work Performance Questionnaire (2013).

The scale has been used in various studies and translated to different languages, like Bahasa Indonesia (Widyastuti, & Hidayat, 2018), Swedish (Dådermana, Ingelgårda, & Koopmans, 2018).

Leadership

Scholars have been working on describing the differences between management and leadership for a long period of time (Kotterman, 2006; Maccoby, 2000; Zaleznik, 1992;). In the distinctions between leader and manager, generally the main contrast is that managers execute a more bureaucratic function of managing people or resources, where leaders are the ones who are driving change through building relationship within the organization. For the goal of this study, the terms "leadership" and "management" were used interchangeably, as a general term that would include both concepts under one umbrella. In such a broad definition leadership (management) can be found in almost all organizations, independently of the country or culture (Sauer & Kohls, 2011).

Flexibility and Leadership

In the past thirty years, with the increasing speed of development of technology, information flows, and overall tempo of global changes, businesses have seen the need to adapt to the world around them on all levels. The term *Flexibility* has been applied to leadership, along with such synonyms as adaptability, agility and versatility. For the most part leader flexibility has been looked at from the perspective of behavioral change in the face of shifting situations, like changes in the career step, competing values and tradeoffs, threats and opportunities, and management of subordinates (Kaiser & Overfield, 2010; Yukl & Mashud, 2010). Zaccaro proposed a three-element framework of components that help develop adaptability in leaders, which included Cognitive flexibility, Emotional flexibility and Dispositional flexibility (as cited in Calarco & Gurvis, 2006). These components allow increasing leader's adaptability by continuous practicing of behaviors that are related to them. Cognitive flexibility involves behaviors that include analyzing, understanding and responding strategically to the environment; Emotional flexibility includes the behaviors that allow the leader to understand and connect with own emotions and those of others; and Dispositional flexibility is seen through behaviors conveying optimism and positive attitude (Calarco & Gurvis, 2006). George (2000) has also studied emotional intelligence as an important part of leader flexibility in his paper on emotional flexibility and leader effectiveness.

Psychological flexibility is another behavioral change model that includes perception of current environment and opportunities at hand, acceptance of self, and committed actions directed towards achievement of goals based of the individual's values. To our knowledge there have not been many studies showing the relationship between psychological flexibility and leadership, aside from the ones conducting ACT interventions (Deval, Bernard-Curie, & Monestès, 2017; Moran, 2011).

INVESTIGATION MODEL

Considering that after conducting a sizeable research, a theory that would show the relationship between the three variables (Psychological Flexibility, Individual Work Performance and executing a Leadership position) was not encountered, such empirical model has been created and operationalized in the Figure 3. It was our goal to find out whether Psychological Flexibility correlates with Individual Work Performance, and if so, whether there is a moderating effect of Leadership position between the relationships of the two.

As previous literature shows positive relationship between Psychological Flexibility and Job Performance (previously measured by target achievement and number of computer input errors), it is expected that Psychological Flexibility will positively relate to such dimensions of self-reported Individual Work Performance as Contextual performance and Task performance, and negatively correlate to the dimension of Counterproductive work behavior. It is also hypothesized that being in a Leadership (management) position may increase or lower this positive effect.

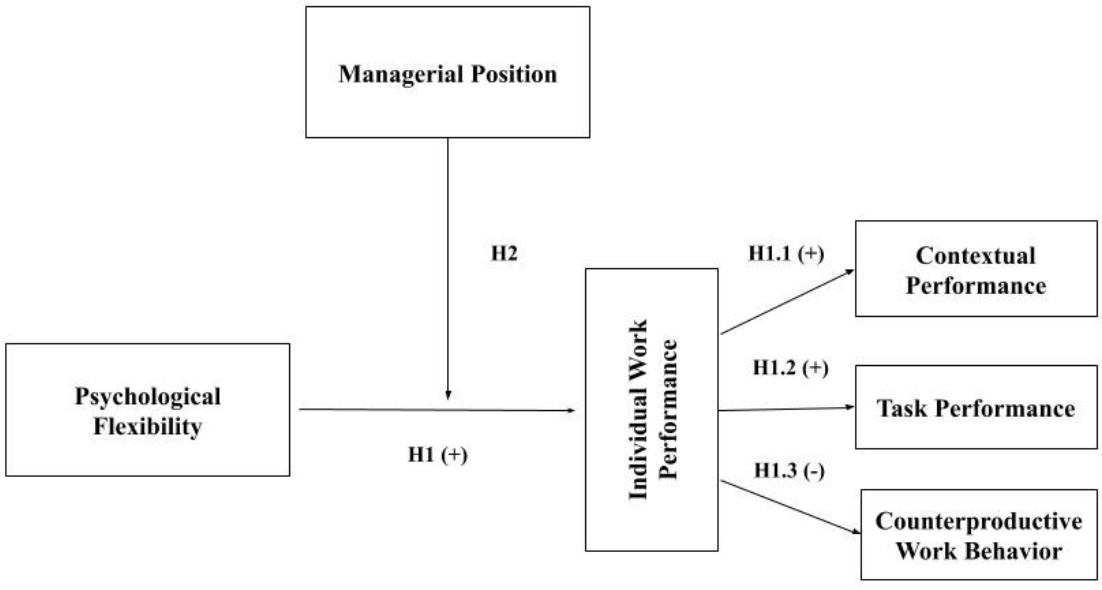


Figure 3 – *Investigation model*

In addition to the above-mentioned model, it is essential to present the hypotheses of the current research:

H1: Psychological Flexibility positively relates to Individual Work Performance (IWP).
H1.1: Psychological Flexibility will positively relate with IWP Contextual performance.
H1.2: Psychological Flexibility will positively relate with IWP Task performance.
H1.3: Psychological Flexibility will negatively relate to the IWP Counterproductive Work Behavior.

H2: Executing leadership position at workplace will moderate the relationship between Psychological Flexibility and Individual Work Performance.

METHOD

Participants

The sample for this study has been selected by convenience, using the *snowball* method, where participants who have filled out the questionnaire shared it with their connections in order to increase the sample. All participants of the study were informed that their participation was voluntary and confidential, and that they are able to stop their participation at any given moment without any repercussions. The descriptive statistics of the sample are represented in the Table 2 and are also represented in the Annex B.

The total number of participants in this study was 103; from which 46,6% (n=48) were male and 53,4% (n=55) were female. This shows that, in terms of sex, the sample was rather balanced. In terms of age, the sample ranged from 20 to 67 years old, where the majority or the sample fell between 20 to 30 years old, making 45.6% of the sample.

In relation to Nationality, the sample turned out to be rather international and included representatives from the following countries: Portugal, Poland, Hungary, Ukraine, America, Britain, Georgia, Austria, Germany, Vietnam, Belarus, Russia, India, Latvia, Lithuania and Philippines. The number of participants per each country represented is demonstrated on the chart to follow (Figure 4). Some participants have marked their nationality as “white” or “Caucasian” that are demonstrated on the chart as “Not Specified” (Figure 4).

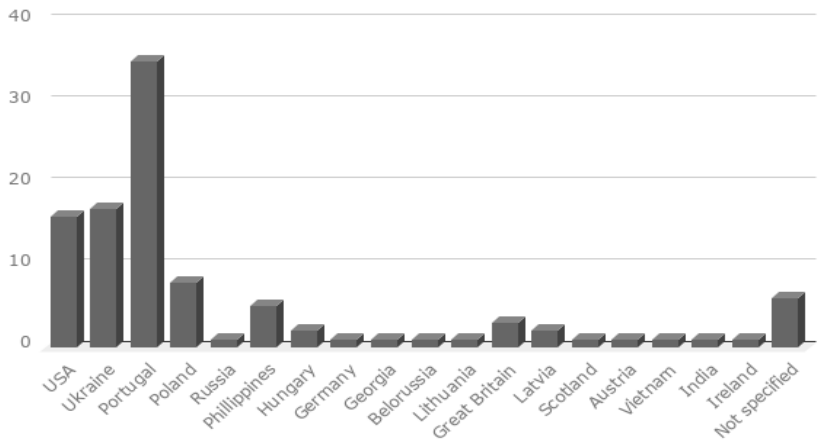


Figure 4 – *Number of Participants per Country*

With regard to education level, the sample has been broken into three classes, where 13,6% (n=14) declared to have High-school education or lower, 50,5% (n=52) have declared to have completed a Bachelor's degree, and 35,9% (n=37) reported to have a Master's degree or higher level of education.

Concerning the management position at work, 28,2% (n=29) of respondents declared to execute a management function at their workplace.

Table 2 – *Descriptive Statistics of the Sample*

	Classes	Frequency (n)	Percentage (%)
Age	[20-30]	47	45.6
	[31-40]	29	28.2
	[41-59]	23	22.3
	[=>60]	4	3.9
Education	High-school or lower	14	13.6
	Bachelor’s degree	52	50.5
	Masters degree or higher	37	35.9
		Frequency (n)	Percentage (%)
Sex	Female	55	53.4
	Male	48	46.6
Managerial function	Yes	29	28.2
	No	74	71.8

Design

The current study is considered to be non-experimental, as there is no manipulation of variables or the cause-effect relationship between them, but an empirical one, as it seeks to confirm a theory with hypotheses based on collected data, quantitative as the data has been collected with the help of a questionnaire, and correlational, as it seeks to investigate the correlation between presented variables. It is also an exploratory study, as it attempts to explore the reality that has not been widely studied yet, namely the impact of executing management position on the relationship between Psychological Flexibility and Individual Work Performance of an employee. Due to the data of the study being collected in one attempt this study is transversal, and explanatory, as it desires to present explanation for a determined reality.

Instruments

For this study a questionnaire consisting of two scales has been used (Annex A), one scale that measures Psychological Flexibility (WAAQ) and another - Individual Job Work Performance (IWPQ), as well as the socio-demographic data section, which was meant to characterize the sample in relation to age, sex, nationality, education level, leadership position, etc.

Psychological Flexibility

Psychological Flexibility has been measured through the Work-related Acceptance and Action questionnaire (WAAQ) designed by Bond, Lloyd and Guenole (2013). It is a seven-item self-report questionnaire that consists of one factor to measure Work-related Psychological Flexibility (α=.83), on a 7-point Likert scale, answer categories ranging from (1) “Never true” to (7) “Always true”. The total score of this scale may very between 7 and 49, where the higher the score the higher the level of Psychological Flexibility.

Considering the multi-nationality of the sample that was exposed to this questionnaire, this scale has been presented in its original language, in English (Table 3).

Table 3 – *Work Acceptance and Action Questionnaire*

1. I am able to work effectively in spite of any personal worries that I have
2. I can admit to my mistakes at work and still be successful
3. I can still work very effectively, even if I am nervous about something
4. Worries do not get in the way of my success
5. I can perform as required no matter how I feel
6. I can work effectively, even when I doubt myself
7. My thoughts and feelings do not get in the way of my work

Individual Work Performance

Koopmans (2014) adapted the original Individual Work Performance Questionnaire (IWPQ) to English language (Table 4). It is a self-report 18-item questionnaire that is designed to measure 3 factors (dimensions): Task Performance (α=.79), Contextual performance (α=.83), and Counterproductive Behavior (α=.89). All items are measured on a 5-point Likert rating scale from (1) - "Seldom" to (5) - "Always" for Task performance and Contextual performance, and (1) - "Never" to (5) - "Often" for counterproductive work behavior. Following the authors' procedure, items in each dimension of the scale have been presented to participants in randomized order.

Table 4 – *Individual Work Performance Scale*

Task Performance
In the past 3 months…
1. I managed to plan my work so that it was done on time.
2. My planning was optimal.
3. I kept in mind the results that I had to achieve in my work.
4. I was able to separate main issues from side issues at work.
5. I was able to perform my work well with minimal time and effort.

Contextual performance
In the past 3 months…
1. I took on extra responsibilities.
2. I started new tasks myself, when my old ones were finished.
3. I took on challenging work tasks, when available.
4. I worked at keeping my job knowledge up-to-date.
5. I worked at keeping my job skills up-to-date.
6. I came up with creative solutions to new problems.
7. I kept looking for new challenges in my job.
8. I actively participated in work meetings.
Counterproductive Behavior
In the past 3 months…
1. I complained about unimportant matters at work.
2. I made problems greater than they were at work.
3. I focused on the negative aspects of a work situation, instead of on the positive aspects.
4. I spoke with colleagues about the negative aspects of my work.
5. I spoke with people from outside the organization about the negative aspects of my work.

Management (Leadership) Position

In order to measure whether a respondent is executing a leadership position no specific instrument has been applied. It was decided to include a dichotomous question in the general questionnaire asking, "Are you executing a management function?" with a "yes" or "no" answer possible. In this paper the terms "leader" and "manager" are used interchangeably.

PROCEDURE

The collection of data was conducted through a questionnaire (Annex A) composed of the following scales: Work-related Acceptance and Action Questionnaire (WAAQ), Individual Work Performance Questionnaire (IWPQ) and the socio-demographic data section. This questionnaire has been created online through *Google Forms* platform with the goal of collecting voluntary replies. Online questionnaire helped collect diverse responses from individuals living in different countries and belonging to different nationalities.

The structure of the questionnaire followed the ensuing construction. At the beginning of the questionnaire was included a brief explanation of the goal of the study, it's structure, information about the reason and the use for the study. It was also explained that the participants are able to stop their participation at any moment without any negative consequences and, if needed, reach out for more information through the email address provided. Before each part of the questionnaire there was included an explanation on how to answer the questions of the scale.

The collection of data lasted approximately two months. The data processing was done with the help of *IBM SPSS Statistics 25* software. For this part, the variables were codified. The variable of Age was left uncodified, being expressed in numbers.

The non-numeric variables, such as Sex, Education level and Leadership position were converted into *dummy* variables, meaning they were converted into numeric variables. The Sex variable was converted in such a way, where male sex was given a value of "1", and female of "2". The Education level was converted as follows: High school or lower as "1", Bachelor's degree as "2", Master's degree or higher as "3". The Leadership position variable was also converted in such a way, where executing management position was given a value of "1", and not executing the leadership position was given the value of "2".

It is important to mention that the IWPQ scale that originally included 18 items has been reduced to 16 items in the process of statistical analysis. This has been done as the executed Exploratory Factor Analysis showed some items to not have sufficient factorial value. The Psychological Flexibility scale remained unaltered.

RESULTS

The first phase of results consisted of verification of metric qualities of the two scales used in the study, meaning the analysis of the sensitivity of items, factorial validity, reliability of dimensions and their sensitivity. These stages are described in detail below.

The Exploratory Factor Analysis (EFA) has been used to check the factorial validity, meaning the internal structure of the scales. The EFA has been chosen due to the internationality of the sample, as the scales of Psychological Flexibility and Individual Work Performance have only recently been adapted to some other cultures. Many of the adaptations do not exist for the nationalities represented in the sample.

The reliability of scales has been checked by testing the Cronbach's Alpha of the scales and their dimensions. The scale is considered to have a good internal consistency if its α is at least 0,70 (Marôco & Garcia-Marques, 2006). The Alpha has also been checked for the cases if one or more items had been eliminated.

In order to verify that all items are following the normal distribution the Skewness and Kurtosis of each were checked. The items were considered robust if they were not showing major deviation from normal distribution, namely Skewness level <|3| and level of Kurtosis <|8| (Kline, 2005).

Psychological Flexibility – Work-related Acceptance and Action Questionnaire (7 items)

Validity

Validity of the scale means to which degree the scale measures what it says it measures, or put simply how well the scale accomplishes its goal (Urbina, 2004). Even though the literature shows previous information about the WAAQ scale having only one factor, due to the internationality of the sample the Exploratory Factor Analysis has been conducted. The saturation for factor analysis has been set to 0,5 due to the small number of the sample (N=103). Such analysis has confirmed the uni-factorial structure of the scale with the total value of 4,279 and the % of total variance of 61,12% (Table 5, Annex C).

Table 5– *Total Variance Explained of the WAAQ scale*

Item	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4,279	61,129	61,129	4,279	61,129	61,129
2	,858	12,255	73,385			
3	,576	8,228	81,612			
4	,412	5,890	87,503			
5	,364	5,195	92,697			
6	,312	4,462	97,159			
7	,199	2,841	100,000			

Reliability

The reliability of the WAAQ scale has been tested by calculation of the Cronbach's *Alpha*. Since the scale only has one dimension, its internal consistency has been tested as a whole. The scale presented with the coefficient *Alpha* of 0,89, which is a very good result (Table 6, Annex C). With the reduction of the item 2, the Alpha could have presented slightly better, but considering the low number of items in the scale to this point, it has been decided to not take the item out (Table 7, Annex C).

The results of the statistic analysis of the WAAQ scale are uniform to those of the authors, who have presented a uni-factorial, seven-item scale with the mean coefficient of Alpha equal 0,83 across five samples (Bond, Lloyd & Guenole, 2013).

Table 6 - *Cronbach's Alpha of the WAAQ Scale*

	Cronbach's Alpha	N of Items
WAAQ	0,893	7

Table 7 - *Reliability of the WAAQ scale if item deleted*

	Cronbach's Alpha if Item Deleted
1. I am able to work effectively in spite of any personal worries that	,869
2. I can admit to my mistakes at work and still be successful	,906
3. I can still work very effectively, even if I am nervous about	,866
4. Worries do not get in the way of my success	,877
5. I can perform as required no matter how I feel	,868
6. I can work effectively, even when I doubt myself	,883
7. My thoughts and feelings do not get in the way of my work	,867

Sensitivity

At last, the sensitivity of the scale is the ability of the scale and its items to discriminate different participants according to the factors that are being evaluated. It was checked whether each item had replies in each of the categories and normal distribution through the index of Skewness and Kurtosis.

For the WAAQ scale measuring Psychological Flexibility all items had replies in each category ranging from (1) “Never true” to (7) “Always true”, aside from the item #2 that didn’t have a reply on the value of (1) “Never true”.

Regarding the Skewness and Kurtosis of the scale, no item has surpassed the normal distribution levels, namely Skewness level <|3| and level of Kurtosis <|8| (Kline, 2005), as can be visible in the Table 8 (Annex C). The negative scores of Skewness for all items lead us to believe that respondents tend to agree with the statements of the scale.

As mentioned previously, the item number 2 did not have replies in each category, however, the fact that the Skewness and Kurtosis of it was still within the limits of the acceptable values permitted to keep the item and not take it out of the scale (Table 8, Annex C).

Table 8 – *Sensitivity of the Items of WAAQ scale*

	Skewness	Kurtosis	Minimum	Maximum
1. I am able to work effectively in spite of any personal worries	-,739	-,158	1	7
2. I can admit to my mistakes at work and still be successful	-1,339	2,785	2	7
3. I can still work very effectively, even if I am nervous about something	-,774	,141	1	7
4. Worries do not get in the way of my success	-,682	-,093	1	7
5. I can perform as required no matter how I feel	-,385	-,747	1	7
6. I can work effectively, even when I doubt myself	-,557	,029	1	7
7. My thoughts and feelings do not get in the way of my work	-,324	-,372	1	7

Std. Error of Skewness = ,238; Std. Error of Kurtosis = ,472

Overall, good levels of Sensitivity of the Work-related Acceptance and Action scale have been observed and the results didn't show deviation from normal distribution, namely Skewness level <|3| and level of Kurtosis <|8| (Kline, 2005) (Table 9, Annex C).

Table 9 – *General Sensitivity of the Psychological Flexibility Scale*

	N	Minimum	Maximum	Mean	Variance	Skewness	Kurtosis
PF	103	1.86	7.00	4.9320	1.101	-.635	-.111
Valid N (listwise)	103						

Std. Error of Skewness = ,238; Std. Error of Kurtosis = ,472; Std. Deviation = 1.04937

Individual Work Performance Scale – IWPQ (18 items)

The same procedure has been followed with the IWPQ scale in order to test it for the Validity, Reliability and Sensitivity levels.

Validity

The Validity of the scale and each of it dimensions has been tested to see whether the scale indeed measures what it is supposed to measure. Literature shows that the structure of the scale presents 3 dimensions (Koopmans et a., 2014), however Exploratory Factor Analysis has been selected to verify the validity of the scale due to the variety of nationalities of the sample, as it has not been verified for many of the nationalities represented. The authors specified 3 dimensions as the following: Task Performance (items 1, 2, 3, 4, 5), Contextual Performance (items 6, 7, 8, 9, 10, 11, 12, 13), and Counterproductive Behavior (items 14, 15, 16, 17, 18).

The Exploratory Factor Analysis showed that in the case of this study the scale also had 3 possible components, with total variance of 9,693 and the percent of explained variance at 53,846% (Table 10, Annex D)

The component analysis for the 3 dimensions of the scale had shown the value of each item in each dimension (Table 11, Annex D). As with the scale measuring Psychological Flexibility, the factorial value for the IWPQ scale has been chosen to be 0,5 due to the small number of the sample (N=103). With that criteria the items 6 and 10 have been eliminated from the scale due to their saturation being inferior to 0,5.

The statistical findings for the validity of the IWPQ scale were uniform to the original structure proposed by the authors (Koopmans et al., 2014).

Table 10 – *Total variance explained for the IWPQ scale*

Item	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5,324	29,575	29,575	5,324	29,575	29,575
2	2,473	13,739	43,314	2,473	13,739	43,314
3	1,896	10,531	53,846	1,896	10,531	53,846
4	1,239	6,883	60,729			
5	1,000	5,554	66,283			
6	,933	5,182	71,465			
7	,792	4,402	75,867			
8	,673	3,740	79,607			
9	,619	3,437	83,044			
10	,512	2,844	85,888			
11	,448	2,487	88,375			
12	,415	2,304	90,678			
13	,373	2,075	92,753			
14	,329	1,829	94,582			
15	,318	1,766	96,349			
16	,279	1,550	97,898			
17	,225	1,248	99,146			
18	,154	,854	100,000			

Table 11- *Rotated Component Matrix of IWPQ scale*

	Component		
	1	2	3
12. ... I worked at keeping my job skills up-to-date.	,810		
8. ... I kept looking for new challenges in my job.	,792		
11. ... I worked at keeping my job knowledge up-to-date.	,791		
9. ... I took on challenging work tasks, when available.	,679		
13. ... I actively participated in work meetings.	,612		
10. ... I came up with creative solutions to new problems.			
2. ... I managed to plan my work so that it was done on time.		,788	
1. ... my planning was optimal.		,782	
4. ... I was able to perform my work well with minimal time and effort.		,729	
3. ... I kept in mind the results that I had to achieve in my work.		,577	
5. ... I was able to separate main issues from side issues at work.		,576	
7. ... I started new tasks myself, when my old ones were finished.		,548	
6. ... I took on extra responsibilities.			
16. ... I made problems greater than they were at work.			,781
15. ... I complained about unimportant matters at work.			,777
18. ... I spoke with colleagues about the negative aspects of my work.			,753
17. ... I focused on the negative aspects of a work situation, instead of on the positive			,686
14. ... I spoke with people from outside the organization about the negative aspects of my			,609

*Component 1 – Contextual performance, Component 2 – Task performance, Component 3 – Counterproductive behavior.

Reliability

A test of Cronbach's *Alpha* has been used to measure the reliability of each dimension of the scale, showing the following results: the dimension of Task Performance α=0,79, dimension of Contextual Performance α=0,81, and dimension of Counterproductive behavior α=0,78 (Table 12, Annex D).

Table 12 – *Cronbach's Alpha of the IWPQ scale and its dimensions*

	Cronbach's Alpha	N of Items
Task Performance	0,79	6
Contextual Performance	0,81	5
Counterproductive behavior	0,78	5

The value of the general *Alpha* for the scale after the item 6 and 10 have been removed dropped to the coefficient α=0,69 (Annex D). Taking out one of the items could increase the alpha to show the value surpassing 0,7, however, it would not bring significant gain (Annex D). Considering the good values of *Alpha* for each dimension individually (Table 12, Annex D), it has been decided to keep all remaining 16 items in the scale.

After that, the reliability of each dimension of the scale if item was deleted has been checked. The following table represents the reliability of each dimension of the IWPQ scale had one of the items been deleted (Table 13, Annex D).

Table 13 – *Reliability of IWPQ dimensions if item was deleted*

Contextual performance	
In the past 3 months…	Alpha if Item Deleted
8. ... I kept looking for new challenges in my job.	,738
9. ... I took on challenging work tasks, when available.	,766
11. ... I worked at keeping my job knowledge up-to-date.	,781
12. ... I worked at keeping my job skills up-to-date.	,759
13. ... I actively participated in work meetings.	,817
Task performance	
In the past 3 months…	Alpha if Item Deleted
1. ... my planning was optimal.	,761
2. ... I managed to plan my work so that it was done on time.	,747
3. ... I kept in mind the results that I had to achieve in my work.	,783
4. ... I was able to perform my work well with minimal time and effort.	,751
5. ... I was able to separate main issues from side issues at work.	,768
7. ... I started new tasks myself, when my old ones were finished.	,792
Counterproductive Work behavior	
In the past 3 months…	Alpha if Item Deleted
14. ... I spoke with people from outside the organization about the negative aspects of my	,776
15. ... I complained about unimportant matters at work.	,712
16. ... I made problems greater than they were at work.	,720
17. ... I focused on the negative aspects of a work situation, instead of on the positive	,744
18. ... I spoke with colleagues about the negative aspects of my work.	,740

Sensitivity

The Individual Work Performance scale when checked for the presence of replies in each category showed, that all items have answers in the categories raging from (1) - "Seldom" to (5) - "Always", and (1) - "Never" to (5) - "Often", depending on the item. Only the item #11 didn't have a response in the category of (1) – "Seldom".

With regards to the criterion of normal distribution, it was visible that the values are satisfactory, being that none of the items had surpassed the allowed values of (<|3|) for Skewness and (<|8|) for Kurtosis (Kline, 2005) (Table 14, Annex D).

Table 14 – *Sensitivity of Items of IWPQ Scale*

Item	N	Min	Max	Mean	Std. Deviation	Variance	Skewness	Kurtosis
1	103	1	5	3.59	.933	.871	-.569	.347
2.	103	1	5	3.90	1.034	1.069	-.888	.347
3	103	1	5	4.29	.749	.561	-1.535	4.147
4	103	1	5	3.56	.977	.954	-.567	-.014
5	103	1	5	3.97	.902	.813	-.842	.551
7	103	1	5	3.78	1.154	1.332	-1.033	.463
8	103	1	5	3.76	1.116	1.244	-.800	-.002
9	103	1	5	3.88	1.069	1.143	-.941	.593
11	103	2	5	4.08	.801	.641	-.609	-.019
12	103	1	5	4.04	.839	.704	-.886	1.091
13	103	1	5	3.87	1.186	1.405	-.975	.201
14	103	1	5	2.79	1.185	1.405	.209	-.844
15	103	1	5	2.41	1.043	1.087	.489	-.378
16	103	1	5	2.09	.951	.904	.730	.355
17	103	1	5	2.35	.977	.955	.465	-.214
18	103	1	5	2.77	1.214	1.475	-.042	-1.064

Std. Error of Skewness =.238; Std. Error of Kurtosis =.472; Valid N =103

Separately, the sensitivity of Contextual performance, Task Performance, and Counterproductive Work behavior dimension has been tested as well (Table 15, Annex D).

Table 15 – *Sensitivity of IWPQ Dimensions*

Contextual Performance							
		N	Minimum	Maximum	Mean	Variance	Skewness	Kurtosis
CP		103	1.40	5.00	3.9262	.584	-.901	1.012
Valid	N	103						
Std. Error of Skewness = ,238; Std. Error of Kurtosis = ,472; Std. Deviation = .76389								
Task Performance								
		N	Minimum	Maximum	Mean	Variance	Skewness	Kurtosis
TP		103	1.50	5.00	3.8495	.465	-1.021	1.513
Valid	N	103						
Std. Error of Skewness = ,238; Std. Error of Kurtosis = ,472; Std. Deviation = .68182								
Counterproductive Work Behavior								
		N	Minimum	Maximum	Mean	Variance	Skewness	Kurtosis
CWB		103	1.00	4.60	2.4796	.619	.207	-.214
Valid	N	103						
Std. Error of Skewness = ,238; Std. Error of Kurtosis = ,472; Std. Deviation = .78682								

Furthermore, it was visible that the items corresponding Task and Contextual performance are on the negative, which leads to the belief that respondents tended to agree with the statements of the scale.

Considering that all items have showed satisfactory results for the Skewness and Kurtosis values (<|3| and <|8| respectively, (Kline, 2005)), the item 11 has been kept in the sale, even though it did not pass the criterion of variability. Taken as a whole, the scale's dimensions have presented good levels of Sensitivity.

Impact of demographic variables on Psychological Flexibility

After testing the metric qualities of the two scales used in the study, the relationship between the demographic variables and Psychological Flexibility has been investigated. With the use of different statistical tests (depending on the variable) the relationship between Psychological Flexibility and Age, Sex, Education level, and executing Leadership position has been explored and can be seen on the table below (Table 16, Annex E).

Table 16 – *Effect of Demographic Variables on Psychological Flexibility*

Correlation	*p*		*r*	
Age	.003*		.286	
Education level	.608			
t-student test results	*t*	*p*	Mean Feminine	Mean Masculine
Sex	-1.409	.073	5.0675	4.7768
	t	*p*	Mean Leader	Mean Non-Leader
Leadership Position	2.405	.000*	5.3201	4.7799

* p<0,01

The Pearson Correlation test has been used to investigate the relationship between *Age* and *Psychological Flexibility*. Contrary to the findings of the authors (Bond, Lloyd & Guenole, 2013) there has been found a significant positive correlation between Age and Psychological Flexibility (r=.286; p=.003). This means that the older the person is, the higher is their level of Psychological Flexibility.

The application of One-Way ANOVA revealed that no significant differences in the levels of *Psychological Flexibility* exist depending on the level of *Education* of the subject (p=.608).

With the help of *t-student* test it has been identified that there is no significant differences in the levels of *Psychological Flexibility* between the two sexes *(p*=.073). The means between two sexes have not shown to be significantly different.

For the test of significant differences in levels of *Psychological Flexibility* between those who are executing *Leadership (management) position* and those who do not, a *t-student* test has been applied. Those who have declared to execute managerial position at work showed to have significantly higher levels (p=.000) of Psychological Flexibility in comparison to those who are not in leadership position at their workplace.

Impact of demographic variables on Individual Work Performance

Next step has been the test of relationship between such demographic variables as Age, Sex, Education, Leadership position and Individual Work Performance variable. The relationship between Age and Education and dimensions of Individual Work Performance are visualized in Table 17 (Annex F), and relationship between such variables as Sex and Management position are visualized in Table 18 (Annex F).

Contextual Performance

In order to see the relationship between Contextual performance and Age variable the Pearson Correlation test has been used. The results showed that there are no significant differences between the levels of Contextual performance of participants based on their Age (p=.190).

With the help of One-Way ANOVA the relationship between Contextual performance and Education level of participants has been tested. The results show that there are no significant differences in levels of Contextual performance between the participants depending on their level of Education (p=.778).

Using the *t-student* test we have found out that there is no statistically significant difference in Contextual performance between participants of two different sexes (p=.708).

T-student test has revealed no significant difference in Contextual Performance levels between those who execute Management function and those who do not execute Management function at their workplace (p=.472).

Task Performance

For the dimension of Task performance the same tests have been applied.

The relationship between Task performance and Age of participants has been tested with the use of Pearson Correlation. The results have demonstrated absence of statistically significant differences (p=.115).

Application of One-Way ANOVA has shown that the differences in the levels of Task performance between participants don't vary significantly based on their levels of Education (p=.711).

The result of the *t-student* test has shown that there is no significant statistical difference in the levels of Task performance between male and female participants (p=.286).

T-student test results revealed no statistically significant differences between Leaders and non-leaders in the levels of Task Performance (p=.189).

Counterproductive Work Behavior

The relationship between demographic variables and Counterproductive Work Behavior has also been tested.

The Pearson Correlation test has been applied to investigate the relationship between Counterproductive Work Behavior and Age of the participants. The relationship has shown to have no statistical significance (p=-.145).

For the relationship between Counterproductive Work Behavior and Education level of the participants there has been observed no statistically significant relationship (p=.052).

The application of *t-student* test demonstrated absence of significant differences in the levels of Counterproductive Work Behavior between the representatives of two sexes (p=.676).

With the help of t-student test it has been shown that there are no statistically significant differences in the levels of Counterproductive Work Behavior between those who execute management position at their workplace and those who have declared to not execute leadership position (p=.229).

Table 17 *- Effect of Age and Education Variables on Individual Work Performance (Dimensions)*

	Contextual Performance	Task Performance	Counterproductive Work Behavior
Age	.190	.115	-.145
Education level	.778	.711	.052

Table 18 – *Results of t-student test for effect of Sex and Management position on Individual Work Performance (Dimensions)*

Sex				
	t	*p*	Mean Feminine	Mean Masculine
Contextual Performance	-.427	.708	3.9564	3.8917
Task Performance	-1.440	.286	3.9394	3.7465
Counterproductive Work Behavior	-.005	.676	2.4800	2.4792
Management position				
	t	*p*	Mean Leader	Mean Non-Leader
Contextual Performance	2.450	.472	4.2138	3.8135
Task Performance	1.630	.189	4.0230	3.7815
Counterproductive Work Behavior	-1.430	.229	2.3034	2.5486

Test of hypotheses

After the analysis of metric qualities and the investigation of relationships of demographic variables, the last step has been to verify the hypotheses of the study. For the purpose of testing of hypotheses of the study test of linear regressions has been used to analyze the data, as shown in the Table 19 and Table 20 (Table 19, 20, Annex H).

Hypothesis 1

Psychological Flexibility positively relates to Individual Work Performance.

The primary effect of the study, being Psychological Flexibility on Individual Work Performance has been investigated considering each dimension of the scale, represented in the following hypotheses respectfully:

H1.1: Psychological Flexibility will positively relate with IWPQ Contextual Performance.
H1.2: Psychological Flexibility will positively relate with IWPQ Task Performance.
H1.3: Psychological Flexibility will negatively relate to the IWPQ Counterproductive Work Behavior.

Table 19 – *Linear Regression Between Psychological Flexibility and Individual Work Performance Dimensions*

Predicting Variable	Criterion Variable	R^2	β	*p*
Psychological Flexibility	Contextual Performance	0,284	.388	.000*
	Task Performance	0,410	.416	.000*
	Counterproductive Work Behavior	0,141	-.282	.000*

*Note: p<0,001

The application of simple linear regression showed that there is a significant positive correlation between Psychological Flexibility and Contextual Performance (R^2=0,284; β=.388; p=.000). It can be concluded that the predicting variable is responsible for 28,4% of Contextual Performance.

In regards to the relationship between Psychological Flexibility and Task performance, the significant and positive correlations can also be observed (R^2=0,410; β=.416; p=.000). In this relationship Psychological Flexibility is responsible for the 41,0% of Task Performance.

As to the relationship between Psychological Flexibility and Counterproductive behavior, the data has indicated that there is significant negative correlation (R^2=0,141; β=-.282; p=.000).

Such results confirm the hypothesis H1, showing the significant effect of Psychological Flexibility on Individual Work Performance.

Hypothesis 2

Executing leadership position at workplace will moderate the relationship between Psychological Flexibility and Individual Work Performance.

To test the second hypothesis of the study a multiple linear regression has been carried out. The analysis has indicated that there is no moderation effect of executing leadership position on the relationship between Psychological Flexibility and Individual Work Performance. Specifically, there has not been a moderation effect for Psychological Flexibility and Contextual Performance (R^2_a=0,283; β=.038; p=.169), for Psychological Flexibility and Task Performance (R^2_a=0,404; β=.002; p=.925), as well as Psychological Flexibility and Counterproductive behavior (R^2_a=0,129; β=-.022; p=.478) (Table 20, Annex H).

In this way the second hypothesis has not been confirmed, and it has been visible that there is no moderation effect of being a manager on the relationship between Psychological Flexibility and Individual Work Performance.

Table 20 - *Results of Multiple Linear Regression for Moderation Effect of Management Position and Interaction between Psychological Flexibility and Dimensions of IWPQ*

Predicting Variable*	Criterion Variable	R^2_a	β	*p*
PF and Contextual Performance	Leadership (management) Position	0,283	.038	.169
PF and Task Performance		0,404	.002	.925
PF and Counterproductive Work Behavior		0,129	-.022	.478

* Interaction between Psychological Flexibility and Dimensions of IWPQ

DISCUSSION

Psychological Flexibility is a concept that existed in the area of clinical psychology for some time, and has been very recently introduced in the area of organizational psychology. Since then, several studies have examined its relationship with work performance; however (to our best knowledge), none of them focused specifically on its relationship with Contextual, Task performance, and Counterproductive Work Behavior. The goal of this research has been to verify whether such relationships exist (H1), and, if so, whether executing management position would have a moderating effect on it (H2).

This research was intended as a little stone to be added to the building of knowledge in the area of industrial and organizational psychology, because it explores the areas that have not been studied yet. The results that this study brings grow the body of knowledge on Psychological Flexibility, how it relates to the three components of Individual Work Performance, as well as the organizational benefits of the relationship between the two.

In order to answer the questions in the study, two scales have been used – Work-related Acceptance and Action Questionnaire (WAAQ) to measure Psychological Flexibility, and Individual Work Performance Questionnaire (IWPQ) to assess Contextual, Task performance, and Counterproductive Work Behavior. The WAAQ scale had replies in each category for each question, with the only exception to the item 2, that didn't have a reply in the category (1) - "Never true". The item has not been eliminated, as its parameters of Skewness and Kurtosis have not surpassed the normal distribution levels of (<|3|) for Skewness and (<|8|) for Kurtosis (Kline, 2005). The Exploratory Factor Analysis showed the existence of only one dimension of the scale, which matched that declared by the authors (Bond, Lloyd, & Guenole, 2013). As to the reliability of the scale, WAAQ has presented internal consistency of α=0,89, which happened to be slightly greater than the value of Cronbach's Alpha that was indicated by the authors of the scale (α=0,83) (Bond, Lloyd & Guenole, 2013).

The Individual Work Performance scale has been used to measure Contextual, Task performance and Counterproductive Work Behavior of the respondents. The scale has presented a response for each category in each item, except for the item 11 that has not had a response in the category (1) - "Seldom". The item has not been eliminated due to the acceptable values of

Skewness (<|3|) and Kurtosis (<|8|) (Kline, 2005). The Exploratory Factor Analysis showed existence of 3 categories, which matched the number of the original scale's dimensions declared by the authors (Koopmans et a., 2014). In the process of examination of the scale's metric qualities the two items, namely 6 and 10 have been eliminated, as these items had the factor value inferior to 0,5. In regard to reliability of the IWPQ scale, the coefficient of each dimension of the scale showed to be good when individually standing: the dimension of Task Performance α=0,79, dimension of Contextual Performance α=0,81, and dimension of Counterproductive behavior α=0,78.

The test of relationship between Psychological Flexibility and such demographic variables as Sex, Age, and Education level revealed that only Age is significantly correlated with Psychological Flexibility (r=.286; p=.003), showing that the older is the employee the higher is their level of Psychological Flexibility. These findings are significant, as younger employees may be more in need of trainings directed on augmenting the levels of Psychological Flexibility. Companies may find it helpful to include the Flexibility training into orientations of new employees in order to reinforce their Contextual and Task performance and prevent actions that are attributed to Counterproductive Work Behavior. When testing for differences in the levels of Psychological Flexibility between those who execute Management position and those who declared to not be in the leadership, significantly greater levels of Psychological Flexibility (p=.000) have been found in the former group than the latter. This leads us to believe that mangers are able to function more efficiently in the face of internal events, such as feelings, doubts, memories and emotions; they are able to better focus their cognitive abilities toward achieving set goals.

The relationship between demographic variables of Age, Sex, Education level and executing Management position at work and Individual Work Performance dimensions showed no statistically significant differences between participants.

When testing hypotheses of the study, the first step was to verify the existence of significant and positive relationship between Psychological Flexibility and such dimensions of Individual Work Performance as Contextual Performance and Task Performance; and significant negative correlation with Counterproductive Work Behavior dimension. The primary effect expressed in hypothesis H1 has been confirmed, as Psychological Flexibility showed significant

positive correlations with Contextual and Task performance, as well as a significant negative correlation with Counterproductive Work Behavior.

Respondents with higher levels of Psychological Flexibility tend to have greater levels of Contextual and Task performance, and significantly lower levels of Counterproductive Work Behavior. Contextual performance consists of behaviors that reinforce individual, social, organizational, and psychological levels of interactions within the organization (Koopmans et al., 2011). The findings from confirmed hypothesis suggest that with increase of one's levels of Psychological Flexibility an individual will have an increase of behaviors that contribute to organizational effectiveness, such as taking initiatives, performing tasks with enthusiasm, or simply following organizational guidelines. Positive correlation with Task performance also suggests that with augmentation of Psychological Flexibility levels, an individual would be able to contribute more effectively to the core tasks of the organization. Furthermore, increase in levels of Psychological Flexibility should result in fewer behaviors that are directed to harm the organization, its well-being, and prevent form achieving its goals.

These findings are considered valuable, as Psychological Flexibility is an individual characteristic that can be trained and augmented (Bond, Hayes, & Barnes-Holmes, 2013; Bond, Lloyd, & Guenole, 2013).

Though effect of Psychological Flexibility on performance of employees has been previously looked at (Bond & Bunce, 2000; Bond & Bunce, 2003; Bond & Flaxman, 2006; Bond, Flaxman, & Bunce, 2008) there has not been a study that would use a self-report scale to measure the Individual Work Performance and that included such dimensions as Contextual and Task Performance, and Counterproductive Work Behaviors. It is true that self-report measures of performance tend to show levels that are somewhat higher than manager reports (Koopmans et al., 2012). However, in the setting of an organization, a self-rating instrument provides noteworthy benefits. When talking about person's emotions and internal events that are involved in our everyday lives, a self-report scale allows for maintaining the privacy of individuals' personal lives, which is important to consider in the workplace setting. Using a self-report scale would also allow Human Resources professionals to evaluate workers progress longitudinally, with lower costs (as it is easier to collect and process), and would permit assessing each dimension separately, if needed.

When testing the second hypothesis, executing a management (leadership) position showed to have no moderating effect on the relationship between Psychological Flexibility and Individual Work Performance, thus not confirming the second hypothesis H2. The results have shown no statistical significance, however, it is important to note that significant differences in Psychological Flexibility levels noticed in those who execute Management function suggest that there might be an important relationship between the two variables. Considering that the sample of managers has been notably low (n=29), further research in this area is required.

Limitations and suggestions for future research

It is important to acknowledge that this study is not without limitations. The first one of them would be the number of respondents (N=103) and the method of collecting the data. Even though it was possible to obtain results with such a small sample, the results of statistical testing are more reliable when the sample is greater (Maxwell, Kelley, & Rausch, 2008). For future studies it is suggested that a larger sample is collected, in order to receive results that would be even more representative and consistent. The method of collecting the data is also considered an impediment of the study, as there has been no way of controlling the environment in which participants were responding to the questions and individuals may have been reluctant to sending an email to the address provided in the questionnaire for any clarifications and questions.

In addition, the sample size of managers for this study is regarded to be another limitation. Unfortunately, only 28.2% (n=29) of the sample has responded "yes" when asked if they are executing a management function. It is likely that this limitation may have affected the results obtained during the test of the second hypothesis. Once again, future studies should be conducted with a larger sample of the population representing those who are in a management position at their places of work.

The results obtained have been gathered from a very diverse sample with participants from various countries and nationalities. For the future studies it would be interesting to conduct a similar research in each of the represented nationalities and see whether the national culture of respondents have any influence on the relationship between the variables.

Practical Implications of the Study

Psychological Flexibility characteristic is beneficial for organizations that are working in the fast-changing environment of the current era and require a lot of agility, adaptation and high performance from each employee, as it seeks to empower an individual to focus on the values and goals in front of him and have the best use of resources at hand in any context that this individual is found in (Bond, Hayes, and Barnes-Holmes, 2006; Bond, Lloyd, Flaxman, & Archer, 2016).

The main contribution of this study is the confirmed relationship between Psychological Flexibility and the dimensions of Individual Work Performance. The positive relationship between Psychological Flexibility and Contextual and Task Performance are significant, as it shows that with the increase of Flexibility the behaviors that support individual effectiveness in organization will also grow in the favorable direction. Thus working on augmenting Psychological Flexibility of company workers should increase their task efficiency, support organization's internal environment, and promote behaviors that are directed towards achieving organizational goals.

Additionally, the negative correlation of Psychological Flexibility and Counterproductive Work Behavior suggests that it is possible to decrease individual's voluntary actions that are harmful for the organization. Development and augmentation of Psychological Flexibility in employees not only benefits the organizational performance, but also able to prevents actions that can sabotage it.

Current research adds to the body of knowledge on Individual Work Performance and organizations and individuals seeking to improve in this area will benefit from considering this study.

REFERENCES

Abasi, E., Fti, L., Molodi, R., & Zarabi, H. (2013). Psychometric properties of Persian version of acceptance and action questionnaire-ii.

Barbosa, L. M., & Murta, S. G. (2015). Propriedades psicométricas iniciais do Acceptance and Action Questionnaire-II-versão brasileira. *Psico-USF*, *20*(1), 75-85.

Beal, D. J., Weiss, H. M., Barros, E., & MacDermid, S. M. (2005). An episodic process model of affective influences on performance. *Journal of Applied psychology*, *90*(6), 1054.

Bishop, S. R., Lau, M., Shapiro, S., Carlson, L., Anderson, N. D., Carmody, J., ... & Devins, G. (2004). Mindfulness: A proposed operational definition. *Clinical psychology: Science and practice*, *11*(3), 230-241.

Block, J. H., & Block, J. (2014). The role of ego-control and ego-resiliency in the organization of behavior. In *Development of cognition, affect, and social relations* (pp. 49-112). Psychology Press.

Boelen, P. A., & Reijntjes, A. (2008). Measuring experiential avoidance: Reliability and validity of the Dutch 9-item acceptance and action questionnaire (AAQ). *Journal of Psychopathology and Behavioral Assessment*, *30*(4), 241-251.

Bond, F. W., & Bunce, D. (2000). Mediators of change in emotion-focused and problem-focused worksite stress management interventions. *Journal of occupational health psychology*, *5*(1), 156.

Bond, F. W., & Bunce, D. (2003). The role of acceptance and job control in mental health, job satisfaction, and work performance. *Journal of applied psychology*, *88*(6), 1057.

Bond, F. W., & Flaxman, P. E. (2006). The ability of psychological flexibility and job control to predict learning, job performance, and mental health. *Journal of Organizational Behavior Management*, *26*(1-2), 113-130.

Bond, F. W., Flaxman, P. E., & Bunce, D. (2008). The influence of psychological flexibility on work redesign: Mediated moderation of a work reorganization intervention. *Journal of Applied Psychology*, *93*(3), 645.

Bond, F. W., & Hayes, S. C. (2002). ACT at work. *Handbook of brief cognitive behaviour therapy*, 117-140.

Bond, F. W., Hayes, S. C., Baer, R. A., Carpenter, K. M., Guenole, N., Orcutt, H. K., ... & Zettle, R. D. (2011). Preliminary psychometric properties of the Acceptance and Action Questionnaire–II: A revised measure of psychological inflexibility and experiential avoidance. *Behavior therapy*, *42*(4), 676-688.

Bond, F. W., Hayes, S. C., & Barnes-Holmes, D. (2006). Psychological flexibility, ACT, and organizational behavior. *Journal of Organizational Behavior Management*, *26*(1-2), 25-54.

Bond, F. W., Lloyd, J., Flaxman, P. E., & Archer, R. (2016). Psychological flexibility and ACT at work. *The Wiley Handbook of Contextual Behavioral Science*, 459-482.

Bond, F. W., Lloyd, J., & Guenole, N. (2013). The work‐related acceptance and action questionnaire: Initial psychometric findings and their implications for measuring psychological flexibility in specific contexts. *Journal of Occupational and Organizational Psychology*, *86*(3), 331-347.

Borman, W. C., & Motowidlo, S. M. (1993). Expanding the criterion domain to include elements of contextual performance. *Personnel Selection in Organizations; San Francisco: Jossey-Bass*, 71.

Brown, K. W., & Ryan, R. M. (2003). The benefits of being present: mindfulness and its role in psychological well-being. *Journal of personality and social psychology*, *84*(4), 822.

Calarco, A., & Gurvis, J. (2006). Flexible flyers: A leader's framework for developing adaptability. *Leadership in Action: A Publication of the Center for Creative Leadership and Jossey‐Bass*, *25*(6), 14-16.

Campbell, J. P. (1990). Modeling the performance prediction problem in industrial and organizational psychology.

Costa, P. T., & McCrae, R. R. (1985). The NEO personality inventory.

Dådermana, A. M., Ingelgårda, A., & Koopmansb, L. (2018). Cross-Cultural Adaptation, from Dutch to Swedish Language, of the Individual Work Performance Questionnaire.

Deval, C., Bernard-Curie, S., & Monestès, J. L. (2017). Effects of an acceptance and commitment therapy intervention on leaders' and managers' psychological flexibility. *Journal de Therapie Comportementale et Cognitive*, *27*(1), 34-42.

Fletcher, L., & Hayes, S. C. (2005). Relational frame theory, acceptance and commitment therapy, and a functional analytic definition of mindfulness. *Journal of rational-emotive and cognitive-behavior therapy*, *23*(4), 315-336.

Ford, M. T., Cerasoli, C. P., Higgins, J. A., & Decesare, A. L. (2011). Relationships between psychological, physical, and behavioural health and work performance: A review and meta-analysis. *Work & Stress*, *25*(3), 185-204.

Frijda, N. H. (1988). The laws of emotion. *American psychologist*, *43*(5), 349.

George, J. M. (2000). Emotions and leadership: The role of emotional intelligence. *Human relations*, *53*(8), 1027-1055.

Gloster, A. T., Klotsche, J., Chaker, S., Hummel, K. V., & Hoyer, J. (2011). Assessing psychological flexibility: What does it add above and beyond existing constructs?. *Psychological assessment*, *23*(4), 970.

Goleman, D. (1999). What makes a leader?. *Clinical laboratory management review: official publication of the Clinical Laboratory Management Association*, *13*(3), 123-131.

Goleman, D. (2001). Emotional intelligence: Issues in paradigm building. *The emotionally intelligent workplace*, *13*, 26.

Gregg, J. A. (2004). *A randomized controlled effectiveness trial comparing patient education with and without acceptance and commitment therapy for type 2 diabetes self-management* (Doctoral dissertation, University of Nevada, Reno).

Gross, J. J. (1998). Antecedent-and response-focused emotion regulation: divergent consequences for experience, expression, and physiology. *Journal of personality and social psychology*, *74*(1), 224.

Gross, J. J., & Muñoz, R. F. (1995). Emotion regulation and mental health. *Clinical psychology: Science and practice*, *2*(2), 151-164.

Hayes, S., & Batten, S. V. (2000). Acceptance and Commitment Therapy: ACT–A radical behavioral approach. *European Psychotherapy*, *1*, 2-9.

Hayes, S. C., Luoma, J. B., Bond, F. W., Masuda, A., & Lillis, J. (2006). Acceptance and commitment therapy: Model, processes and outcomes. *Behaviour research and therapy*, *44*(1), 1-25.

Hayes, S. C., Pistorello, J., & Levin, M. E. (2012). Acceptance and commitment therapy as a unified model of behavior change. *The Counseling Psychologist*, *40*(7), 976-1002.

Hayes, S. C., Strosahl, K., & Wilson, K. G. (1999). Acceptance and Commitment Therapy: An experiential approach to behavior change. New York: Guilford Press.

Hayes, S. C., Strosahl, K., Wilson, K. G., Bissett, R. T., Pistorello, J., Toarmino, D., ... & Stewart, S. H. (2004). Measuring experiential avoidance: A preliminary test of a working model. *The psychological record*, *54*(4), 553-578.

Kaiser, R. B., & Overfield, D. V. (2010). Assessing flexible leadership as a mastery of opposites. *Consulting Psychology Journal: Practice and Research*, *62*(2), 105.

Kline, R. B. (2005). Principles and practice of structural equation modeling 2nd ed. *New York: Guilford*.

Koopmans, L. (2014). Measuring individual work performance.

Koopmans, L., Bernaards, C. M., Hildebrandt, V. H., Schaufeli, W. B., de Vet Henrica, C. W., & van der Beek, A. J. (2011). Conceptual frameworks of individual work performance: a systematic review. *Journal of occupational and environmental medicine*, *53*(8), 856-866.

Koopmans, L., Coffeng, J. K., Bernaards, C. M., Boot, C. R., Hildebrandt, V. H., de Vet, H. C., & van der Beek, A. J. (2014). Responsiveness of the individual work performance questionnaire. *BMC public health*, *14*(1), 513.

Kotterman, J. (2006). Leadership versus management: what's the difference?. *The Journal for Quality and Participation*, *29*(2), 13.

Kuo, C. C., Ye, Y. C., Chen, M. Y., & Chen, L. H. (2018). Psychological Flexibility at Work and Employees' Proactive Work Behaviour: Cross‐Level Moderating Role of Leader Need for Structure. *Applied Psychology*, *67*(3), 454-472.

Latzman, R. D., & Masuda, A. (2013). Examining mindfulness and psychological inflexibility within the framework of Big Five personality. *Personality and Individual Differences*, *55*(2), 129-134.

Maccoby, M. (2000). The human side: Understanding the difference between management and leadership. *Research-Technology Management*, *43*(1), 57-59.

Mairal, J. B. (2004). Spanish adaptation of the Acceptance and Action Questionnaire (AAQ). *International Journal of Psychology and Psychological Therapy*, *4*(3), 505-515.

Maroco, J., & Garcia-Marques, T. (2006). Qual a fiabilidade do alfa de Cronbach? Questões antigas e soluções modernas?. *Laboratório de psicologia*, 65-90.

Maxwell, S. E., Kelley, K., & Rausch, J. R. (2008). Sample size planning for statistical power and accuracy in parameter estimation. *Annu. Rev. Psychol.*, *59*, 537-563.

Moran, D. J. (2011). ACT for leadership: Using acceptance and commitment training to develop crisis-resilient change managers. *International Journal of Behavioral Consultation and Therapy*, *7*(1), 66.

Motowildo, S. J., Borman, W. C., & Schmit, M. J. (1997). A theory of individual differences in task and contextual performance. *Human performance*, *10*(2), 71-83.

Murphy, K. R. (1990). Job performance and productivity. *Psychology in organizations: Integrating science and practice*, *157*, 176.

Newman, J. P., & Lorenz, A. R. (2003). Response modulation and emotion processing: Implications for psychopathy and other dysregulatory psychopathology. *Handbook of affective sciences*, 904-929.

Nolen-Hoeksema, S., Wisco, B. E., & Lyubomirsky, S. (2008). Rethinking rumination. *Perspectives on psychological science*, *3*(5), 400-424.

Novaes, V. P., Ferreira, M. C., & Valentini, F. (2018). Psychological Flexibility as a Moderator of the Relationships between Job Demands and Resources and Occupational Well-being. *The Spanish journal of psychology*, *21*.

Podsakoff, P. M., MacKenzie, S. B., Paine, J. B., & Bachrach, D. G. (2000). Organizational citizenship behaviors: A critical review of the theoretical and empirical literature and suggestions for future research. *Journal of management*, *26*(3), 513-563.

Robinson, S. L., & Bennett, R. J. (1995). A typology of deviant workplace behaviors: A multidimensional scaling study. *Academy of management journal*, *38*(2), 555-572.

Rotundo, M., & Sackett, P. R. (2002). The relative importance of task, citizenship, and counterproductive performance to global ratings of job performance: A policy-capturing approach. *Journal of applied psychology*, *87*(1), 66.

Ruiz, F. J., & Odriozola-González, P. (2017). The Predictive and moderating role of psychological flexibility in the development of job burnout. *Universitas Psychologica*, *16*(4), 282-289.

Ruiz, F. J., Suárez-Falcón, J. C., Cárdenas-Sierra, S., Durán, Y., Guerrero, K., & Riaño-Hernández, D. (2016). Psychometric properties of the Acceptance and Action Questionnaire–II in Colombia. *The Psychological Record*, *66*(3), 429-437.

Salovey, P., & Mayer, J. D. (1990). Emotional intelligence. *Imagination, cognition and personality*, *9*(3), 185-211.

Sauer, S., & Kohls, N. (2011). Mindfulness in leadership: does being mindful enhance leaders' business success?. In *Culture and neural frames of cognition and communication* (pp. 287-307). Springer, Berlin, Heidelberg.

Scheier, M. F., & Carver, C. S. (1988). A model of behavioral self-regulation: Translating intention into action. In *Advances in experimental social psychology* (Vol. 21, pp. 303-346). Academic Press.

Sinclair, R. C., & Mark, M. M. (1992). The influence of mood state on judgment and action: Effects on persuasion, categorization, social justice, person perception, and judgmental accuracy.

Tangen, S. (2005). Demystifying productivity and performance. *International Journal of Productivity and performance management*, *54*(1), 34-46.

Thorndike, E. L. (1920). Intelligence and its uses. *Harper's magazine*.

Urbina, S. (2014). *Essentials of psychological testing*. John Wiley & Sons.

Viswesvaran, C., & Ones, D. S. (2000). Perspectives on models of job performance. *International Journal of Selection and Assessment*, *8*(4), 216-226.

Widyastuti, T., & Hidayat, R. (2018). Adaptation of Individual Work Performance Questionnaire (IWPQ) into Bahasa Indonesia. *International Journal of Research*, *7*(2), 101-112.

Yukl, G., & Mahsud, R. (2010). Why flexible and adaptive leadership is essential. *Consulting Psychology Journal: practice and research*, *62*(2), 81.

Zaleznik, A. (1992). Managers and leaders: are they different?. *Harvard Business Review*, *70*(2), 126-135.

Zhang, C. Q., Chung, P. K., Si, G., & Liu, J. D. (2014). Psychometric properties of the Acceptance and Action Questionnaire–II for Chinese college students and elite Chinese athletes. *Measurement and Evaluation in Counseling and Development*, *47*(4), 256-270.

ANNEXES

ANNEX A – QUESTIONNAIRE

This questionnaire serves as a part of an academic research project for the completion of Masters degree of a student of the 5th year of Organizational and Social Psychology from ISPA - Instituto Universitário.

The goal of this questionnaire is to understand the relationship between personal characteristics and work performance.

The following questionnaire consists of 31 questions and should not take more than 5 minutes to fill out. There are no correct or wrong answers to the questions. Please try to answer every question as honestly as possible.

Nowhere in the study will you be ask to share your name, email or the name of the company you work for. All the responses collected will be used for the academic purposes only and will not be otherwise shared publicly or affect your work.

By answering this questionnaire you are giving your informed consent answering the questions voluntarily, confidentially and anonymously. If you wish to stop your participation, you can do so at any given moment without any negative consequences.

Should you have any questions, please feel free to contact me at 24317@alunos.ispa.pt email address.

Thank you for your participation and input to science!

~ Oleksandra Zabolotna

Please read each statement and on the scale of 1 to 7, mark how true each statement is for you. (1 = Never true and 7 = Always true)

	1	2	3	4	5	6	7
1. I am able to work effectively in spite of any personal worries that I have							
2. I can admit to my mistakes at work and still be successful							
3. I can still work very effectively, even if I am nervous about something							
4. Worries do not get in the way of my success							
5. I can perform as required no matter how I feel							
6. I can work effectively, even when I doubt myself							
7. My thoughts and feelings do not get in the way of my work							

On the scale of 1 to 5 please mark how true each of the statements have been for you in the past 3 month (1= Seldom or Never and 5 = Always or Often, depending on the question).

In the past 3 months…	1	2	3	4	5
1. ... my planning was optimal.					
2. ... I managed to plan my work so that it was done on time.					
3. ... I kept in mind the results that I had to achieve in my work.					
4. ... I was able to perform my work well with minimal time and effort.					
5. ... I was able to separate main issues from side issues at work.					
6. ... I took on extra responsibilities.					
7. ... I started new tasks myself, when my old ones were finished.					
8. ... I kept looking for new challenges in my job.					
9. ... I took on challenging work tasks, when available.					
10. ... I came up with creative solutions to new problems.					
11. ... I worked at keeping my job knowledge up-to-date.					
12. ... I worked at keeping my job skills up-to-date.					
13. ... I actively participated in work meetings.					

14. ... I spoke with people from outside the organization about the negative aspects of my work.					
15. ... I complained about unimportant matters at work.					
16. ... I made problems greater than they were at work.					
17. ... I focused on the negative aspects of a work situation, instead of on the positive aspects.					
18. ... I spoke with colleagues about the negative aspects of my work.					

Please answer the following questions to the best of your knowledge. This information serves only to describe the population that is taking part in the questionnaire and is not going to be used in any way aside from this academic research.

1. What is your age?
2. What is your sex?

□ Female

□ Male

3. What is your nationality?
4. What is your education level?

□ High-school or lower

□ Bachelor's degree

□ Masters degree or higher

5. Are you currently hired by a company?

□ Yes

□ No

6. Are you executing a management function?

□ Yes

□ No

Thank you for your participation and input to science!

If you have any questions or comments, please feel free to contact through email: 24317@alunos.ispa.pt

ANNEX B – DESCRIPTIVE STATISTICS OF THE SAMPLE

What is your sex?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	48	46.6	46.6	46.6
	Female	55	53.4	53.4	100.0
	Total	103	100.0	100.0	

What is your education level?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	HS or lower	14	13.6	13.6	13.6
	Bach. Degree	52	50.5	50.5	64.1
	Mast. or higher	37	35.9	35.9	100.0
	Total	103	100.0	100.0	

Are you executing a management function?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	29	28.2	28.2	28.2
	No	74	71.8	71.8	100.0
	Total	103	100.0	100.0	

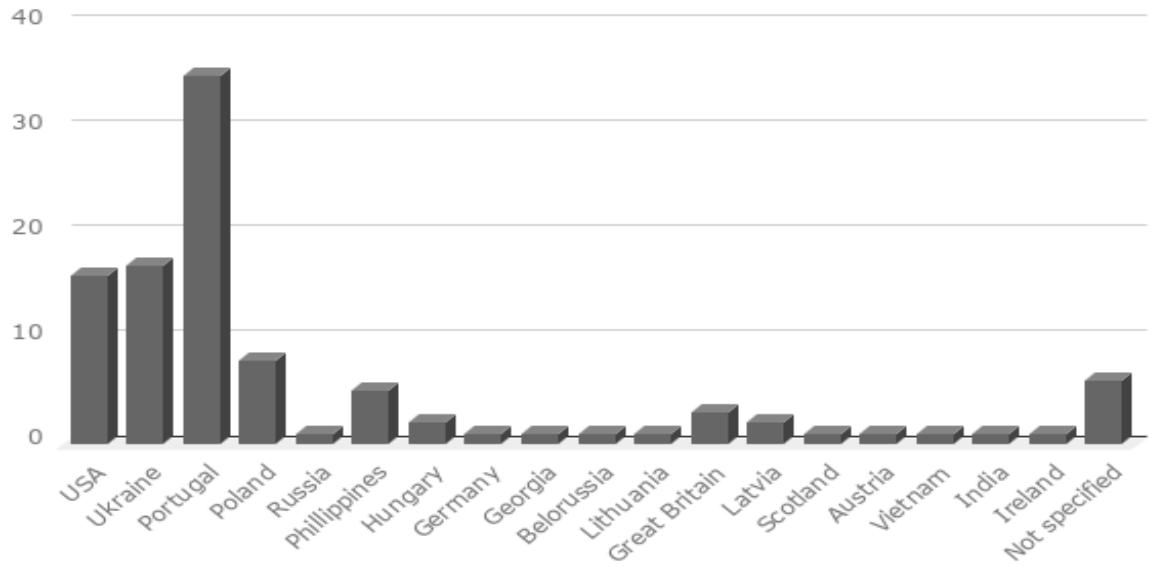
What is your age?

N	Valid	103
	Missing	0
Mean		34.67
Median		31.00
Skewness		.955
Std. Error of Skewness		.238
Kurtosis		.033
Std. Error of Kurtosis		.472
Minimum		20
Maximum		67

Age Classes

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	[20-30]	47	45.6	45.6	45.6
	[31-40]	29	28.2	28.2	73.8
	[41-59]	23	22.3	22.3	96.1
	[=>60]	4	3.9	3.9	100.0
	Total	103	100.0	100.0	

Nationality



ANNEX C – METRIC QUALITIES OF WAAQ SCALE

Validity - Exploratory Factor Analysis

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4,279	61,129	61,129	4,279	61,129	61,129
2	,858	12,255	73,385			
3	,576	8,228	81,612			
4	,412	5,890	87,503			
5	,364	5,195	92,697			
6	,312	4,462	97,159			
7	,199	2,841	100,000			

Extraction Method: Principal Component Analysis.

Reliability

Reliability Statistics

Cronbach's Alpha	N of Items
,893	7

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
PF1. I am able to work effectively in spite of any personal worries that I have	29,66	38,579	,761	,869
PF2. I can admit to my mistakes at work and still be successful	28,60	47,654	,391	,906
PF3. I can still work very effectively, even if I am nervous about something	29,74	38,117	,784	,866
PF4. Worries do not get in the way of my success	29,83	39,237	,695	,877
PF5. I can perform as required no matter how I feel	29,85	38,479	,766	,868
PF6. I can work effectively, even when I doubt myself	29,60	41,948	,645	,883
PF7. My thoughts and feelings do not get in the way of my work	29,85	38,420	,780	,867

Sensitivity

Statistics

		1. I am able to work effectively in spite of any personal worries that I have	2. I can admit to my mistakes at work and still be successful	3. I can still work very effectively, even if I am nervous about something	4. Worries do not get in the way of my success	5. I can perform as required no matter how I feel	6. I can work effectively, even when I doubt myself	7. My thoughts and feelings do not get in the way of my work
N	Valid	103	103	103	103	103	103	103
	Missing	0	0	0	0	0	0	0
Skewness		-,793	-1,339	-,774	-,682	-,385	-,557	-,324
Std. Error of Skewness		,238	,238	,238	,238	,238	,238	,238
Kurtosis		-,158	2,785	,141	-,093	-,747	,029	-,392
Std. Error of Kurtosis		,472	,472	,472	,472	,472	,472	,472
Minimum		1	2	1	1	1	1	1
Maximum		7	7	7	7	7	7	7

General Sensitivity of WAAQ Scale

	N	Minimum	Maximum	Mean	Std. Deviation	Variance	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
PF	103	1.86	7.00	4.9320	1.04937	1.101	-.635	.238	-.111	.472
Valid N (listwise)	103									

ANNEX D – METRIC QUALITIES OF IWPQ SCALE

Validity - Exploratory Factor Analysis

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5,324	29,575	29,575	5,324	29,575	29,575	3,513	19,515	19,515
2	2,473	13,739	43,314	2,473	13,739	43,314	3,340	18,554	38,069
3	1,896	10,531	53,846	1,896	10,531	53,846	2,840	15,777	53,846
4	1,239	6,883	60,729						
5	1,000	5,554	66,283						
6	,933	5,182	71,465						
7	,792	4,402	75,867						
8	,673	3,740	79,607						
9	,619	3,437	83,044						
10	,512	2,844	85,888						
11	,448	2,487	88,375						
12	,415	2,304	90,678						
13	,373	2,075	92,753						
14	,329	1,829	94,582						
15	,318	1,766	96,349						
16	,279	1,550	97,898						
17	,225	1,248	99,146						
18	,154	,854	100,000						

Extraction Method: Principal Component Analysis.

Rotated Component Matrix[a]

	Component		
	1	2	3
12. ... I worked at keeping my job skills up-to-date.	,810		
8. ... I kept looking for new challenges in my job.	,792		
11. ... I worked at keeping my job knowledge up-to-date.	,791		
9. ... I took on challenging work tasks, when available.	,679		
13. ... I actively participated in work meetings.	,612		
10. ... I came up with creative solutions to new problems.			
2. ... I managed to plan my work so that it was done on time.		,788	
1. ... my planning was optimal.		,782	
4. ... I was able to perform my work well with minimal time and effort.		,729	
3. ... I kept in mind the results that I had to achieve in my work.		,577	
5. ... I was able to separate main issues from side issues at work.		,576	
7. ... I started new tasks myself, when my old ones were finished.		,548	
6. ... I took on extra responsibilities.			
16. ... I made problems greater than they were at work.			,781
15. ... I complained about unimportant matters at work.			,777
18. ... I spoke with colleagues about the negative aspects of my work.			,753
17. ... I focused on the negative aspects of a work situation, instead of on the positive aspects.			,686
14. ... I spoke with people from outside the organization about the negative aspects of my work.			,609

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

Reliability of IWPQ scale

Reliability Statistics

Cronbach's Alpha	N of Items
,699	16

Item-Total Statistics

	Cronbach's Alpha if Item Deleted
14. ... I spoke with people from outside the organization about the negative aspects of my work.	,714
15. ... I complained about unimportant matters at work.	,714
16. ... I made problems greater than they were at work.	,702
17. ... I focused on the negative aspects of a work situation, instead of on the positive aspects.	,725
18. ... I spoke with colleagues about the negative aspects of my work.	,689
1. ... my planning was optimal.	,678
2. ... I managed to plan my work so that it was done on time.	,668
3. ... I kept in mind the results that I had to achieve in my work.	,676
4. ... I was able to perform my work well with minimal time and effort.	,685
5. ... I was able to separate main issues from side issues at work.	,684
7. ... I started new tasks myself, when my old ones were finished.	,666
8. ... I kept looking for new challenges in my job.	,653
9. ... I took on challenging work tasks, when available.	,673
11. ... I worked at keeping my job knowledge up-to-date.	,679
12. ... I worked at keeping my job skills up-to-date.	,671
13. ... I actively participated in work meetings.	,670

Reliability of Contextual Performance dimension

Reliability Statistics

Cronbach's Alpha	N of Items
,810	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
IWP12. ... I worked at keeping my job skills up-to-date.	15,59	10,303	,665	,759
IWP8. ... I kept looking for new challenges in my job.	15,87	8,719	,702	,738
IWP11. ... I worked at keeping my job knowledge up-to-date.	15,55	10,857	,586	,781
IWP9. ... I took on challenging work tasks, when available.	15,75	9,387	,619	,766
IWP13. ... I actively participated in work meetings.	15,76	9,637	,482	,817

Reliability of Task Performance dimension

Reliability Statistics

Cronbach's Alpha	N of Items
,798	6

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
IWP2. ... I managed to plan my work so that it was done on time.	19,19	11,256	,636	,747
IWP1. ... my planning was optimal.	19,50	12,096	,580	,761
IWP4. ... I was able to perform my work well with minimal time and effort.	19,53	11,643	,621	,751
IWP3. ... I kept in mind the results that I had to achieve in my work.	18,81	13,491	,487	,783
IWP5. ... I was able to separate main issues from side issues at work.	19,13	12,405	,554	,768
IWP7. ... I started new tasks myself, when my old ones were finished.	19,32	11,651	,476	,792

Reliability of Counterproductive Work Behavior dimension

Reliability Statistics

Cronbach's Alpha	N of Items
,780	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
IWP16. ... I made problems greater than they were at work.	10,31	10,706	,621	,720
IWP15. ... I complained about unimportant matters at work.	9,99	10,167	,635	,712
IWP18. ... I spoke with colleagues about the negative aspects of my work.	9,63	9,784	,555	,740
IWP17. ... I focused on the negative aspects of a work situation, instead of on the positive aspects.	10,05	11,027	,539	,744
IWP14. ... I spoke with people from outside the organization about the negative aspects of my work.	9,61	10,573	,454	,776

Sensitivity

General Sensitivity of IWPQ Scale

Statistics

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
N	Valid	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103
	Missing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Skewness		-,569	-,888	-1,535	-,567	-,842	-,785	-1,033	-,800	-,941	-,700	-,609	-,886	-,975	,209	,489	,730	,465	-,042
Std. Error of Skewness		,238	,238	,238	,238	,238	,238	,238	,238	,238	,238	,238	,238	,238	,238	,238	,238	,238	,238
Kurtosis		,347	,347	4,147	-,014	,551	-,020	,463	-,002	,593	,551	-,019	1,091	,201	-,844	-,378	,355	-,214	-1,064
Std. Error of Kurtosis		,472	,472	,472	,472	,472	,472	,472	,472	,472	,472	,472	,472	,472	,472	,472	,472	,472	,472
Minimum		1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1
Maximum		5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5

Sensitivity of IWPQ Dimensions

Sensitivity of Contextual Performance Dimension

	N Statistic	Minimum Statistic	Maximum Statistic	Mean Statistic	Std. Deviation Statistic	Variance Statistic	Skewness Statistic	Skewness Std. Error	Kurtosis Statistic	Kurtosis Std. Error
CP	103	1.40	5.00	3.9262	.76389	.584	-.901	.238	1.012	.472
Valid N (listwise)	103									

Sensitivity of Task Performance Dimension

	N	Minimum	Maximum	Mean	Std. Deviation	Variance	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
TP	103	1.50	5.00	3.8495	.68182	.465	-1.021	.238	1.513	.472
Valid N (listwise)	103									

Sensitivity of Counterproductive Work behavior Dimension

	N	Minimum	Maximum	Mean	Std. Deviation	Variance	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
CWB	103	1.00	4.60	2.4796	.78682	.619	.207	.238	-.214	.472
Valid N (listwise)	103									

ANNEX E – IMPACT OF DEMOGRAPHIC VARIABLES ON PSYCHOLOGICAL FLEXIBILITY

Psychological Flexibility and Age

Correlations

		PF	What is your age?
Psychological Flexibility	Pearson Correlation	1	,286**
	Sig. (2-tailed)		,003
	N	103	103
What is your age?	Pearson Correlation	,286**	1
	Sig. (2-tailed)	,003	
	N	103	103

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

Psychological Flexibility and Education

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1,112	2	,556	,500	,608
Within Groups	111,208	100	1,112		
Total	112,320	102			

Group Statistics

	What is your sex?	N	Mean	Std. Deviation	Std. Error Mean
PF	Male	48	4.7768	1.18937	.17167
	Female	55	5.0675	.89925	.12126

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
PF	Equal variances assumed	3.283	.073	-1.409	101	.162	-.29075	.20628	-.69995	.11846
	Equal variances not assumed			-1.383	86.792	.170	-.29075	.21018	-.70851	.12701

Group Statistics

	Are you executing a management function?	N	Mean	Std. Deviation	Std. Error Mean
PF	Yes	29	5.3202	.65092	.12087
	No	74	4.7799	1.13702	.13218

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
PF	Equal variances assumed	14.796	.000	2.405	101	.018	.54027	.22469	.09455	.98600
	Equal variances not assumed			3.016	87.184	.003	.54027	.17911	.18428	.89627

ANNEX F - IMPACT OF DEMOGRAPHIC VARIABLES ON DIMENSIONS OF INDIVIDUAL WORK PERFORMANCE

Contextual Performance and Age

Correlations

		Contextual Performance	What is your age?
Contextual Performance	Pearson Correlation	1	.190
	Sig. (2-tailed)		.054
	N	103	103
What is your age?	Pearson Correlation	.190	1
	Sig. (2-tailed)	.054	
	N	103	103

Contextual Performance and Education

ANOVA

Contextual Performance

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.298	2	.149	.252	.778
Within Groups	59.221	100	.592		
Total	59.519	102			

Contextual Performance and Sex

Group Statistics

	What is your sex?	N	Mean	Std. Deviation	Std. Error Mean
CP	Male	48	3.8917	.77180	.11140
	Female	55	3.9564	.76273	.10285

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
CP	Equal variances assumed	.141	.708	-.427	101	.670	-.06470	.15149	-.36522	.23582
	Equal variances not assumed			-.427	98.796	.671	-.06470	.15162	-.36554	.23615

Contextual Performance and Management Position

Group Statistics

	Are you executing a management function?	N	Mean	Std. Deviation	Std. Error Mean
CP	Yes	29	4.2138	.64350	.11949
	No	74	3.8135	.78152	.09085

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
CP	Equal variances assumed	.520	.472	2.450	101	.016	.40028	.16339	.07615	.72441
	Equal variances not assumed			2.667	61.805	.010	.40028	.15011	.10020	.70036

Task Performance and Age

Correlations

		Task Performance	What is your age?
Task Performance	Pearson Correlation	1	.115
	Sig. (2-tailed)		.249
	N	103	103
What is your age?	Pearson Correlation	.115	1
	Sig. (2-tailed)	.249	
	N	103	103

Task Performance and Education

ANOVA

Task Performance

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.323	2	.161	.342	.711
Within Groups	47.095	100	.471		
Total	47.417	102			

Task Performance and Sex

Group Statistics

	What is your sex?	N	Mean	Std. Deviation	Std. Error Mean
Task Performance	Male	48	3.7465	.74772	.10792
	Female	55	3.9394	.61142	.08244

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
TP	Equal variances assumed	1.151	.286	-1.440	101	.153	-.19287	.13397	-.45863	.07290
	Equal variances not assumed			-1.420	90.913	.159	-.19287	.13581	-.46264	.07691

Task Performance and Management Position

Group Statistics

	Are you executing a management function?	N	Mean	Std. Deviation	Std. Error Mean
TP	Yes	29	4.0230	.52084	.09672
	No	74	3.7815	.72723	.08454

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
TP	Equal variances assumed	1.752	.189	1.630	101	.106	.24146	.14818	-.05248	.53540
	Equal variances not assumed			1.880	71.189	.064	.24146	.12846	-.01467	.49758

Counterproductive Work Behavior and Age

Correlations

		CWB	What is your age?
CWB	Pearson Correlation	1	-.145
	Sig. (2-tailed)		.145
	N	103	103
What is your age?	Pearson Correlation	-.145	1
	Sig. (2-tailed)	.145	
	N	103	103

Counterproductive Work Behavior and Education

ANOVA

CWB

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.630	2	1.815	3.049	.052
Within Groups	59.517	100	.595		
Total	63.147	102			

Counterproductive Work Behavior and Sex

Group Statistics

	What is your sex?	N	Mean	Std. Deviation	Std. Error Mean
CWB	Male	48	2.4792	.83104	.11995
	Female	55	2.4800	.75385	.10165

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
CWB	Equal variances assumed	.176	.676	-.005	101	.996	-.00083	.15618	-.31066	.30899
	Equal variances not assumed			-.005	95.760	.996	-.00083	.15723	-.31294	.31127

Counterproductive Work Behavior and Management Position

Group Statistics

	Are you executing a management function?	N	Mean	Std. Deviation	Std. Error Mean
CWB	Yes	29	2.3034	.66681	.12382
	No	74	2.5486	.82300	.09567

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
CWB	Equal variances assumed	1.463	.229	-1.430	101	.156	-.24520	.17150	-.58541	.09501
	Equal variances not assumed			-1.567	62.823	.122	-.24520	.15648	-.55791	.06751

ANNEX G – TEST OF HYPOTHESIS

Primary effect – *Effect of Psychological Flexibility on Dimensions of Individual Work Performance*

Psychological Flexibility – Contextual Performance

Model Summary

Model	R	R square	Adjusted R Square	Std. Error of Estimate
1	,533[a]	,284	,276	,64976

a. Predictors: (Constant), PF

Coefficients [a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std.Error	Beta	t	Sig.
1	(Constant)	2,014	,309		6,517	,000
	PF	,388	,061	,533	6,323	,000

a. Dependent Variable: Contextual Performance

Psychological Flexibility – Task Performance

Model Summary

Model	R	R square	Adjusted R Square	Std. Error of Estimate
1	,640[a]	,410	,404	,52628

a. Predictors: (Constant), PF

Coefficients [a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std.Error	Beta	t	Sig.
1	(Constant)	1,797	,250		7,180	,000
	PF	,416	,050	,640	8,379	,000

a. Dependent Variable: Task Performance

Psychological Flexibility – Counterproductive Work Behavior

Model Summary

Model	R	R square	Adjusted R Square	Std. Error of Estimate
1	,376[a]	,141	,133	,73267

a. Predictors: (Constant), PF

Coefficients [a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std.Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	3,870	,349		11,105	,000
	PF	-,282	,069	-,376	-4,079	,000

a. Dependent Variable: Counterproductive Work Behavior

Secondary effect – *Moderating effect of executing a Management function on the relationship between Psychological Flexibility and IWPQ dimensions*

Moderation of interaction between Psychological Flexibility and Contextual Performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of Estimate
1	,545[a]	,297	,283	,64681

a. Predictors: (Constant), Interaction Variable, PF

Coefficients [a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coeff. Beta	t	Sig.
1	(Constant)	2,077	,311		6,679	,000
	PF	,363	,063	,499	5,722	,000
	Interaction variable	,038	,027	,121	1,387	,169

a. Dependent Variable: Contextual Performance

Moderation of interaction between Psychological Flexibility and Task Performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,640[a]	,410	,404	,52628

a. Predictors: (Constant), Interaction Variable, PF

Coefficients [a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std.Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	1,801	,254		7,082	,000
	PF	,415	,052	,638	7,988	,000
	Interaction variable	,002	,022	,008	,094	,925

a. Dependent Variable: Task Performance

Moderation of interaction between Psychological Flexibility and Counterproductive Work Behavior

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,382[a]	,146	,129	,73446

a. Predictors: (Constant), Interaction Variable, PF

Coefficients [a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std.Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	3,834	,353		10,856	,000
	PF	-,268	,072	-,357	-3,714	,000
	Interaction variable	-,022	,031	-,069	-,713	,478

a. Dependent Variable: Counterproductive Work Behavior