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Relation between Job Crafting and Work Engagement: the mediating role of Psychological Well-Being among nurses.

Inês dos Santos Gonçalves Luís

Master in Management,

Supervisor:
Alzira Duarte, Assistant, ISCTE Business School, Department of Human Resources and Organizational Behaviour

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BUSINESS
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Acknowledgements

I´ve come to realize that the saying “You can achieve anything you set your mind to” is true.

After some dreadful years, of learning how to live with the great unpredictability of life, I can stop and enjoy this great victory of mine. It is a victory because it took all I had (and did not have) to finish. It took my biggest moments of despair put to the side. However, I am here and it´s done.

All I can say is that I am the most grateful for my support system. My mom, who is the reason why I started this path in the first place and my dad, who is the reason why I am finishing it. I can surely say, forever, that I know what to be loved and cherished feels like. I was a perfect storm before their eyes; throughout these years, I just felt the perfect side of it.

My brother, who I love deeply, and will forever be my best friend, the sweetest, most caring and most considerate person I have ever met, I am so proud to be your sister.

My grandparents, all four of them, reason enough to be grateful for, but without whose support I would not have been able to have spent these last few years at ISCTE.

To my friends, those who remained and those who entered my life along the way, thank you for the love and the happiness, but also thank you for the lessons you made me learn. To those who will continue to be a part of my life, congrats, you´re something special.

Thank you to my supervisor, Alzira Duarte, who guided me throughout this whole process, never failing to let me know how much she believed in me compared to how much I did. I owe the greatness of this work to you.

We get so caught up in the little things, that often don’t see the big picture. Well, this is a huge picture right here, enjoy it.

Resumo

A presente dissertação tem como objetivo entender de que modo a participação em processos de *job crafting* entre os profissionais do setor da saúde, poderá contribuir para o seu bem-estar psicológico e o impacte subsequente no seu *work engagement*. Procedeu-se à recolha de dados através de um questionário *online*, tendo por referência enfermeiros a exercer no setor da saúde em Portugal. De modo a investigar as relações que se estabelecem entre as três variáveis mencionadas acima, foram realizados vários procedimentos estatísticos, entre os quais um modelo de regressão linear e uma análise de mediação.

Os resultados obtidos permitem identificar, por um lado, correlações significativas entre o *job crafting* e o bem-estar psicológico, entre o bem-estar psicológico e o *work engagement* e, por fim, entre o *job crafting* e o *work engagement* e, numa abordagem um pouco diferente um efeito significativo, parcial de mediação do bem-estar psicológico na relação que se estabelece entre o *job crafting* e o *work engagement*.

Os resultados obtidos realçam a importância de as organizações de saúde reconhecerem e atuarem ao nível das necessidades da sua força de trabalho, fornecendo suporte e recursos para permitir a participação em processos estratégicos de *job crafting*.

Palavras-chave: HealthCare, Job Crafting, Psychological Well-Being, Work Engagement

JEL Classification System

I31 – General Welfare, Well-Being

M54 – Labor Management

Abstract

This dissertation aims to provide insights into how participation in job crafting processes among professionals in the healthcare sector can contribute to their psychological well-being and the subsequent impact on their work engagement. Data was collected through an online questionnaire, having nurses working in the health sector in Portugal as a reference. To investigate the relationships that are established between the variables, several statistical procedures were performed, including a linear regression model and a mediation analysis.

The results obtained allow us to identify, on the one hand, significant correlations between job crafting and psychological well-being, between psychological well-being and work engagement, and, finally, between job crafting and work engagement and, in a slightly different approach, a significant, partial effect of mediation of psychological well-being on the relationship that is established between job crafting and work engagement.

These results show how important it is for healthcare organizations to recognize the unique needs of their employees and provide support and resources to enable crafting inherent strategies.

Keywords: HealthCare, Job Crafting, Psychological Well-Being, Work Engagement

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Acronyms

JC	Job Crafting
JCQ	Job Crafting Questionnaire
KMO	Kaiser-MeyerOlkin
PCA	Principal Component Analysis
PWB	Psychological Well-Being
WE	Work Engagement
WHO	World Health Organization

Introduction

"The wealth of business depends on the health of workers."

Dr. Maria Neira, Director,
Department of Public Health and Environment, World Health Organization

According to the World Health Organization (2021)[1], health is "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity".

In recent years, there has been increasing acknowledgement of the important role of mental health in achieving global development goals.

Healthcare providers tend to have a heavier emotional baggage, due to their work experiences, which makes them more vulnerable to this mental state. In this sense, organizations must provide their workforce with healthy work environments, more notably, because they play a vital role in the provision of quality care and services to patients. However, they also face numerous challenges and constraints, including high work demands, emotional stressors, and limited autonomy. These factors can significantly impact their psychological well-being and work engagement.

Job crafting, a concept introduced by Wrzesniewski and Dutton (2001), refers to a proactive and intentional process, where employees reframe their job tasks, relationships, and perceptions to align with their personal preferences, skills, and motivations. It allows employees to change their work environment in meaningful ways, enhancing their sense of well-being control, and personal growth.

Psychological well-being encompasses various dimensions, including positive affect, life satisfaction, self-esteem, and personal growth, and is characterized by optimal psychological functioning (Slemp & Vella-Brodrick, 2013a). In the context of healthcare professionals, achieving and maintaining psychological well-being is crucial for their overall ability to provide high-quality care. However, the demanding nature of healthcare work often poses challenges to their well-being, making it essential to explore strategies and appropriate responses to cope with stress, enhancing their psychological well-being.

Work engagement refers to a positive and fulfilling state of work-related well-being (Leiter & Bakker, 2010), characterized by dedication, absorption, and vigour in one's work (Schaufeli & Bakker, 2004). Therefore, understanding the factors that contribute to work engagement

[1] https://www.who.int/publications/i/item/9789240038349

among healthcare professionals is of utmost importance for their personal and professional development.

While the literature on job crafting, psychological well-being, and work engagement is growing, especially in these past few years, limited research has specifically focused on this problematic in the healthcare field, which is what is being intended to deepen. This research gap is what ignited the investigation into the role of job crafting and its key role in promoting better psychological well-being and subsequently, work engagement among healthcare professionals.

The primary objective of this study is to examine how job crafting practices among healthcare professionals can contribute to their psychological well-being and the subsequent impact on work engagement. By exploring the relationship between these variables, this research aims to provide answers to questions such as “To what extent do workers in healthcare engage in job crafting?”, “How can job crafting lead to better psychological well-being?” and “What impact does this process have in terms of work engagement?”, as well as valuable insights and practical implications for healthcare organizations.

This dissertation is structured into multiple sections, each serving the purpose of methodically fulfilling the research objectives. In Chapter 1, an exhaustive and insightful review of pertinent literature is presented. This encompasses theoretical frameworks, empirical studies, and conceptualizations relevant to the domains of job crafting, psychological well-being, and work engagement. By developing this thorough review, the chapter sets a robust foundation for the subsequent exploration.

Chapter 2 illustrates the research methodology adopted for this study, where the research design personifies the blueprint that guided the investigative process. Additionally, this chapter provides a clear explanation of how the sample was chosen, effectively ensuring the study's representation and reliability. Furthermore, this chapter delineates the instruments used for data collection, to gather the information that was later analysed. The procedures followed for analysis are also discussed, shedding light on the careful examination of the collected data, which formed the foundation on which well-considered conclusions were drawn.

Chapter 3 analyses the first plot of results, more specifically psychometric properties of the instruments, followed by data exploration.

Chapter 4 manifests the findings of the study and aims toward model assessment and hypothesis validation. This chapter unveils the intricate tapestry of relationships existing between job crafting, psychological well-being, and work engagement, particularly within the

context of healthcare professionals. Through careful exploration, the results offer great insights into the dynamics at play and allow the validation of the hypotheses proposed.

Lastly, chapter 5 incorporates a succinct synthesis of the key findings as well as contributions arising from the study's findings, magnifying their significance within the healthcare domain. These contribute practical recommendations tailored for healthcare organizations. Concurrently, the limitations inherent in the study are addressed, laying bare the boundaries of the investigation. Moreover, this chapter enlightens suggestions for future research, delineating potential trajectories for new exploration.

1. Literature Review

The presented literature review will provide theoretical substantiation for all the constructs used to design the model. The following concepts will be discussed and presented: Health Care Sector and its specificities; Job Crafting and its outcomes; Psychological Well-Being and its outcomes; and Work Engagement and its outcomes. Finally, the proposed framework and hypotheses will be presented.

1.1. Working in Health Care

1.1.1. The Health Care Sector

Healthcare is a broad and complex field, which withholds a wide range of jobs and services provision, related to the prevention, promotion, diagnosis, and treatment of health conditions and diseases (Mitchell & Haroun, 2016).

According to the World Health Organization (2021)[2], health is "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity".

In this context, doctors and nurses play a fundamental role. Doctors are responsible for the diagnosis, treatment, and management of their patients' infirmities and health conditions. Nurses, on the other hand, take direct care of the patients and appear as the main communication channel between patients and their families. They also present figures before, during, and after hospital procedures and processes, as even after hospital discharges, patients can contact their nursing team to clarify some questions they might have been left with or did not understand.

In this regard, this type of profession faces high levels of pressure and daily challenges that test their resilience and sanity in this sector, like stress, burnout, and emotional distress (O'Connor *et al.*, 2016; Yanchus *et al.*, 2016).

1.1.2. Importance of Nurses

Being a nurse is one of the most important jobs in the world, as they are essential to the well-oiled function of any health unit. Nursing practitioners have the responsibility to take care of patients in all different phases of life, despite their age and physical condition.

[2] https://www.who.int/publications/i/item/9789240038349

The World Health Organization recognizes nurses as the guts of healthcare, stating that "nurses are critical to the achievement of universal health coverage and the Sustainable Development Goals" (WHO, 2020)[3].

They act on the assessment of patient´s health conditions, medication administration and treatments prescribed by doctors or on their own in an emergency, monitorization of patient's vital signs and health evolution, performing curatives and other therapeutic interventions, orientation and education of the patient and his family members, coordination of care with other healthcare providers (American Nurses Association, 2021).

They are also responsible for communicating any changes to the healthcare team, which can help prevent complications and ensure patients receive the necessary intervention. A study published in the Journal of Advanced Nursing found that having a higher proportion of nurses on staff was associated with lower rates of patient mortality and failure to rescue (Aiken *et al.*, 2014b).

The other side of nursing that tends to be forgotten is the emotional. Nurses also provide emotional support to patients and their families during difficult times. They often spend a significant amount of time with patients, listening to their concerns and providing comfort and reassurance. Another study published in the Journal of Nursing Scholarship found that nurses who provide emotional support to patients are associated with higher levels of patient satisfaction and improved outcomes (Duffy *et al.*, 2018).

Being a nurse is important as they are the face of the whole healthcare provision and are often the first contact for patients seeking medical attention, as they play a critical role in ensuring patients receive timely and appropriate care.

1.1.3. Public sector vs. Private sector

Nurses work from hospitals to clinics, in the public and/ or private sectors, and there are differences among them.

Basu (2012) stated that nurses in the public sector typically work in government-funded hospitals, clinics, or other healthcare facilities that provide services to the public, while nurses in the private sector may work in healthcare facilities that are owned by private companies or individuals. This means that these facilities may often have different goals, such as patient well-being and care versus efficiency and profit (as for public and private sectors, respectively).

[3] https://www.who.int/news-room/fact-sheets/detail/quality-health-services

The access also varies. The types of patients that attend these hospitals and clinics are habitually divergent because it is necessary to have some type of health insurance or financial status to afford these private facilities. Public hospitals are a part of the National Health System and treat anyone who needs any type of healthcare, insured or uninsured (Basu, 2012).

As for resources, the private sector can, overall, provide better resources and equipment for nurses to work with, such as modern new technology and equipment, whereas in the public sector, on the other hand, there may be a lack of resources, staffing, funding, and equipment due to budget constraints, ultimately impacting factors such as waiting times *(op.cit.)*.

When it comes to salary and benefits, they can vary between these two sectors, since the private sector may offer higher pay checks. However, in the long term, the public sector may offer better benefits such as health plans and retirement conditions *(op.cit.)*.

Overall, there are some differences between being a public or private sector employee, which will ultimately determine the level of motivation and satisfaction that is carried by each one of them daily and the outcomes of their work.

1.2. Job Crafting

The concept of Job Crafting (JC) was first approached and defined by Amy Wrzesniewski and Jane Dutton at the beginning of the XXI century, and it is described as "the physical, and cognitive changes individuals make in the task or relational boundaries of their work" (Wrzesniewski & Dutton, 2001, p. 179).

According to the research of Berg *et al.* (2013), job crafting is a way to improve meaning in the workplace and work identity, as their approach to their work environment can be reshaped through three categories of job crafting, being task, relational, and cognitive crafting:

- Task crafting is the process in which employees modify the responsibilities initially specified in the job description by adding or dropping tasks, altering the nature of tasks, or changing the time, energy, and attention put into the tasks (Berg *et al.*, 2013; Slemp, & Vella-Brodrick, 2013b; Wrzesniewski & Dutton, 2001).
- Relational crafting involves altering the set of work interactions with other workers, choosing freely how, when, and with whom employees interact when performing their jobs (*op.cit.*).

- Cognitive crafting refers to the alteration or adjustment of the perception one has of the tasks performed and, of the relationships developed to perform them, i.e. their perception of work (*op.cit.*).

Tims *et al.* (2013) later introduced a new theory that focused on job crafting from the perspective of the Job Demands-Resources model (JD-R), which derives from the job design theory (Oldham & Fried, 2016).

The structure of the job, or the bundle of tasks/activities that employees complete daily for their organizations is called job design (Oldham & Fried, 2016). Job designs may be "starting points from which employees introduce changes to their tasks and relationships at work" as they redefine and reimagine them in personal, meaningful ways (Berg *et al.*, 2013, p. 81), "with the intention of improving the job for themselves" (Bruning & Campion, 2018, p. 500).

In line with the JD-R model (Bakker & Demerouti, 2014), job crafting is characterized by the changes employees implement in the level of job demands (e.g., workload and emotionally demanding interactions and role conflict), the level of job resources (e.g., skills, autonomy, feedback, social support, training, etc.), or both, improving the fit between the characteristics of the job and their own needs, abilities, and preferences, making it more meaningful and pleasing (Tims *et al.*, 2013). According to this theory, there are four different dimensions of job crafting: (1) increasing structural job resources (e.g., development of opportunities), (2) increasing social job resources (e.g., asking for feedback), (3) increasing challenging job demands (e.g., taking on extra tasks), and (4) decreasing hindering job demands (e.g., reduce emotional intensity) (Tims *et al.*, 2013).

Analysing the job design as a two-piece junction, of job resources and job demands, Tims *et al.* (2013) uncovered the positive impact of crafting job resources in increasing the level of job resources over time and its direct effect in increasing well-being, satisfaction, work engagement and employee performance. Aligned with this idea, Bruning and Campion (2018) added that this positive impact would minimize the person–job misfit, ultimately improving the employee's work experience.

As job crafting is viewed as a bottom-up approach, ignited through proactive employee behaviours, it can come from an individual or social nature (Berg *et al.*, 2013), where the process is initiated by the main character or this character follows the behaviours started by other team members, leading to the enhancement of their work motivations, organization of their resources, and the set their own challenges, leading to better work performance (Zhang & Parker, 2018; Bakker *et al.*, 2012).

1.2.1. Job Crafting in HealthCare vs. Other Sectors

Job crafting in healthcare may have some unique characteristics compared to other sectors due to the specific nature of healthcare work. For example, healthcare professionals may have less autonomy and control over their work due to factors such as strict regulations, complex procedures, and the need for constant collaboration and communication with other healthcare professionals (Chung *et al.*, 2021). Additionally, the emotional demands and stressors of healthcare work may require job crafting strategies that differ from those used in other sectors.

Research has found that healthcare professionals engage in job crafting by adding tasks related to patient care or personal and professional development, such as learning new skills or seeking feedback from colleagues (Chung *et al.*, 2021). They may also engage in job crafting by reducing or delegating tasks that are considered less meaningful or enjoyable, or by changing the way they perceive their work by finding meaning in challenging situations (Berg *et al.*, 2013).

A study by Skår (2009) unveiled that nurses perceive autonomy as influenced by challenges in specific situations as well as the amount of responsibility inherent to the job category one occupies. The author also concluded that there were many situations where nurses felt constraints and challenges regarding their autonomy to perform their jobs, whether at a management level, decision-making, or task completion (Skår, 2009).

Despite dealing with these constraints, this category of workers is also one where employees are vulnerable to work stressors and bigger emotional demands.

This may hinder their participation in job crafting processes, therefore, healthcare organizations need to recognize the unique needs of their employees and provide support and resources to enable crafting inherent strategies (Skår, 2009).

1.2.2. Job Crafting and Nurses

As previously stated, there are different ways to job craft, e.g., add, change, or remove tasks from the bundle that is a part of the job description, alter relationships that may add knowledge or motivation, and remove some that may cause self-doubt or stress and finally, switch the perspective one has on its daily occupation.

Healthcare professionals can add tasks that allow them to utilize their skills and knowledge more effectively, redesign tasks to make them more meaningful and challenging, and remove tasks that they consider less important or that do not use their skills well (Berg *et al.*, 2013).

A nurse starting an educational program for patients with diabetes to help them better manage their condition, rotating in a different department of the hospital to learn new skills, and even outsourcing some administrative tasks to spend more time with patients are some examples of that.

Employees can also redefine their relationships with their coworkers or patients to improve their work environment (Berg *et al.*, 2013), by having regular meetings with the team to discuss procedures and give feedback.

Lastly, they can alter their work perspective and environment to improve their productivity and well-being (Berg *et al.*, 2013), such as customizing their workstation to make them more comfortable and enjoyable.

Job crafting can be a strategy for dealing with occupational stress in nurses (Tims *et al.*, 2013; Hakanen *et al.*, 2006). In addition, studies show that job crafting may be positively related to psychological well-being in general (Bakker & Demerouti, 2014).

Nurses are a population of interest in the study of job crafting, as their profession is characterized by a high emotional load and stress, which can make job crafting a useful strategy for dealing with the demands of work (Wrzesniewski & Dutton, 2001).

This can be positively related to several positive outcomes at work, such as satisfaction, commitment, and performance (Tims *et al.*, 2013).

The literature suggests that job crafting may be influenced by factors such as autonomy, social support, and available resources (Tims *et al.*, 2013). These factors may be especially relevant in the context of nursing, where nurses face challenges such as lack of resources and high workload (Aiken *et al.*, 2014a).

It is important to note that the strategies used by health professionals to practice job crafting may vary depending on the context in which they work and their skills and preferences.

1.2.3. Job Crafting Benefits in Healthcare

Job Crafting can take many shapes and forms in the Healthcare Sector (HS), e.g., focusing on tasks that bring them closer to patients, such as counselling, health education, or case management; working closely with other team members, such as doctors, nurses, physiotherapists, and social workers, to provide quality care and coordinate treatment efforts; find ways to reduce stress and increase resilience, such as developing relaxation techniques or

changing the work environment; focus on opportunities to refresh knowledge and skills, such as attending training courses or conferences.

Bakker (2017), examined how nurse practitioners do job crafting in their jobs and the results showed that they use it to improve patient care, increase collaboration with the multidisciplinary team, and develop their skills. In line with this author, McCormack *et al.* (2010) found that patient-centred care was positively associated with job satisfaction among healthcare professionals.

A study made by Tims *et al.* (2013), explored the impact of job crafting on employee well-being, and the results indicated that job crafting can be effective in reducing stress and improving employee well-being, especially in the health sector, where working conditions are often stressful. Along with these positive outcomes, Gordon *et al.* (2018) showed that job crafting interventions can lead to improvements in the well-being, job satisfaction, and performance of health professionals.

Healthcare professionals who seek out opportunities to refresh their knowledge and skills through job crafting, such as attending training courses or conferences, may experience increased job satisfaction and better patient outcomes. A study by MacPhee *et al.* (2017) found that continuing education was positively associated with job satisfaction and improved patient care and that collaborative care was positively associated with job satisfaction and decreased burnout in the workplace.

These studies support the idea that job crafting can be a valuable strategy for healthcare professionals to address the specific demands of their jobs and improve patient care, well-being, and job satisfaction while aligning their jobs with their, strengths, and interests, therefore experiencing increased job satisfaction, improved patient outcomes, and reduced burnout.

1.3. Employee Psychological Well-Being

Well-being is a state in which individuals realize their abilities, can cope with the normal stresses of life, can work productively, and are able to contribute to the community – i.e., a resource for daily life (WHO, 2021[4]).

This concept of well-being started to be discussed by Ryff at the end of the 20th century, where he pointed out the six factors of positive functioning, being autonomy, environmental mastery, personal growth, purpose in life, positive relations with others, and self-acceptance

[4] https://www.who.int/publications/i/item/9789240038349

(Ryff, 1989). According to the author, all these factors combined would lead to optimal psychological well-being and therefore, to happiness.

According to Deci and Ryan (2006), there are two approaches from which one can study well-being, the hedonic and the eudaimonic approach.

The hedonic approach, captured by the scientific term of subjective well-being (SWB) is related to general and immediate happiness in life, both socially and emotionally (Slemp & Vella-Brodrick, 2013). This form of well-being is often represented by job satisfaction (Guest, 2017).

The eudaimonic approach, best captured by the term psychological well-being (PWB), recognises that not all human experiences result in optimal well-being, despite being pleasurable, and contributively to self-growth and self-actualization (Slemp & Vella-Brodrick, 2013a). PWB is often connected to the fulfilment of potential and finding meaning and purpose in work (Guest, 2017).

Another definition of PWB was given by Panaccio and Vandenberghe (2009) as being characterised by the presence of positive affect, the absence of negative affect and the combined presence of job and life satisfaction.

In a study about mental health, Slemp and Vella-Brodrick (2013a) described well-being as the presence of optimal psychological functioning. Consistent with this view, Piao and Managi (2022), directly relate the concept of PWB to stress in the workplace, stating that adopting strategies and appropriate responses to cope with stress will enhance employee´s psychological well-being in the long term. This also means that people who have a high level of well-being feel good about themselves, trust their relationships with other people, and feel motivated (Schaufeli & Bakker, 2004).

Psychological well-being is then associated with flexible and creative thinking, proactive behaviour, and good physical health (Huppert, 2009).

1.3.1. Job Crafting and Employee Psychological Well-being

Job crafting appears as a strategy to modify workers' tasks, relationships, and perceptions of their work, leaving space for a positive impact on their psychological well-being, as it leads to a better suit between their work and personal needs (Wrzesniewski & Dutton, 2001).

Several studies have shown that job crafting can have a positive impact on nurses' psychological well-being. One of them, by Tims *et al.* (2013), showed that those who practised

job crafting had higher levels of psychological well-being than those who did not, since it is associated with more and better resources, like autonomy, support, feedback, etc.

Another study conducted by Halbesleben and Buckley (2004) revealed that the practice of job crafting was positively related to job satisfaction and the reduction of professional burnout, and this would ultimately lead to better psychological well-being.

Slemp and Vella-Brodrick (2013a) unveiled that employee engagement in job crafting processes predicts employee well-being, through the satisfaction of their intrinsic needs, as it shifts the motivation to work beyond the material or financial benefits, towards a state where the motivation to work is achieved from the intrinsic fulfilment and satisfaction from the work itself.

In addition, job crafting can also allow nurses to increase the symbiosis between their personal and professional identity, thus increasing their self-efficacy, i.e., workers' belief in their ability to successfully perform tasks and achieve their goals and decrease work-related stress (Tims *et al.* 2015). According to Wrzesniewski and Dutton (2001), as well as Tims *et al.* (2013), the practice of job crafting can help workers find greater meaning and purpose at work, which will lead to greater job satisfaction and, consequently, better psychological well-being.

Another study by Bakker and Demerouti (2014) also showed that job crafting was positively related to intrinsic motivation, which will consequently lead to work satisfaction and hence, better psychological well-being, a conclusion that is aligned with Bakker (2017), that also stated that job crafting can be a way for healthcare professionals to cope with high work demands and improve their well-being.

Finally, Berg *et al.*, (2013) show that job crafting is positively associated with self-efficacy at work, i.e., workers' belief in their ability to successfully perform tasks and achieve their goals. This boost of confidence in the self ultimately leads to this type of well-being as well.

Guest (2017) stated that organisations are likely to benefit from a focus on well-being in terms of both enhanced performance and reduced costs, which is why paying attention to the employee´s needs draws the line between positive and negative organizational outcomes. As well as Guest (2017), Wrzesniewski and Dutton (2001) also highlighted the importance of leadership and organizational culture in a work environment where job crafting is enabled.

1.4. Work Engagement

Work engagement is a concept that refers to the positive experience that workers have concerning their work, characterized by a positive state of mind that comprehends three dimensions, them being vigour, dedication, and absorption (Schaufeli & Bakker, 2004). According to these authors, these concepts can be described as follows:

Vigour relates to the state of possessing high levels of energy and showing enthusiasm for one's work, as well as exhibiting a strong willingness to invest effort and persist in the face of obstacles (Bakker, 2017).

Dedication encompasses a feeling of meaning, importance, pride, and inspiration in the work. The individual is deeply involved in their work and feels rewarded for what they do *(op.cit.)*.

Absorption implies being completely immersed in work, to the point of losing track of time and space. The individual feels totally focused on work and has difficulty disconnecting from it *(op.cit.)*.

The aforementioned concepts are interrelated and influence each other, contributing to a state of positive engagement at work (Schaufeli & Bakker, 2004).

Another viewpoint on work engagement is that it is a "positive, fulfilling, affective-motivational state of work-related wellbeing that can be seen as the antipode of job burnout" (Leiter & Bakker, 2010, p.1).

In contrast to individuals experiencing burnout, engaged employees possess a feeling of vitality and productive involvement with their work tasks, and view themselves as capable of effectively managing the demands of their job (Schaufeli *et al.*, 2006).

Thus, engagement is described by a high level of vigour and strong identification with one's work (Leiter & Bakker, 2010).

The concept of work engagement has, then, a motivational connotation (Leiter & Bakker, 2010). Engaged employees possess a strong drive to pursue challenging objectives and are characterized by their personal investment and intense involvement in their work. The hallmark of work engagement lies in employees' capacity to generate and enthusiastically apply their energy towards their work tasks (Leiter & Bakker, 2010).

When workers are engaged at work, they tend to feel more satisfied with their work, perform better, and stay longer in their organizations (Schaufeli & Bakker, 2010).

Resorting, again, to Bakker and Demerouti (2014), it is proposed that there are two types of factors in the workplace that affect engagement at work: work demands and work resources.

Work resources such as social support, autonomy, feedback, and learning opportunities can help promote engagement at work, while excessive demands such as work overload, role conflicts, and task ambiguity can have a negative effect on engagement at work (Bakker *et al.*, 2012).

Leiter and Bakker (2010) stated that job resources such as social support from colleagues and supervisors, performance feedback, skill variety, autonomy, and learning opportunities are positively associated with work engagement, through constructive feedback, autonomy to make decisions and make work-related choices, opportunities to learn and develop new skills, rewards and recognition.

Lack of engagement at work can have negative consequences for workers and the organization, including poor performance, absenteeism, and employee turnover (Saks, 2006).

1.4.1. Job Crafting and Work Engagement

As mentioned earlier, job crafting allows nurses to modify their tasks, relationships, and perceptions of work to better meet their personal and professional needs. This can lead to an increase in vigour, dedication, and absorption at work, which are the dimensions of work engagement (Leiter & Bakker, 2010).

A study conducted by Tims *et al.* (2013) showed that those who practised job crafting had higher levels of work engagement than those who did not. The results of this study suggest that job crafting can be a useful strategy to improve employees' engagement and satisfaction with work, as well as reduce the risk of burnout.

Also, job crafting can allow nurses the possibility to express more of their sense of personal and professional identity (Wrzesniewski & Dutton, 2001), thus increasing their self-efficacy and decreasing work-related stress. This can lead to greater enthusiasm and dedication of nurses to the work, as well as a greater commitment and involvement with their professional tasks and goals (Tims *et al.*, 2013).

In addition, according to a study by Bakker *et al.* (2012), by mobilizing their own resources and setting their own boundaries and challenges, employees actively work on the enhancement of their engagement.

Hence, job crafting brings benefits at both the individual and organizational levels. These benefits are positively related to cognitive crafting, where employees end up experiencing higher levels of engagement and attribute meaning to their work, thus ensuring other benefits

at the organizational level, such as higher levels of performance, less work stress and lower levels of absenteeism or intention to leave (Letona-Ibañez *et al.*, 2021).

1.5. Framework and Hypotheses

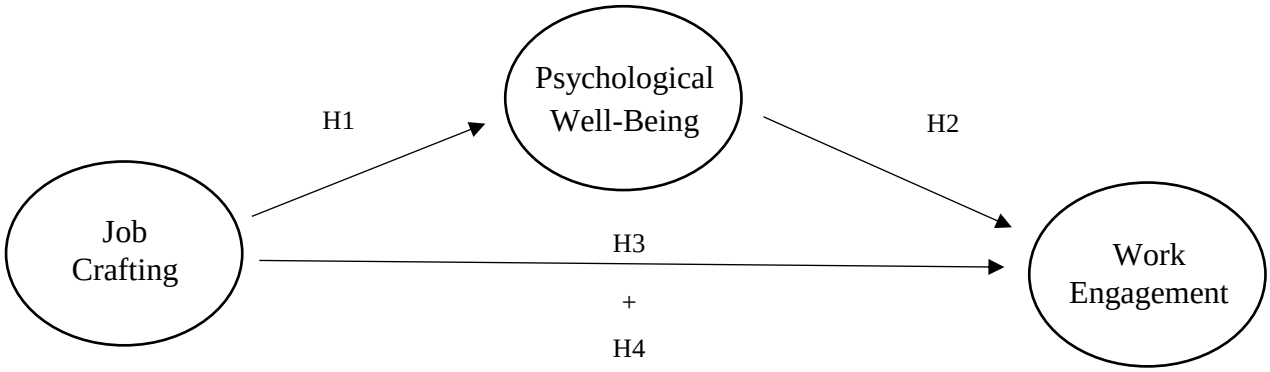

Figure 1: Proposed Research Model

Figure 1 presents the four hypotheses that were developed from the presented framework. This figure personifies a wrap-up of all the literature findings, along with the questions that arose from it, the focus of the present study.

It was mentioned in the literature review that those who practised job crafting had higher levels of psychological well-being than those who did not, since it is associated with more and better resources, like autonomy, support, and feedback (Tims *et al.*, 2013). This is because the practice of job crafting is positively related to job satisfaction and the reduction of professional burnout, which would ultimately lead to better psychological well-being (Halbesleben & Buckley, 2004).

On that account, the importance of leadership and organizational culture in a work environment where job crafting is enabled is highlighted by Guest (2017) and Wrzesniewski and Dutton (2001), all because paying attention to the employee´s needs draws the line between positive and negative organizational outcomes.

Hence, nurses who engage in job crafting processes are more likely to increase their psychological well-being, and this is the starting point of the first hypothesis:

Hypothesis 1: Job crafting establishes a positive association with Psychological Well-Being.

The rising awareness of the importance of employee well-being and engagement in the healthcare sector enables the understanding of the role of healthy work environments for the overall welfare of the workforce.

Schaufelli and Bakker (2004) stated that being actively engaged in the job can make a person feel energized and generate positive feelings of well-being and therefore, people who have a high level of well-being feel good about themselves, trust their relationships with other people, and feel motivated and engage in their daily tasks.

Also, adopting strategies and appropriate responses to cope with stress will enhance employee´s psychological well-being in the long term (Piao & Managi, 2022). In line with this view about welfare, Schaufeli and Bakker (2004) stated that in contrast to individuals experiencing burnout, engaged employees possess a feeling of vitality and productive involvement with their work tasks, and view themselves as capable of effectively managing the demands of their job.

This generates a symbiotic relationship between psychological well-being and work engagement, from where the next hypothesis is withdrawn:

Hypothesis 2: Psychological Well-Being establishes a positive association with Work Engagement.

Job resources such as social support from colleagues and supervisors, performance feedback, skill variety, autonomy, and learning opportunities are positively associated with work engagement, through constructive feedback, autonomy to make decisions and make work-related choices, opportunities to learn and develop new skills, rewards and recognition Leiter and Bakker (2010).

Furthermore, job crafting brings benefits at both the individual and organizational levels. These benefits are positively related to cognitive crafting, where employees end up experiencing higher levels of engagement and attribute meaning to their work, thus ensuring other benefits at the organizational level, such as higher levels of performance, less work stress and lower levels of absenteeism or intention to leave (Letona-Ibañez *et al.,* 2021).

Therefore, nurses who engage in job crafting processes are more likely to increase their work engagement, leading to the third hypothesis:

Hypothesis 3: Job Crafting establishes a positive association with Work Engagement.

Then, one of the aims of this study was to unveil the possible presence of a mediating effect in the relationship between job crafting and work engagement, withdrawing the benefits of those two associations independently. This would allow the possibility to express more of their sense of personal and professional identity (Wrzesniewski & Dutton, 2001), while improving intrinsic motivation and coping with high work demands, improving their well-being, while also leading to greater enthusiasm and dedication of nurses the work, as well as a greater commitment and involvement with their professional tasks and goals (Tims *et al.*, 2013).

For that reason, the last hypothesis of this model is:

Hypothesis 4: Psychological Well-being mediates the association between Job Crafting and Work Engagement.

2. Methodology

This study aims to identify possible positive correlations between Job Crafting, Psychological Well-Being and Work Engagement, ascertaining the significance and type of relation established between them.

2.1. Design

Regarding the aforementioned statement, this is a study of correlational nature, used to examine the relationship between the three variables under scope. A correlational study allows one to "describe, identify and measure the degree to which two or more quantitative variables are associated" (Reto & Nunes, 1999, p. 29), i.e., to determine whether/ and the degree to which two variables change together.

For the purpose of understanding the type of correlations established between Job Crafting, Psychological Well-Being and Work Engagement, it is intended to follow a primary data, quantitative approach as methodology, due to the descriptive nature of the study, and to test the hypotheses previously mentioned.

The quantitative data was collected through a questionnaire and diffused through online channels to find information about job crafting intentions respondents' psychological well-being and work engagement attitudes.

One of the most important factors is that the answers on the survey must be representative, hence, it was hoped to reach a sample of 200 respondents (minimum), within nursery practice, from the Portuguese healthcare sector, – due to their close contact with the whole operationalization of the healthcare service, as of pre, during and post medical intervention – regardless of age, gender, educational qualifications, or company in which they carry out their profession.

2.2. Sampling Profile

Questionnaires were online between May 30th and June 30th, 2023, and reached a total of 207 nursing practitioners. To better understand the sample, sociodemographic data was collected at the end of the questionnaire, as shown in Tables 1 and 2.

Observing Table 1, in a sample amounting to 207 respondents, 151 (72.95%) are women, and 56 (27.05%) are men. Regarding their age, the highest percentage of responses belongs to young adults with a range between 25 to 34 years old (35.6%) followed by adults with a range

between 35 to 44 years old (30.8%), making a total of 66.4% of the population. The average age stands at 37 years old ($\overline{X}$ = 37.40, σ = 10.391). By analysing the geographic area from where respondents practised their jobs, more than half of them exert nursing between the central and the southern areas of Portugal. Regarding the education level, 57% have a bachelor level and the significant rest have a master´s degree, leaving only 6 respondents with a post-graduation.

Table 1: Sociodemographic Data

Gender		
Male	56	27,05%
Female	151	72,95%
Age		
18 - 24 years	18	8,70%
25 - 34 years	74	35,75%
35 - 44 years	63	30,43%
45 - 54 years	38	18,36%
>= 55 years	14	6,76%
Geographical area of professional activity		
North (Portugal Continental)	35	16,91%
Centre (Portugal Continental)	65	31,40%
South (Portugal Continental)	63	30,43%
Região Autónoma dos Açores	44	21,26%
Região Autónoma da Madeira	0	0,00%
Academic habilitations		
Bachelors Degree	117	57%
Masters Degree	84	41%
PhD	0	0%
Postgraduate	6	3%

Table 2, which will now be analysed, presents more of an insight into respondents as nurses. Firstly, more than half of the sample works in the public sector (77.78%), as well as just in one institution, i.e., don´t have cumulative work (77.78%). Regarding the years of experience ($\overline{X}$ = 13.996, σ = 10.1215), most respondents have not been working for more than 20 years, amounting to 74.4% of the sample. Furthermore, regarding the level, the table shows a close frequency in the number of nurses and specialist nurses, the difference being specialist nurses have to have further education in a specific field, 47.83% versus 44.44%.

Table 2: Sociodemographic Data (cont.)

Sector		
Setor Público	161	77,78%
Setor Privado	31	14,98%
Setor Público, Setor Privado	15	7,25%
Years of experience		
<= 5 years	55	26,57%
6-10 years	39	18,84%
11-20 years	60	28,99%
21-30 years	36	17,39%
31-40 years	16	7,73%
>= 41 years	1	0,48%
Level		
Nurse	99	47,83%
Specialist Nurse	92	44,44%
Managing Nurse	16	7,73%
Activity in more than one institution		
Yes	46	22,22%
No	161	77,78%

Lastly, Tables 8 and 9 from Annex B, have additional information on the specialty that each respondent exerts, where is clear that almost half of the sample has no specialty, an inference that is in line with the conclusions that were just taken on the level portion of the table, whereas the other half splits between 12 different specialties (49.79%). Also, the observation of the contract type shows that 131 respondents have open-end contracts (63.29%), followed by 42 respondents with an indefinite-term employment contract (20.29%).

2.3. Variables and Instruments

The questionnaire – derived from the Job Crafting Questionnaire (Slemp & Vella-Brodrick, 2013b), the Mental Health Continuum - Short Form (Lamers *et al.*, 2011) and short version of the Utrecht Work Engagement Scale (UWES) (Schaufeli *et al.*, 2006) – collected data regarding the engagement in Job Crafting processes, as well as information on respondents Psychological Well-Being and Work Engagement, for further assessing the relationship between them.

The questionnaire began with an introduction, explaining the objectives of the study, as well as its framework, highlighting the voluntary and confidential nature of participating in the study. As this study aims to investigate the relationship between JC, PWB and WE among nurses, the inclusion criterion of the participants was that respondents were nursing

practitioners, regardless of the age, sex, educational qualifications, or geographic locations from where the activity was performed.

The questionnaire (Annex A) is made up of 13 questions and was organized into two main parts: (i) the questions regarding Job Crafting – composed of 15 items – Psychological Well-Being – composed of six items – and Work Engagement composed of nine items; and (ii) sociodemographic questions, composed of 10 items.

This study comprises 15 variables – 12 independent variables (or control variables) and three dependent variables – independent variables are the ones presented on the sampling profile, and dependent variables are Job Crafting, Psychological Well-Being and Work engagement. Under this study´s scope, the dependable variables were operationalized into instruments.

2.3.1. Job Crafting

To assess Job Crafting behaviours, it was applied the Job Crafting Questionnaire (JCQ).

The Job Crafting Questionnaire (JCQ), as the name itself suggests, is a questionnaire that measures the extent to which employees engage in job crafting behaviours (Slemp & Vella-Brodrick, 2013b). All three dimensions of Job Crafting – task crafting, relational crafting, and cognitive crafting – were studied with resort to this questionnaire.

This measure consisted of 15 items, such as "Change the scope or types of tasks that you complete at work" (related to task crafting), "Think about how your job gives your life purpose" (connected to cognitive crafting) and "Choose to mentor new employees (officially or unofficially)" (linked to relational crafting).

Respondents then indicated the frequency with which they engaged in each behaviour based on a 6-level Likert Scale, that went from 1(hardly ever) to 6 (very often).

2.3.2. Psychological Well-Being

The Mental Health Continuum-Short Form (MHC-SF) (Lamers *et al.*, 2011) measures positive mental health and contains 14 items, representing the various components of well-being.

The MHC-SF contains three items of emotional well-being, six items of psychological well-being, and five items of social well-being, where each psychological and social well-being item represents one of its dimensions.

Resorting to this Continuum, the items under assessment correspond to the six dimensions of psychological well-being, – self-acceptance, personal growth, purpose in life, environmental

mastery, autonomy, and positive relations with others – beginning with "In the past month, how often did you feel…", such as "Good at managing the responsibilities of your daily life" or "Confident to think or express your ideas and opinion".

Respondents then indicated the frequency of each feeling in the past month based on a 6-level Likert Scale, that went from 1(never) to 6 (everyday). The intermediate levels correspond to once or twice a month (2), about once a week (3), two or three times a week (4) and almost every day (5).

2.3.3. Work Engagement

The level of work engagement was measured with the short version of the Utrecht Work Engagement Scale (UWES) (Schaufeli *et al.*, 2006), which assesses the level of work engagement through 9 items (UWES-9), instead of the original 17 items scale.

These 9 items correspond to the three dimensions of work engagement, – vigour, dedication, and absorption – each with three items, such as "When I get up in the morning, I feel like going to work" (vigour), "I am enthusiastic about my job" (dedication) and "When I am working, I forget everything else around me" (absorption).

Respondents then indicated the frequency of each state on a 7-point Likert Scale, that went from 0 (never) to 6 (always), with higher scores representing greater engagement.

2.4. Procedure

Since the targeted sample was 100% Portuguese, the questionnaire was released in that same language. To ensure language compatibility within the questionnaire, it was used a forward-backwards translation method (Brislin, 1970), guaranteeing a proper translation of the questions for the targeted audience.

Before the disclosure of the questionnaires, three pre-tests were performed by direct contact, to identify possible interpretation errors and other possible flaws that could emerge during the questionnaires' assembly process.

After these pre-tests were validated, the questionnaires were made available on the Google Forms platform and were disclosed via e-mail and through social networks, such as Facebook, Instagram and LinkedIn, using a non-probability sampling method, since not all the individuals of the population (Portuguese nursing practitioners) have a chance of being included, by snowball sample (Goodman, 1961).

The Snowball Sampling method is a sampling technique, where “a random sample of individuals is drawn from a given finite population” (Goodman, 1961, p. 148), i.e., in which existing research participants provide references or take, in this case, the questionnaire, to other individuals who may be relevant to the study.

In this case, as there was no complete list of the elements to be sampled, this was the sampling method that better fitted the purpose of the study, which was to gather the greatest amount of information on the process of job crafting among many nursing practitioners.

The process begins with a few key participants who are in the “zero stage” (Goodman, 1961, p. 149) who are selected and then nominate other individuals who may fit the research interest criteria. To get a greater number of responses, people were asked to disclose the link to the questionnaire on their contact networks. These new entrants, in turn, can refer others, creating a recruitment "snowball” of stages that reaches more and more people of interest in the study.

Online responses were collected automatically through Google Forms until the established deadline. Afterwards, online responses were exported to Microsoft Excel, and subsequently to SPSS 28 program, used to apply the appropriate statistical treatments for the purposes of this study.

Hypothesis 4 was tested through Hayes Macro-Process Mediation Model 4, which is a widely used framework for examining and understanding mediation effects in statistical analyses. This model, introduced by Hayes (2013), helps researchers assess the mechanisms through which an independent variable affects a dependent variable by including one or more mediator variables.

3. Results

In this data processing phase, the first step is the psychometric analysis of the instruments, followed by data exploration.

Firstly, a Principal Component Analysis (PCA), with Varimax rotation, was performed to identify patterns of relationships among the set of items that build up the variables, uncovering the underlying dimensions that explain the correlations between them, followed by a reliability test, for scale validity. Before the analysis, there was a need to make sure that the variables met the requirements to move forward with the test.

3.1. Psychometric Analysis of the Instruments

3.1.1. Job Crafting

Regarding JC (Table 10 from Annex C), the Kaiser-MeyerOlkin (KMO) measure of sampling adequacy obtained shows that the current sample is appropriate to apply PCA, providing a value of 0.886 which indicates a good sample adequacy. Because Bartlett's test allows the acceptance or rejection of the null hypothesis (that there are no correlations between the variables), the statistics of the test showed the existence of substantial correlations between the items under scope (Sig (α) = 0.01; $p \leq 0.05$). Lastly, the sample dimension is over 5 times bigger than the number of initial variables, meaning that the PCA may now be performed.

After analysing the total variance explained (Table 12 from Annex C), the conclusion that 5 components would need to be extracted to retain at least 70% of the variance of the initial variables can be withdrawn. Therefore, as the objective is to extract as few components as possible while still explaining most of the initial variables' variance, Kaiser´s criterion indicates the extraction of 3 principal components accounting for 64.005% of the total variance of the 15 original variables, similarly to Slemp and Vella-Brodrick (2013b) solution. These results align with the original three-component model of job crafting put forward by Wrzesniewski and Dutton (2001).

Varimax rotation was used to make the components simpler and spread out the importance of the original factors on each component as much as possible, maximizing their variability (Table 13 from Annex C).

By analysing the rotated solution, it is visible that all the initial variables fit with the three job crafting dimensions identified in the literature: PC1 (task crafting – items 1, 2, 3, 4, 5), PC2 (cognitive crafting – items 6, 7, 8, 9, 10), PC3 (relational crafting – items 11, 12, 13, 14, 15).

Furthermore, these new variables were tested for internal consistency (reliability) using Cronbach Alfa statistics (Table 22 of Annex F). Task crafting (α= 0.842), cognitive crafting (α= 0.861) and relational crafting (α= 0.818) all showed high levels of internal consistency, which means that the items of each dimension are highly related between them, results that match the ones Slemp and Vella-Brodrick (2013b) found.

3.1.2. Psychological Well-being

Moving on to PWB (Table 14 of Annex D), The KMO measure of sampling adequacy obtained shows that the current sample is appropriate to apply PCA, providing a value of 0.909 which indicates a very good sample adequacy. Once more, Bartlett's test allows the rejection of the null hypothesis (that there are no correlations between the variables), as the statistics of the test showed the existence of substantial correlations between the items under scope (Sig (α) = 0.01; $p \leq 0.05$). Lastly, the sample dimension is over 5 times bigger than the number of initial variables, meaning that the PCA may now be performed.

After analysing the total variance explained (Table 16 of Annex D), the extraction of only one principal component accounts for 68.393% of the total variance of the 6 original variables. This result is in line with what Lamers *et al.* (2011) concluded in their article about the MHC-SF since it is a scale that measures three dimensions of well-being, one of them being psychological well-being.

By analysing the component matrix (Table 17 of Annex D), is visible that all the initial variables fit with the dimension of PWB identified in the literature: PC1 (psychological well-being – items 1, 2, 3, 4, 5 and 6).

Furthermore, this new variable was tested for internal consistency (reliability) using Cronbach Alfa statistics (Table 22 of Annex F). PWB (α= 0.907), showed a high level of internal consistency, meaning the items are highly related between them, in line with the results of Lamers *et al.* (2011) study.

3.1.3. Work Engagement

The KMO measure of sampling adequacy obtained (Table 18 of Annex E) shows that the current sample is appropriate to apply PCA, providing a value of 0.908, which indicates a very good sample adequacy. Similarly to the other variables, Bartlett´s test showed the existence of substantial correlations between the items (Sig (α) = 0.01; $p \leq 0.05$), rejecting the statistic´s null hypothesis. Lastly, the sample dimension is over 5 times bigger than the number of initial variables, showing its eligibility to perform the PCA.

After analysing the total variance explained (Table 20 of Annex E), the extraction of one principal component accounts for 71.987% of the total variance of the 9 original variables.

Even though it would be expected the extraction of three components, the one component extracted is in line with, Sonnentag (2003) who did not find a clear three-factor structure and decided to use the total score on the UWES as a measure for work engagement. As for Schaufeli *et al.* (2006), pros and cons were found in both three and one-component extraction and for that reason, the one-component extraction was the one carried out for the rest of the analysis (Table 21 of Annex E).

To end the analysis on WE, this new variable was tested for internal consistency (reliability) using Cronbach Alfa statistics (Table 22 of Annex F). Work engagement (α= 0.950) showed a very high level of internal consistency, just like the results found in the study conducted by Schaufeli *et al.* (2006). Once more, this shows that all the items are highly related.

Once the structure of the scales has been validated and their reliability has been ensured, data exploration can proceed.

3.2. Data Exploration Analysis

3.2.1. Descriptive Statistics

To conduct an analysis, the primary stage is to perform a descriptive analysis of all the variables that characterize the model presented in Chapter 1.

After examining the results of the factor analysis and calculating the internal consistency of each dimension, to endure further analysis, it was required to generate new variables, through the calculation of the mean of each specific dimension and, in the specific case of job crafting, the aggregated mean, resulting from a mean of each dimension's means. A descriptive statistical analysis of each variable is presented in Table 3.

Table 3: Variables descriptive statistics

	Min.	Max.	Mean	Standard Deviation	Variance
Dimension **task** in JC	2,00	6,00	4,21	0,73	0,54
Dimension **cognitive** in JC	1,20	6,00	4,62	0,84	0,70
Dimension **relational** in JC	1,60	6,00	4,13	0,93	0,87
JCQ_var	2,13	5,93	4,32	0,68	0,47
PWB_var	1,83	6,00	4,50	0,91	0,83
WE_var	1,00	5,89	4,10	0,95	0,90

All the scales had attributed values between 1 and 6, therefore, from Table 3 it is possible to understand that all the variables – including the dimensions of JC – had the majority of responses with high values, considering the dimension and variables means. The highest mean corresponds to PWB ($\overline{X}$ = 4.50, σ = 0.91) and the lowest to WE ($\overline{X}$ = 4.10, σ = 0.95).

3.2.2. Mean comparison

To understand if the behaviour of two or more groups regarding a certain dimension is alike, a series of tests were performed – Independent Samples T-tests, as well as OneWay ANOVA. Regarding this samples´ dimension (n > 30), the population is considered to be approximately normal.

Starting with the variable "Age" (Tables 25 to 29 of Annex G), Figure 2 shows an uneven distribution between the five age interval groups. After the performance of OneWay ANOVA, the results showed that there were no significant statistical differences between the means of the groups in the variables PWB and WE. On the contrary, in the variable JC, there is a significant statistical difference between two age groups, 45-54 years and ≥ 55 years ($p = 0.038 < \alpha = 0.05$), but no significant statistical difference between the other groups.

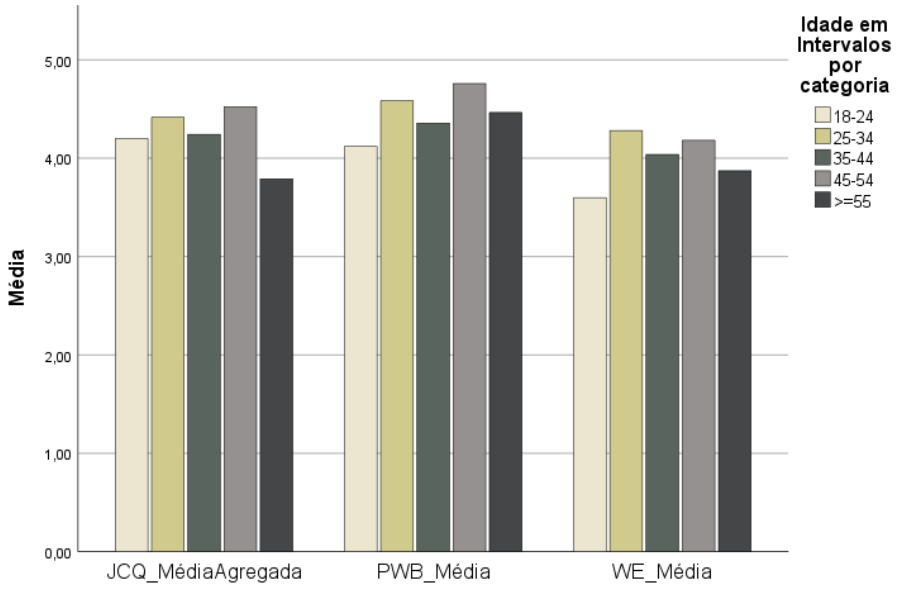

Figure 2: Clustered Bar Mean of job crafting, psychological well-being and work engagement by INDEX of age

Regarding the variable "Academic Qualifications" (Tables 32 to 35 of Annex G), Figure 3 shows a slightly uneven distribution between the four groups – bachelor's degree, master's degree, PhD and Post-graduation. After the performance of OneWay ANOVA, the results showed a significant statistical difference between the means of two specific groups, bachelor's degree, and master's degree, regarding the variables Job Crafting and Work Engagement ($p < 0.01 < \alpha = 0.05$). The results for the other comparisons were not statistically different.

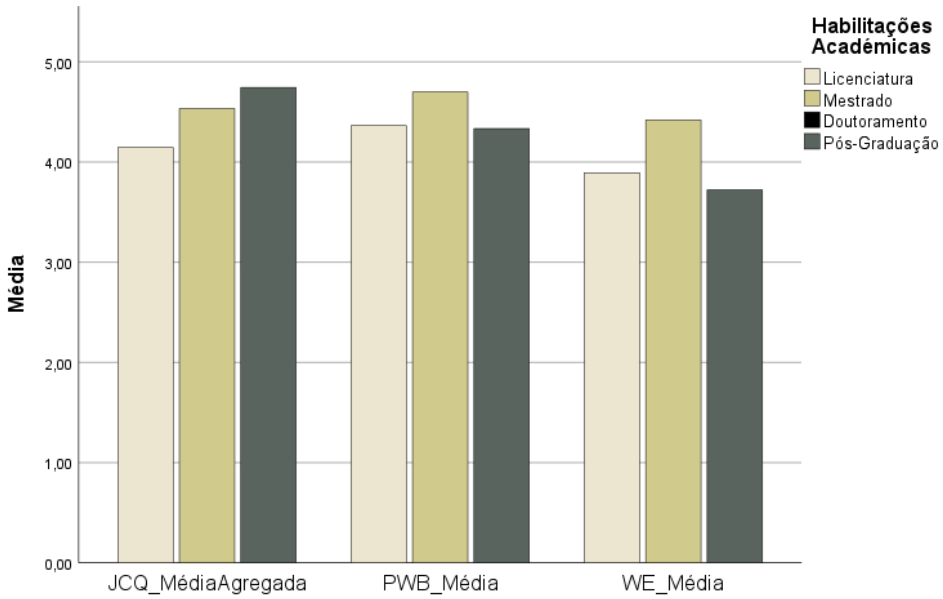

Figure 3: Clustered Bar Mean of job crafting, psychological well-being and work engagement by INDEX of academic qualifications

Next on the analysis, a OneWay ANOVA was conducted with the variable "Sector" (Tables 36 to 39 of Annex G), composed of three groups – Public Sector, Private Sector and Public and Private Sectors, shown in Figure 4.

Results showed a significant statistical difference at the level of WE, where the groups Public Sector vs. Public and Private Sectors and Private Sector vs. Public and Private Sectors are not equally distributed ($p = 0.048 < \alpha = 0.05$ and $p = 0.009 < \alpha = 0.05$, respectively). Despite this, the difference between the public sector and the private sector is not statistically different.

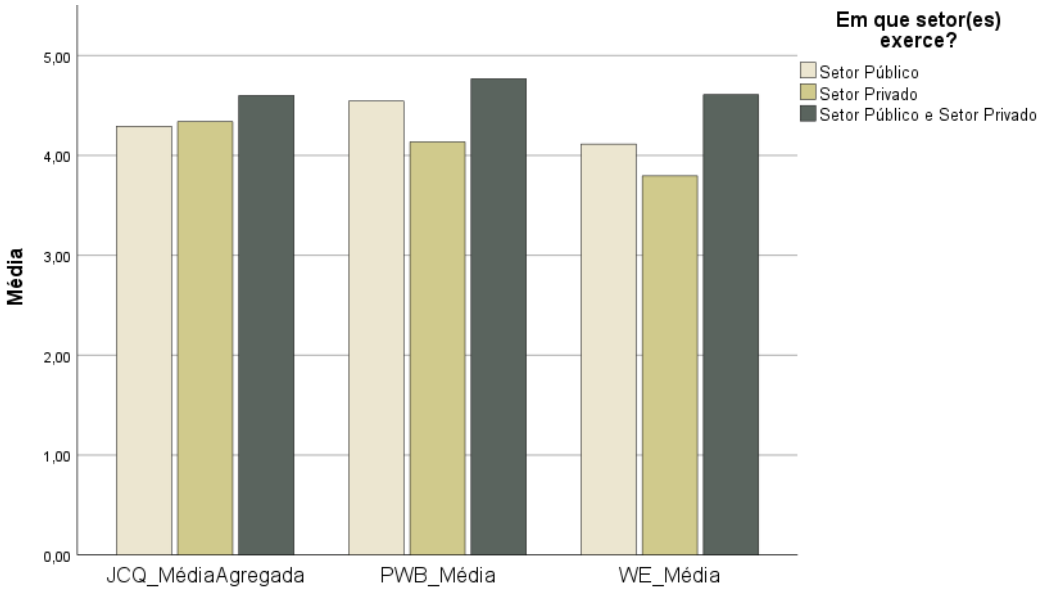

Figure 4: Clustered Bar Mean of job crafting, psychological well-being and work engagement by INDEX of sector

As for the variable "Level" (Tables 40 to 43 of Annex G), Figure 5 shows that the group Specialist Nurse has a higher mean than the other two groups – Nurse and Managing Nurse – upon all three variables under the scope. OneWay ANOVA results are in line with this observation, as there is a significant statistical difference between the means of Nurse vs. Specialist Nurse within JC and WE ($p = 0.007 < \alpha = 0.05$ and $p = 0.005 < \alpha = 0.05$, respectively). In PWB, the difference between the groups´ distributions was not statistically significant.

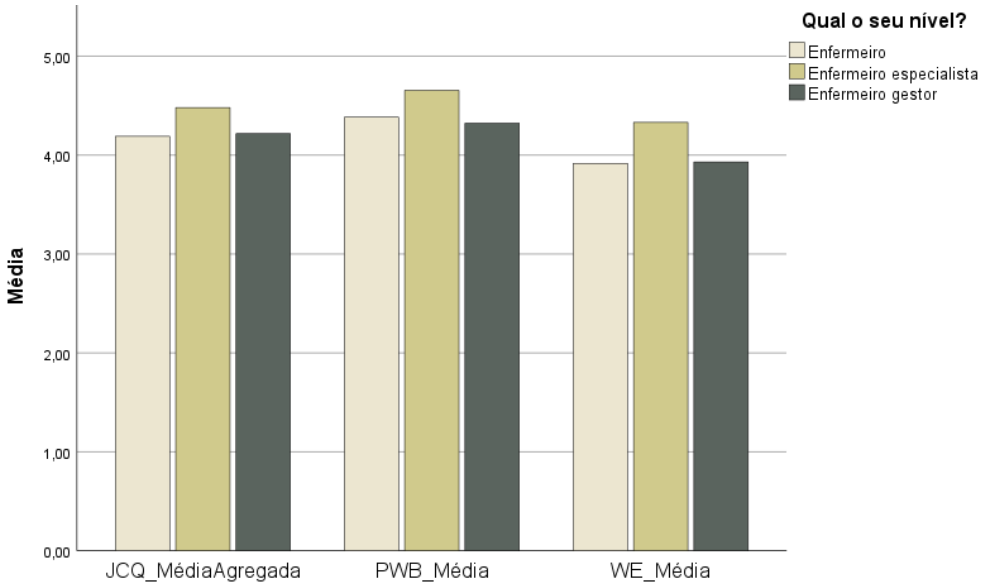

Figure 5: Clustered Bar Mean of job crafting, psychological well-being and work engagement by INDEX by level

Further information on the variables presented in this chapter´s figures, appears in Annex G. Annex G also holds all the remaining groups – gender (Table 23), institution accumulation (Table 24), geographic area (Tables 30 and 31), specialty (Tables 44 and 45), and contract type (Tables 46 to 48) – that were also tested for their distributions but where there were no statistically significant differences found between them, within any of the variables.

4. Hypotheses Validation and Discussion

Once the data exploration was complete, a set of procedures was developed to test the hypotheses. These procedures comprehended a correlation analysis (Table 4), a linear regression model (Table 5) and a mediation analysis (Tables 6 and 7 and Figure 6).

4.1. Pearson´s Correlation Matrix

To analyse the relationships among the variables under investigation, a Pearson correlation analysis was conducted, allowing the assessment of whether there are statistically significant correlations between the variables and to make conclusions on their direction and strength.

Table 4: Pearson´s Correlation Matrix

	$\overline{X}$	σ	JCQ_task	JCQ_cognitive	JCQ_relational	JCQ_var	PWB_var	WE_var
JCQ_task	4.2106	0.73186	--					
JCQ_cognitive	4.6232	0.83669	.554**	--				
JCQ_relational	4.1295	0.93469	.439**	.515**	--			
JCQ_var	4.3211	0.68258	.784**	.842**	.824**	--		
PWB_var	4.4984	0.91228	.288**	.402**	.371**	.437**	--	
WE_var	4.1020	0.94654	.476**	.469**	.504**	.592**	.600**	--

N = 207
**. Correlation is significant at the level 0.01 (2-tailed)

Considering the variables under scope, all of them show a positive and significant correlation. Job Crafting establishes a moderate and positive correlation with Psychological Well-Being (R = 0.437; Sig = 0.000) and a strong and positive correlation with work engagement (R = 0.592; Sig = 0.000). These correlations show that the more job crafting processes one undergoes, the better the psychological well-being, similar to what Slemp and Vella-Brodrick (2013a) unveiled in a study about optimising employees' mental health, stating that employee´s engagement in job crafting processes predicts employee well-being, through the satisfaction of their intrinsic needs. One of the possible reasons why this correlation is not stronger is due to the perceived constraints and challenges regarding the autonomy to complete the job, whether at a management level, decision-making or tasks completion path and therefore, the subsequent autonomy to engage in processes such as this one (Skår, 2009). Further analysis shows the impact of job crafting on how strong the work engagement is going

to be, concordant with the study conducted by Bakker (2017) on the role of work engagement in job crafting among healthcare professionals. Through these results is clear to say that work engagement increases when job crafting is a part of one's work life.

Lastly, the significant and strong correlation established between Psychological Well-Being and Work Engagement (R = 0.600; Sig = 0.000) means that increasing nurses´ psychological well-being ultimately leads to higher work engagement. In line with this viewpoint, Tims *et al.* (2013) stated that increasing self-efficacy and decreasing work-related stress leads to greater enthusiasm and dedication of nurses to the work, as well as greater commitment and involvement with their professional tasks and goals.

This analysis allows drawing a conclusion regarding three of the four hypotheses. Data supports H1[Job crafting establishes a positive association with Psychological Well-Being], H2 [Psychological Well-Being establishes a positive association with Work Engagement] and H3 [Job Crafting establishes a positive association with Work Engagement], meaning that there are positive associations between every two sets of variables and, therefore, these hypotheses are validated.

These findings suggest that nurses who are able to craft their jobs to better fit their needs and interests are more likely to have higher levels of psychological well-being and be engaged in their work. This is important because engaged nurses are more productive and provide better care to their patients. In addition, nurses with higher levels of psychological well-being are also less likely to experience burnout and other health problems. To take proper care of others, nurses must take care of themselves first, and this fills a huge gap on how they can do it.

4.2. Linear Regression Model

In the context of the linear regression analysis, it was sought to examine if a set of predictor variables, namely job crafting, psychological well-being, and sociodemographic variables significantly predicted work engagement. Results for the model are presented in Table 5, as well as in Tables 49 and 50 from Annex H.

Table 5: Statistics for the Linear Regression Model

Variables	Coefficients		
	Standardized Beta Coefficients	(t-statistic)	(sig.)
Gender	0.060	0.116	0.907
Geographic Area	0.144	2.794	0.006
Academic qualifications	(0.052)	(0.826)	0.410
Sector(s)	0.032	0.557	0.578
Level	0.101	1.389	0.166
Specialty	(0.007)	(0.102)	0.919
Contract type	0.103	1.985	0.049
Activity in more than one institution	0.011	0.205	0.837
Age_intervals	0.239	1.871	0.063
Years of experience_intervals	(0.268)	(2.028)	0.044
PWB_Mean	0.429	7.650	< 0.001
JC_var	0.387	6.614	< 0.001

This model yielded valuable insights into how these predictors collectively contribute to explaining the variability within work engagement. Firstly, the results demonstrate that the overall regression model is statistically significant ($Z(12, 194) = 18.342$; $p < 0.001$).

Table 40 of Annex G, shows an $R^2 = 0.532$, meaning that 53.2% of the variability of work engagement is explained by the set of independent variables, through this linear regression model. An R^2 in this range suggests that a substantial proportion of the variability in the dependent variable is explained by the predictor variables. The overall model demonstrated a good fit to the data, as indicated by an adjusted $R^2 = 0.503$.

After accounting for the effects of the other predictors, Table 5 shows that both job crafting and psychological well-being, exhibited a statistically significant prediction of work engagement ($t = 6.614$, sig. < 0.01 and $t = 7.650$, sig. < 0.01, respectively). Table 5 also shows a statistically significant prediction between work engagement and three other variables, geographic zone from where the work is performed ($t = 2.794$, sig. $= 0.06$), contract type ($t = 1.985$, sig. $= 0.049$) and years of experience ($t = - 2.028$, sig. $= 0.044$).

The analysis of the standardized beta (β) values from Table 5, allows us to compare the magnitude of the effect of the independent variables on the dependent variable. Bearing in mind the information provided in the last paragraph, the most important predictors of work engagement are psychological well-being ($|\beta| = 0.429$) and job crafting ($|\beta| = 0.387$), followed

by years of experience (|β| = 0.268), geographic zone (|β| = 0.144), and contract type (|β| = 0.103).

These findings highlight the importance of JC and PWB in predicting WE and reconfirm the existing positive association between PWB and WE and between JC and WE while also showing that there is still variance to be explained by variables, other than the ones presented in the study. In addition, this procedure provides the valuable conclusion that we can move forward with the validation of this study´s model.

4.3. Mediation Analysis

The mediation analysis was carried out through the Process Macro SPSS – Model 4 –, developed by Hayes (2013). The results of the mediation effects are presented in Table 6.

Table 6: Statistics for the Mediation Analysis

Model	Mediation	b	t	p	LLCI - 95%	ULCI - 95%	R^2
	X → M (a)	0.58	6.95	0.000	0.42	0.75	0.19
	M → Y (b)	0.44	7.62	0.000	0.32	0.55	
Total Effect	X → Y (c)	0.82	10.52	0.000	0.67	0.97	0.35
Direct Effect	X → Y (c´)	0.57	7.37	0.000	0.41	0.72	0.49
Indirect Effect	X → M → Y (a*b)	0.26			0.14	0.38	

The first step of this analysis showed that the effect of JC on PWB (a) was statistically significant (b=0.58, 95% CI [0.42; 0.75], t=6.95, p=0.000) and that job crafting alone, only explains 19% of psychological well-being´s variance (R^2=0.19). The study conducted by Tims *et al.* (2013), explored the impact of Job Crafting on employee well-being, and the results indicated that Job Crafting is often effective in reducing stress and improving employee well-being, especially in the healthcare sector, where working conditions are often stressful, matching the results found in this research. These results support H1, that job crafting establishes a positive correlation with psychological well-being.

The next step of this analysis showed that the direct effect model (relationship between job crafting and work engagement in the presence of psychological well-being – c´) was also statistically significant (b=0.57, 95% CI [0.41; 0.72], t=7.37, p=0.000) and explains 49% of psychological well-being´s variance (R^2=0.49).

The model also allows us to observe that the impact of psychological well-being on work engagement (b) is statistically significant (b=0.44, 95% CI [0.32; 0.55], t=7.62, p=0.000), hence supporting H2, that psychological well-being establishes a positive correlation with work engagement

As for the total effect model (overall relationship between job crafting and work engagement with no mediation effect – c), similarly to the other models observed so far, is also statistically significant (b=0.82, 95% CI [0.67; 0.97], t=10.52, p=0.000) and shows that job crafting explains 35% of work engagement´s variance (R^2=0.35), less than seen on the direct effect, where the presence of the mediator is accounted. This information supports H3, that job crafting establishes a positive correlation with work engagement.

Lastly, the analysis of the indirect effect (which is the influence of job crafting on work engagement transmitted through the mediation variable – a*b) reveals a significant indirect effect through psychological well-being, i.e., psychological well-being significantly explains part of the relationship between the two variables, which the 95% CI [0.14;0.38], allows to conclude. Hayes (2013) emphasizes the use of bootstrapping as a statistical technique for testing mediation effects since it involves resampling the data multiple times to estimate the sampling distribution of the mediation effect.

The results revealed a significant indirect effect of the impact of Job Crafting on Work Engagement (b= 0.18, 95% CI [0.098; 0.27]), supporting H4 [Psychological Well-being mediates the association between Job Crafting and Work Engagement]. Nonetheless, the direct effect of Job Crafting on Work Engagement in the presence of the mediator was also found significant (b = 0.57, 95% CI [0.41; 0.72], t=7.37, p=0.000). This is an interesting finding, since it is the key to determine the portion of the mediation that is established in this relation.

To draw a conclusion on the mediating effect of PWB on the relationship between JC and WE, and to facilitate interpretation, standardized values were taken into consideration.

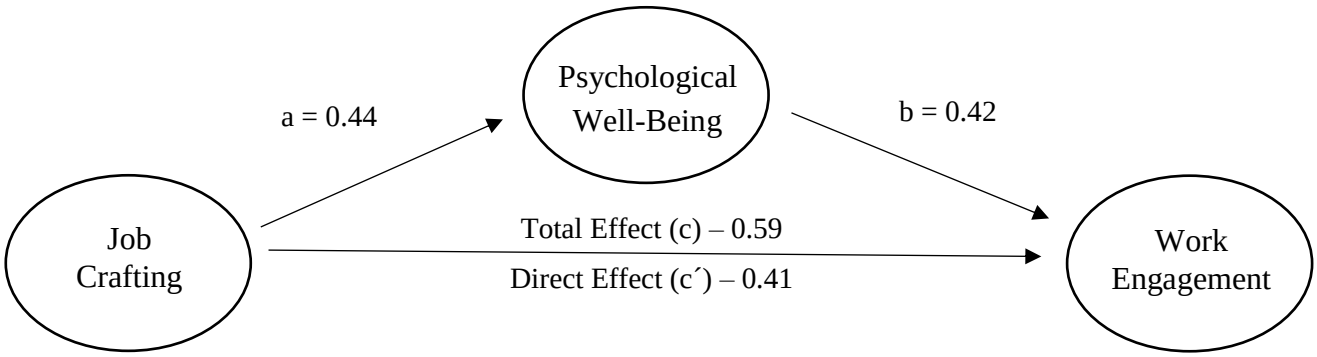

Figure 6: Mediation model and standardized effects

Table 7: Indirect effect statistics

Model	Mediation	b	LLCI - 95%	ULCI - 95%
Indirect Standardized Effect	**X → M → Y (a*b)**	0.18	0.098	0.27

The effect of Job Crafting (X) on Work Engagement (Y), mediated by Psychological Well-Being (M) is 0.18 (a*b = 0.4*0.42), as shown in Table 7.

Mediation proportion = Direct effect/ Total effect = $\frac{0.41}{0.59}$ = 69%

Mediation effect = 1 – 0.69 = 0.31 = 31%

Approximately 31% of the total relationship between Job Crafting and Work Engagement can be explained by the inclusion of the proposed mediator variable – Psychological Well-Being. In this case, the mediator accounts for a substantial portion of the association between these variables.

Besides supporting H4, these results allow us to understand the extent to which this mediation is affecting the relationship between the variables. It is important to highlight that this symbiosis suffers from a particularity, which is the fact that the relation between Job Crafting and Work Engagement in the presence of the mediator was also found significant, meaning that the mediation only explains a part of the relationship established between the two variables. H4 is then, partially validated.

This conclusion is valuable because it means that there are different ways to promote work engagement, not only directly through crafting processes. Hospitals and other healthcare organizations can improve their employees' work engagement, not only by creating a culture that values job crafting but also by enabling one that supports and enhances sanity and well-being through crafting activities, by taking a collective approach to job crafting. In addition, creating a supportive work environment, providing nurses with opportunities for professional development in positive and sustainable work environments, and offering employee assistance programs, specifically on their mental welfare, will also increase the level of well-being and engagement.

Benefits that arise from having engaged nurses are the provision of high-quality care to their patients, since there is a higher chance to be aware of patients' needs, to go the extra mile, and to provide personalized care. Also engaged nurses are more satisfied with their jobs and

are more likely to feel valued and respected, becoming less likely to leave their jobs, which ensures the continuity of care and patient safety (Bakker, 2017).

5. Conclusions

As previously stated, nursing practitioners play a critical role in ensuring patients receive timely and appropriate care, as well as supporting emotionally both patients and families during hard times (Duffy *et al.*, 2018). For this matter, the pressure and emotional baggage they personify makes them one workforce to keep in mind when talking about improving work environments and increasing motivation and engagement.

This research aimed to understand the relationship that each two sets of variables establish, in a sector that is prone to many physical, emotional, and social stressors. To obtain the data, a questionnaire disclosed of Portuguese nursing practitioners from all over the country, amounted to a sample of 207 respondents.

Results showed that a moderate positive association is established between (1) Job Crafting and Psychological Well-being; and that a strong positive association is established between (2) Psychological Well-Being and Work Engagement and (3) Job Crafting and Work Engagement. Both the linear regression model and the correlation measurement provided the same conclusions regarding the significance of these relationships. Hence the first three hypotheses under scope, are fully supported and validated by the data, in line with the literature provided by both Tims *et al.* (2013) and Bakker (2012).

Furthermore, because of the predictive power of JC and PWB on WE shown by the linear regression model, a mediation process between these variables was tested, showing that effectively, psychological well-being mediates a significant percentage, of the relationship between job crafting and psychological well-being. Nonetheless, this mediation was concluded to be partial, because of the significant direct effect of JC on WE, which opens the path to explore more about this relationship. Hence, these results show that H4 is partially supported by the data.

The research finishes with all the assumptions supported and validated, at least partially, which provides more insights into how these concepts are connected and which effects they may have on the individuals who experience them.

Throughout the study, it was possible to conclude that many people engage in job crafting processes even if in an unconscious way, shedding light on the importance of these mechanisms on self-development and motivation as well as to understand potential impacts on individuals and to bring awareness to how organizations can encourage their workforce to engage in these processes.

On the one hand, this study fills a theoretical gap in the literature since it deepens the knowledge of job crafting and mental welfare, relating it to employee engagement, which is not vast in terms of literature, nor applicable in many sectors the same way, even more, in a category of workers who are extremely vulnerable to work stressors and bigger emotional demands. Besides, it explores the theoretical topic of mediation, presenting a mediating effect of psychological well-being, which also represents a literature gap.

On the practical side, job crafting is also a topic that is raising awareness, since it can modify one's whole perception of self, worth, purpose and well-being. Nowadays, there is a significant need to have coping mechanisms and tools that push us all through, and that is the great importance of this process. In addition, it shows how important it is for healthcare organizations to recognize the unique needs of their employees and provide support and resources to enable crafting inherent strategies, where they can optimize their own functioning in the workplace (Skår, 2009).

As for further research reference, a mediation effect of 31%, as well as the fact that the mediation is partial, and not total, shows that there is still a significant portion of the relationship between the independent and dependent variables that remains unexplained by the mediator. This might indicate the presence of additional mediators, moderators, or other variables that influence the relationship. In this sense, to understand the complexity of the underlying mechanisms and potential factors that contribute to the remaining variance in the relationship, future research on this topic could include different variables, such as job satisfaction, which is also one of many outcomes of undertaking job crafting processes.

In addition, to ensure a more representative outcome, a greater number of respondents would help to make better conclusions. Besides that, the fact that this study targeted only Portuguese nurses makes it harder to generalize conclusions to other countries, which is why future studies could also focus on a more diversified sample.

As literary studies support the idea that job crafting can be a valuable strategy for healthcare professionals to address the specific demands of their jobs and improve patient care, well-being, and job satisfaction, future research could also study specific crafting behaviours and their outcomes, a more hands-on approach.

6. Bibliography

Aiken, L. H., Sloane, D. M., & Bruyneel, L. (2014a). Vanishing nurses: The impact on health care. The Robert Wood Johnson Foundation.

Aiken, L. H., Sloane, D. M., Bruyneel, L., Van den Heede, K., Griffiths, P., Busse, R., Diomidous, M., Kinnunen, J., Kózka, M., Lesaffre, E., McHugh, M. D., Moreno-Casbas, M. T., Rafferty, A. M., Schwendimann, R., Tishelman, C., van Achterberg, T., & Sermeus, W. (2014b). Nurse staffing and education and hospital mortality in nine European countries: A retrospective observational study. Journal of Advanced Nursing, 70(12), 2725–2737. https://doi.org/10.1111/jan.12483

American Nurses Association. (2021). *Nursing: Scope and standards of practice, 4th edition.* Retrieved from https://www.nursingworld.org/practice-policy/scope-of-practice/

Bakker A. B. (2017). Job crafting among health care professionals: The role of work engagement. Journal of Nursing Management, 26(3), 321–331. https://doi.org/10.1111/jonm.12551

Bakker, A. B., & Demerouti, E. (2014). Job demands-resources theory. In C. Cooper & P. Chen (Eds.), Wellbeing: A Complete Reference Guide (pp. 37-64). Wiley-Blackwell. https://doi.org/10.1002/9781118539415.wbwell019

Bakker, A. B., Tims, M., & Derks, D. (2012). Proactive personality and job performance: The role of job crafting and work engagement. *Human Relations, 65*(10), 1359–1378. https://doi.org/10.1177/0018726712453471

Basu, S., Andrews, J. R., Kishore, S. P., Panjabi, R., & Stuckler, D. (2012). Comparative Performance of Private and Public Healthcare Systems in Low- and Middle-Income Countries: a Systematic review. *PLOS Medicine*, *9*(6), e1001244. https://doi.org/10.1371/journal.pmed.1001244

Berg, J. M., Dutton, J. E., & Wrzesniewski, A. (2013). Job Crafting and Meaningful Work. In Dik, B. J., PhD, Z. B. S., & Steger, M. F. (Eds.). *Purpose and Meaning in the Workplace* (1st ed., pp. 81-104). American Psychological Association.

Brislin, R. W. (1970). Back-Translation for Cross-Cultural research. Journal of Cross-Cultural Psychology, 1(3), 185–216. https://doi.org/10.1177/135910457000100301

Bruning, P. F., & Campion, M. A. (2018). A Role–resource Approach–Avoidance model of Job Crafting: A Multimethod Integration and Extension of Job Crafting Theory. *Academy of Management Journal*, *61*(2), 499–522. https://doi.org/10.5465/amj.2015.0604

Chung, H., Cho, J., & Kim, M. S. (2021). Healthcare professionals' job crafting strategies: A mixed-methods study. *BMC Health Services Research*, 21(1), 1-14. https://doi.org/10.1186/s12913-021-06251-9

Deci, E. L., & Ryan, R. M. (2006). Hedonia, eudaimonia, and well-being: an introduction. *Journal of Happiness Studies*, *9*(1), 1–11. https://doi.org/10.1007/s10902-006-9018-1

Duffy, J. R., Hoskins, L. M., Yates, K. F., & Kennedy, J. D. (2018). The role of nurses in providing psychosocial support for patients with cancer. Journal of Nursing Scholarship, 50(6), 687–696. https://doi.org/10.1111/jnu.12427

Goodman, L. A. (1961). Snowball sampling. *Annals of Mathematical Statistics*, *32*(1), 148–170. https://doi.org/10.1214/aoms/1177705148

Gordon, H. L., Demerouti, E., Blanc, P. M. L., Bakker, A. B., Bipp, T., & Verhagen, M. (2018). Individual job redesign: Job crafting interventions in healthcare. *Journal of Vocational Behavior*, *104*, 98–114. https://doi.org/10.1016/j.jvb.2017.07.002

Guest, D. E. (2017) Human resource management and employee well-being: towards a new analytic framework. *Human Resource Management Journal*, *27*(1), 22–38. https://doi.org/10.1111/1748-8583.12139.

Hakanen, J. J., Bakker, A. B., & Schaufeli, W. B. (2006). Burnout and work engagement among teachers. Journal of School Psychology, 43(6), 495-513.

Halbesleben, J. R. B., & Buckley, M. R. (2004). Burnout in Organizational Life. Journal of Management, 30(6), 859–879. https://doi.org/10.1016/j.jm.2004.06.004.

Huppert, F. A. (2009), Psychological Well-being: Evidence Regarding its Causes and Consequences. *Applied Psychology: Health and Well-Being*, *1*(2), 137-164. https://doi.org/10.1111/j.1758-0854.2009.01008.x

Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. Guilford Press.

Lamers, S., Westerhof, G. J., Bohlmeijer, E. T., Klooster, P. M. T., & Keyes, C. L. M. (2011). Evaluating the psychometric properties of the mental health Continuum-Short Form (MHC-SF). *Journal of Clinical Psychology*, *67*(1), 99–110. https://doi.org/10.1002/jclp.20741

Leiter, M. P. & Bakker, A. B. (2010). Work Engagement: Introduction. In A. B. Bakker & M. P. Leiter (Eds.), *Work engagement: A handbook of essential theory and research* (pp. 10-24). Psychology Press.

Letona-Ibañez, O., Martínez-Rodríguez, S., Ortiz-Marqués, N., Carrasco, M. P., & Amillano, A. (2021). Job Crafting and Work Engagement: The Mediating Role of Work Meaning. *International Journal of Environmental Research and Public Health*, *18*(10), 5383. https://doi.org/10.3390/ijerph18105383

MacPhee, M., Dahinten, V. S., & Havaei, F. (2017). The Impact of Heavy Perceived Nurse Workloads on Patient and Nurse Outcomes. *Administrative Sciences*, *7*(1), 7. https://doi.org/10.3390/admsci7010007

McCormack, B., Dewing, J., Breslin, L., Coyne-Nevin, A., Kennedy, K., Manning, M. L., Peelo-Kilroe, L., Tobin, C. D., & Slater, P. B. (2010). Developing person-centred practice: nursing outcomes arising from changes to the care environment in residential settings for older people. *International Journal of Older People Nursing*, *5*(2), 93–107. https://doi.org/10.1111/j.1748-3743.2010.00216.x

Mitchell, D., & Haroun, L. (2016). *Introduction to health care*. Cengage Learning. Retrieved from https://www.perlego.com/book/2728640/introduction-to-health-care-pdf

O'Connor, D. B., Thakore, B., Rose, J., & Mahmood, L. (2016). Exploring the benefits of a nurse-led job crafting intervention in acute care: A multiple-case study approach. Health, Work & Organisations, 10(2), 141-158. doi: 10.1080/1 757479.2016.1252118

Oldham, G. R., & Fried, Y. (2016). Job design research and theory: Past, present and future. *Organizational Behavior and Human Decision Processes*, *136*, 20–35. https://doi.org/10.1016/j.obhdp.2016.05.002

Panaccio, A., & Vandenberghe, C. (2009). Perceived organizational support, organizational commitment and psychological well-being: A longitudinal study. *Journal of Vocational Behavior*, *75*(2), 224-236. https://doi.org/10.1016/j.jvb.2009.06.002

Piao, X., & Managi, S. (2022). Long-term improvement of psychological well-being in the workplace: What and how. *Social Science & Medicine*, *298*. https://doi.org/10.1016/j.socscimed.2022.114851

Reto, L., & Nunes, F. (1999). Métodos como estratégia de pesquisa: problemas tipo numa investigação. *Revista Portuguesa De Gestão*, *1*, 21–31. https://ciencia.iscte-iul.pt/publications/metodos-como-estrategia-de-pesquisa-problemas-tipo-numa-investigacao/38695

Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology*, *57*(6), 1069–1081. https://doi.org/10.1037/0022-3514.57.6.1069

Saks, A. M. (2006). Antecedents and consequences of employee engagement. *Journal of Managerial Psychology*, *21*(7), 600–619. https://doi.org/10.1108/02683940610690169

Schaufeli, W. B., & Bakker, A. B. (2010). Defining and measuring work engagement: Bringing clarity to the concept. In A. B. Bakker & M. P. Leiter (Eds.), *Work engagement: A handbook of essential theory and research* (pp. 10-24). Psychology Press.

Schaufeli, W. B., Bakker, A. B., & Salanova, M. (2006). The measurement of work engagement with a short questionnaire. *Educational and Psychological Measurement*, *66*(4), 701–716. https://doi.org/10.1177/0013164405282471

Schaufeli, W.B. and Bakker, A.B. (2004), "UWES (Utrecht Work Engagement Scale): Test manual", unpublished manuscript, Department of Psychology, Utrecht University, Utrecht.

Skår, R. (2009). The meaning of autonomy in nursing practice. *Journal of Clinical Nursing*. https://doi.org/10.1111/j.1365-2702.2009.02804.x

Slemp, G. R., & Vella-Brodrick, D. A. (2013a). Optimising Employee Mental Health: The Relationship Between Intrinsic Need Satisfaction, Job Crafting, and Employee Well-Being. *Journal of Happiness Studies*, *15*(4), 957-977. http://doi.org/10.1007/s10902-013-9458-3

Slemp, G.R., & Vella-Brodrick, D.A. (2013b). The job crafting questionnaire: A new scale to measure the extent to which employees engage in job crafting. *International Journal of Wellbeing*, 3(2), 126-146. https://doi.org/10.5502/ijw.v3i2.1

Sonnentag, S. (2003). Recovery, work engagement, and proactive behaviour: A new look at the interface between nonwork and work. *Journal of Applied Psychology*, *88*(3), 518–528. https://doi.org/10.1037/0021-9010.88.3.518

Tims, M., Bakker, A. B., & Derks, D. (2013). The Impact of Job Crafting on Job Demands, Job Resources, and Well-Being. *Journal of Occupational Health Psychology*, *18*(2), 230 –240. http://dx.doi.org/10.1037/a0032141

Tims, M., Bakker, A. B., & Derks, D. (2015). Job crafting and job performance: A longitudinal study. *European Journal of Work and Organizational Psychology*, 24(6), 914-928. https://doi.org/10.1080/1359432X.2014.969245.

World Health Organization (2020, July 20). *Fact sheet: Quality health services*. https://www.who.int/news-room/fact-sheets/detail/quality-health-services

World Health Organization (2021, December 6). *Health Promotion Glossary of Terms 2021*. https://www.who.int/publications/i/item/9789240038349

Wrzesniewski, A., & Dutton, J. E. (2001). Crafting a Job: Revisioning Employees as Active Crafters of Their Work. *The Academy of Management Review*, *26*(2), 179-201. https://doi.org/10.2307/259118

Yanchus, N. J., Periard, D. A., & Osatuke, K. (2016). Further examination of predictors of turnover intention among mental health professionals. *Journal of Psychiatric and Mental Health Nursing*, 24(1), 41–56. https://doi.org/10.1111/jpm.12354

Zhang, F., & Parker, S. K. (2018). Reorienting job crafting research: A hierarchical structure of job crafting concepts and integrative review. *Journal of Organizational Behavior*, *40*(2), 126–146. https://doi.org/10.1002/job.2332

7. Appendix

Annex A – Job Crafting Questionnaire

Questionário *Job Crafting*

O presente questionário insere-se no âmbito da dissertação de mestrado em Management, do ISCTE e tem como objetivo avaliar se o *Job Crafting* pode levar a um aumento do bem estar psicológico e o impacto no engagement.

O conceito de *Job Crafting* refere-se à prática da reconstrução do significado do trabalho, onde o objetivo é tornar as atividades de trabalho mais significativas, levando a um aumento da identificação com o trabalho, do bem-estar e da produtividade.

A sua resposta será um importante contributo para que haja um maior conhecimento sobre a dinâmica de participação dos enfermeiros em processos de *Job Crafting*.

Neste questionário não há respostas certas nem erradas. Será garantida a confidencialidade e o anonimato das respostas.

Muito obrigada pela sua colaboração,

Inês Gonçalves Luís | isgls@iscte-iul.pt

* Indica uma pergunta obrigatória

1. Leia as frases que se seguem e indique a frequência com que ocorrem na sua atividade, numa escalam de 6 pontos que varia entre "Nunca" e "Sempre". *

Marcar apenas uma oval por linha.

	Nunca	Raramente	Poucas vezes	Muitas vezes	Frequentemente	Sempre
Introduzo novas abordagens para melhorar o meu trabalho.	◯	◯	◯	◯	◯	◯
Executo mudanças no âmbito ou no tipo de tarefas que realizo no meu trabalho.	◯	◯	◯	◯	◯	◯
Introduzo novas tarefas que considero serem mais adequadas às minhas competências ou interesses.	◯	◯	◯	◯	◯	◯
Escolho realizar tarefas adicionais no meu trabalho.	◯	◯	◯	◯	◯	◯
Dou preferência a tarefas que sejam mais adequadas às minhas competências ou interesses.	◯	◯	◯	◯	◯	◯
Reflito no modo como o meu trabalho dá propósito à minha vida.	◯	◯	◯	◯	◯	◯
Tenho presente o significado que o meu trabalho tem no sucesso da organização.	◯	◯	◯	◯	◯	◯
Tenho presente a importância do meu trabalho para a comunidade.	◯	◯	◯	◯	◯	◯
Tenho presente o modo como o meu trabalho impacta positivamente a minha vida.	◯	◯	◯	◯	◯	◯
Reflito no papel que o meu trabalho tem no meu bem-estar geral.	◯	◯	◯	◯	◯	◯
Esforço-me por conhecer	◯	◯	◯	◯	◯	◯

as pessoas com quem trabalho.						
Organizo ou participo em eventos de cariz social relacionados com o trabalho.						
Organizo eventos especiais no local de trabalho (p.e. celebrar o aniversário de um colega).						
Escolho ser mentor/a de novos trabalhadores (oficialmente ou não).						
Sou amigo/a de colegas de trabalho com competências ou interesses semelhantes aos meus.						

2. Leia as frases que se seguem e indique a frequência com que ocorrem na sua vida, numa escala de 6 pontos, que varia entre "Nunca" e "Todos os dias". *

"No último mês, quantas vezes (se) sentiu..."

Marcar apenas uma oval por linha.

	Nunca	Uma ou duas vezes por mês	Uma vez por semana	Duas ou três vezes por semana	Quase todos os dias	Todos os dias
...que gosta da maioria das partes da sua personalidade.						
...bem a gerir as responsabilidades do seu quotidiano.						
...que as suas relações com os outros são boas e de confiança.						
...que tem experiências que o/a desafiam a crescer e que o/a tornam numa pessoa melhor.						
...confiante em sentir ou expressar as suas próprias ideias e opiniões.						
...que a sua vida tem sentido e propósito.						

3. Leia as frases que se seguem e indique a frequência com que ocorrem na sua atividade, numa escalam de 6 pontos que varia entre "Nunca" e "Sempre". *

Marcar apenas uma oval por linha.

	Nunca	Raramente	Poucas vezes	Muitas vezes	Frequentemente	Sempre
No meu trabalho, sinto-me cheio(a) de energia.	◯	◯	◯	◯	◯	◯
No meu trabalho, sinto-me forte e vigoroso(a).	◯	◯	◯	◯	◯	◯
Sinto-me entusiasmado(a) com o meu trabalho.	◯	◯	◯	◯	◯	◯
O meu trabalho inspira-me.	◯	◯	◯	◯	◯	◯
Quando me levanto de manhã, apetece-me ir trabalhar.	◯	◯	◯	◯	◯	◯
Sinto-me feliz quando trabalho intensamente.	◯	◯	◯	◯	◯	◯
Sinto-me orgulhoso(a) do trabalho que faço.	◯	◯	◯	◯	◯	◯
Estou completamente envolvido(a) no meu trabalho.	◯	◯	◯	◯	◯	◯
Fico empolgado(a) quando estou a trabalhar.	◯	◯	◯	◯	◯	◯

Secção sem título

4. Género *

Marcar apenas uma oval.

- ◯ Feminino
- ◯ Masculino
- ◯ Outro

5. Idade *

_____

6. Zona geográfica da sua atividade profissional *

Marcar apenas uma oval.

- ◯ Norte (Portugal Continental)
- ◯ Centro (Portugal Continental)
- ◯ Sul (Portugal Continental)
- ◯ Região Autónoma dos Açores
- ◯ Região Autónoma da Madeira
- ◯ Outra: _____

7. Habilitações académicas *

Marcar apenas uma oval.

- ◯ Licenciatura
- ◯ Mestrado
- ◯ Doutoramento
- ◯ Outra: _____

8. Em que setor(es) em que exerce? *

Marcar tudo o que for aplicável.

- ☐ Setor Público
- ☐ Setor Privado
- ☐ Outra: _____

9. Há quanto anos exerce a sua profissão? *

_____

10. Qual o seu nível? *

Marcar apenas uma oval.

- ◯ Enfermeiro gestor (cargos de chefia e coordenação)
- ◯ Enfermeiro especialista (possui competências avançadas numa área especifica de enfermagem)
- ◯ Enfermeiro (concluiu o curso de enfermagem de nível superior e está registado na Ordem do Enfermeiros)
- ◯ Outra: _____

11. Qual a sua especialidade? *

Marcar apenas uma oval.

- ◯ Enfermagem de Saúde Materna e Obstetrícia
- ◯ Enfermagem de Saúde Infantil e Pediátrica
- ◯ Enfermagem de Saúde Mental e Psiquiátrica
- ◯ Enfermagem de Reabilitação
- ◯ Enfermagem Médico-Cirúrgica
- ◯ EMC Enfermagem à Pessoa em Situação Paliativa
- ◯ EMC Enfermagem à Pessoa em Situação Crítica
- ◯ EMC Enfermagem à Pessoa em Situação Perioperatória
- ◯ EMC Enfermagem à Pessoa em Situação Crónica
- ◯ Enfermagem Comunitária
- ◯ EC Enfermagem de Saúde Comunitária e Saúde Pública
- ◯ EC Enfermagem de Saúde Familiar
- ◯ Enfermagem Pré-Hospitalar (INEM)
- ◯ Enfermagem de Cuidados Intensivos

12. Qual o seu regime contratual? *

Marcar apenas uma oval.

- ◯ Contrato de Trabalho a termo certo
- ◯ Contrato de Trabalho a termo incerto
- ◯ Contrato de Trabalho sem termo
- ◯ Contrato de Trabalho temporário
- ◯ Contrato de Trabalho a tempo parcial (part-time)
- ◯ Contrato de Estágio
- ◯ Outra: _____

13. Acumula a atividade como enfermeiro em mais que uma instituição? *

Marcar apenas uma oval.

Sim
Não

Annex B - Sampling Profile

Table 8: Specialty

		Frequência	Porcentagem	Porcentagem válida	Porcentagem acumulativa
Válido	EC Enfermagem de Saúde Comunitária e Saúde Pública	6	2,9	2,9	2,9
	EC Enfermagem de Saúde Familiar	6	2,9	2,9	5,8
	EMC Enfermagem à Pessoa em Situação Crítica	9	4,3	4,3	10,1
	EMC Enfermagem à Pessoa em Situação Crónica	2	1,0	1,0	11,1
	EMC Enfermagem à Pessoa em Situação Paliativa	9	4,3	4,3	15,5
	EMC Enfermagem à Pessoa em Situação Perioperatória	5	2,4	2,4	17,9
	Enfermagem Comunitária	19	9,2	9,2	27,1
	Enfermagem de Reabilitação	7	3,4	3,4	30,4
	Enfermagem de Saúde Infantil e Pediátrica	13	6,3	6,3	36,7
	Enfermagem de Saúde Materna e Obstétrica	8	3,9	3,9	40,6
	Enfermagem de Saúde Mental e Psiquiátrica	10	4,8	4,8	45,4
	Enfermagem Médico-Cirúrgica	12	5,8	5,8	51,2
	Sem especialidade	101	48,8	48,8	100,0
	Total	207	100,0	100,0	

Table 9: Contract type

		Frequência	Porcentagem	Porcentagem válida	Porcentagem acumulativa
Válido	Contrato de Trabalho a termo certo	31	15,0	15,0	15,0
	Contrato de Trabalho a termo incerto	42	20,3	20,3	35,3
	Contrato de Trabalho sem termo	131	63,3	63,3	98,6
	Contrato de Trabalho a tempo parcial (part-time)	3	1,4	1,4	100,0
	Total	207	100,0	100,0	

Annex C – PCA on Job Crafting

Table 10: KMO and Bartlett´s Test for sample adequacy

Medida Kaiser-Meyer-Olkin de adequação de amostragem.		,886
Teste de esfericidade de Bartlett	Aprox. Qui-quadrado	1548,303
	gl	105
	Sig.	<,001

Table 11: Communalities

	Inicial	Extração
Introduzo novas abordagens para melhorar o meu trabalho.	1,000	,694
Executo mudanças no âmbito ou no tipo de tarefas que realizo no meu trabalho.	1,000	,735
Introduzo novas tarefas que considero serem mais adequadas às minhas competências ou interesses.	1,000	,784
Escolho realizar tarefas adicionais no meu trabalho.	1,000	,534
Dou preferência a tarefas que sejam mais adequadas às minhas competências ou interesses.	1,000	,389
Reflito no modo como o meu trabalho dá propósito à minha vida.	1,000	,632
Tenho presente o significado que o meu trabalho tem no sucesso da organização.	1,000	,675
Tenho presente a importância do meu trabalho para a comunidade.	1,000	,630
Tenho presente o modo como o meu trabalho impacta positivamente a minha vida.	1,000	,606
Reflito no papel que o meu trabalho tem no meu bem-estar geral.	1,000	,701
Esforço-me por conhecer as pessoas com quem trabalho.	1,000	,655
Organizo ou participo em eventos de cariz social relacionados com o trabalho.	1,000	,627
Organizo eventos especiais no local de trabalho (p.e. celebrar o aniversário de um colega).	1,000	,774
Escolho ser mentor/a de novos trabalhadores (oficialmente ou não).	1,000	,644
Sou amigo/a de colegas de trabalho com competências ou interesses semelhantes aos meus.	1,000	,521

Método de Extração: análise de Componente Principal.

Table 12: Total variance explained

Variância total explicada

Componente	Autovalores iniciais			Somas de extração de carregamentos ao quadrado			Somas de rotação de carregamentos ao quadrado		
	Total	% de variância	% cumulativa	Total	% de variância	% cumulativa	Total	% de variância	% cumulativa
1	6,215	41,434	41,434	6,215	41,434	41,434	3,486	23,238	23,238
2	1,868	12,452	53,887	1,868	12,452	53,887	3,366	22,441	45,679
3	1,518	10,118	64,005	1,518	10,118	64,005	2,749	18,326	64,005
4	,837	5,579	69,584						
5	,756	5,040	74,624						
6	,636	4,243	78,868						
7	,535	3,564	82,431						
8	,449	2,995	85,426						
9	,396	2,642	88,068						
10	,367	2,450	90,517						
11	,354	2,358	92,875						
12	,300	2,001	94,876						
13	,288	1,917	96,794						
14	,251	1,671	98,465						
15	,230	1,535	100,000						

Método de Extração: análise de Componente Principal.

Table 13: Rotated component matrix

	Componente		
	1	2	3
Reflito no papel que o meu trabalho tem no meu bem-estar geral.	,793	,186	,196
Tenho presente a importância do meu trabalho para a comunidade.	,774	,059	,165
Reflito no modo como o meu trabalho dá propósito à minha vida.	,716	,327	,112
Tenho presente o significado que o meu trabalho tem no sucesso da organização.	,706		,060
Tenho presente o modo como o meu trabalho impacta positivamente a minha vida.	,694	,297	,191
Introduzo novas tarefas que considero serem mais adequadas às minhas competências ou interesses.	,191	,859	,099
Executo mudanças no âmbito ou no tipo de tarefas que realizo no meu trabalho.	,107	,840	,130
Introduzo novas abordagens para melhorar o meu trabalho.	,161	,812	,096
Escolho realizar tarefas adicionais no meu trabalho.	,249	,637	,258
Dou preferência a tarefas que sejam mais adequadas às minhas competências ou interesses.	,289	,530	,155
Organizo eventos especiais no local de trabalho (p.e. celebrar o aniversário de um colega).	,103	,113	,866
Organizo ou participo em eventos de cariz social relacionados com o trabalho.	,182	,203	,744
Escolho ser mentor/a de novos trabalhadores (oficialmente ou não).	,042	,340	,726
Esforço-me por conhecer as pessoas com quem trabalho.	,544	,038	,598
Sou amigo/a de colegas de trabalho com competências ou interesses semelhantes aos meus.	,453	-,001	,562

Método de Extração: análise de Componente Principal.
Método de Rotação: Varimax com Normalização de Kaiser.[a]

a. Rotação convergida em 6 iterações.

Annex D – PCA on Psychological Well-Being

Table 14: KMO and Bartlett´s Test for sample adequacy

Medida Kaiser-Meyer-Olkin de adequação de amostragem.		,909
Teste de esfericidade de Bartlett	Aprox. Qui-quadrado	718,285
	gl	15
	Sig.	<,001

Table 15: Communalities

	Inicial	Extração
Quantas vezes sentiu que gosta da maioria das partes da sua personalidade.	1,000	,721
Quantas vezes se sentiu bem a gerir as responsabilidades do seu quotidiano.	1,000	,665
Quantas vezes sentiu que as suas relações com os outros são boas e de confiança.	1,000	,643
Quantas vezes sentiu que tem experiências que o/a desafiam a crescer e que o/a tornam numa pessoa melhor.	1,000	,637
Quantas vezes se sentiu confiante em sentir ou expressar as suas próprias ideias e opiniões.	1,000	,703
Quantas vezes sentiu que a sua vida tem sentido e propósito.	1,000	,734

Método de Extração: análise de Componente Principal.

Table 16: Total variance explained

	Autovalores iniciais			Somas de extração de carregamentos ao quadrado		
Componente	Total	% de variância	% cumulativa	Total	% de variância	% cumulativa
1	4,104	68,393	68,393	4,104	68,393	68,393
2	,465	7,750	76,143			
3	,459	7,649	83,792			
4	,374	6,232	90,024			
5	,323	5,381	95,405			
6	,276	4,595	100,000			

Método de Extração: análise de Componente Principal.

Table 17: Component matrix

	Componente 1
Quantas vezes sentiu que a sua vida tem sentido e propósito.	,857
Quantas vezes sentiu que gosta da maioria das partes da sua personalidade.	,849
Quantas vezes se sentiu confiante em sentir ou expressar as suas próprias ideias e opiniões.	,838
Quantas vezes se sentiu bem a gerir as responsabilidades do seu quotidiano.	,816
Quantas vezes sentiu que as suas relações com os outros são boas e de confiança.	,802
Quantas vezes sentiu que tem experiências que o/a desafiam a crescer e que o/a tornam numa pessoa melhor.	,798

Método de Extração: análise de Componente Principal.

a. 1 componentes extraídos.

Annex E – PCA on Work Engagement

Table 18: KMO and Bartlett´s Test for sample adequacy

Medida Kaiser-Meyer-Olkin de adequação de amostragem.		,908
Teste de esfericidade de Bartlett	Aprox. Qui-quadrado	1835,547
	gl	36
	Sig.	<,001

Table 19: Communalities

	Inicial	Extração
No meu trabalho, sinto-me cheio(a) de energia.	1,000	,766
No meu trabalho, sinto-me forte e vigoroso(a).	1,000	,796
Sinto-me entusiasmado(a) com o meu trabalho.	1,000	,753
O meu trabalho inspira-me.	1,000	,774
Quando me levanto de manhã, apetece-me ir trabalhar.	1,000	,723
Sinto-me feliz quando trabalho intensamente.	1,000	,654
Sinto-me orgulhoso(a) do trabalho que faço.	1,000	,557
Estou completamente envolvido(a) no meu trabalho.	1,000	,667
Fico empolgado(a) quando estou a trabalhar.	1,000	,789

Método de Extração: análise de Componente Principal.

Table 20: Total variance explained

	Autovalores iniciais			Somas de extração de carregamentos ao quadrado		
Componente	Total	% de variância	% cumulativa	Total	% de variância	% cumulativa
1	6,479	71,987	71,987	6,479	71,987	71,987
2	,839	9,325	81,312			
3	,433	4,809	86,121			
4	,319	3,541	89,661			
5	,263	2,925	92,586			
6	,252	2,800	95,387			
7	,199	2,206	97,592			
8	,122	1,359	98,951			
9	,094	1,049	100,000			

Método de Extração: análise de Componente Principal.

Table 21: Component matrix

	Componente 1
No meu trabalho, sinto-me forte e vigoroso(a).	,892
Fico empolgado(a) quando estou a trabalhar.	,888
O meu trabalho inspira-me.	,880
No meu trabalho, sinto-me cheio(a) de energia.	,875
Sinto-me entusiasmado(a) com o meu trabalho.	,868
Quando me levanto de manhã, apetece-me ir trabalhar.	,850
Estou completamente envolvido(a) no meu trabalho.	,817
Sinto-me feliz quando trabalho intensamente.	,809
Sinto-me orgulhoso(a) do trabalho que faço.	,746

Método de Extração: análise de Componente Principal.

a. 1 componentes extraídos.

Annex F – Reliability Analysis

Table 22: Reliability Statistics

	Cronbach´s Alfa	Cronbach´s Alfa based on standardized items	Nr of items
Job Crafting - Task Dimension	0.842	0.844	5
Job Crafting - Cognitive Dimension	0.861	0.862	5
Job Crafting - Relational Dimension	0.818	0.821	5
Psychological Well-Being	0.907	0.907	6
Work Engagement	0.950	0.951	9

Annex G – Mean Comparison

Table 23: Independent Samples T-Test (gender)

		Teste de Levene para igualdade de variâncias		teste-t para Igualdade de Médias							
						Significância		Diferença média	Erro de diferença padrão	95% Intervalo de Confiança da Diferença	
		Z	Sig.	t	df	Unilateral p	Bilateral p			Inferior	Superior
JCQ_MédiaAgregada	Variâncias iguais assumidas	2,197	,140	-1,228	205	,110	,221	-,13102	,10666	-,34132	,07928
	Variâncias iguais não assumidas			-1,302	110,790	,098	,196	-,13102	,10066	-,33048	,06845
PWB_Média	Variâncias iguais assumidas	1,187	,277	-,529	205	,299	,597	-,07565	,14299	-,35756	,20626
	Variâncias iguais não assumidas			-,542	103,285	,294	,589	-,07565	,13953	-,35235	,20106
WE_Média	Variâncias iguais assumidas	,355	,552	-1,262	205	,104	,208	-,18659	,14788	-,47815	,10498
	Variâncias iguais não assumidas			-1,283	101,738	,101	,202	-,18659	,14539	-,47498	,10180

Table 24: Independent Samples T-Test (activity accumulation)

		Teste de Levene para igualdade de variâncias		teste-t para Igualdade de Médias							
						Significância		Diferença média	Erro de diferença padrão	95% Intervalo de Confiança da Diferença	
		Z	Sig.	t	df	Unilateral p	Bilateral p			Inferior	Superior
Média dos items que compõe a dimensão task no JC	Variâncias iguais assumidas	1,207	,273	-,248	205	,402	,804	-,03043	,12263	-,27222	,21135
	Variâncias iguais não assumidas			-,271	83,615	,394	,787	-,03043	,11231	-,25379	,19292
Média dos items que compõe a dimensão cognitive no JC	Variâncias iguais assumidas	,747	,388	-,013	205	,495	,989	-,00186	,14022	-,27832	,27460
	Variâncias iguais não assumidas			-,014	82,417	,494	,989	-,00186	,12949	-,25943	,25570
Média dos items que compõe a dimensão relational no JC	Variâncias iguais assumidas	,659	,418	,115	205	,454	,909	,01801	,15664	-,29082	,32684
	Variâncias iguais não assumidas			,122	79,319	,452	,903	,01801	,14799	-,27654	,31256
JCQ_MédiaAgregada	Variâncias iguais assumidas	,698	,404	-,042	205	,483	,967	-,00476	,11439	-,23030	,22078
	Variâncias iguais não assumidas			-,045	81,579	,482	,964	-,00476	,10627	-,21618	,20666
PWB_Média	Variâncias iguais assumidas	2,544	,112	1,391	205	,083	,166	,21170	,15217	-,08833	,51172
	Variâncias iguais não assumidas			1,545	86,188	,063	,126	,21170	,13702	-,06067	,48407
WE_Média	Variâncias iguais assumidas	,871	,352	,427	205	,335	,670	,06763	,15856	-,24499	,38025
	Variâncias iguais não assumidas			,452	79,376	,326	,653	,06763	,14974	-,23040	,36566

Age per intervals

Table 25: Levene´s Test for variance homogeneity

		Estatística de Levene	df1	df2	Sig.
Média dos items que compõe a dimensão task no JC	Com base em média	1,090	4	202	,363
	Com base em mediana	,987	4	202	,415
	Com base em mediana e com gl ajustado	,987	4	191,135	,416
	Com base em média aparada	1,087	4	202	,364
Média dos items que compõe a dimensão cognitive no JC	Com base em média	2,745	4	202	,030
	Com base em mediana	2,300	4	202	,060
	Com base em mediana e com gl ajustado	2,300	4	173,570	,061
	Com base em média aparada	2,572	4	202	,039
Média dos items que compõe a dimensão relational no JC	Com base em média	1,856	4	202	,120
	Com base em mediana	1,670	4	202	,158
	Com base em mediana e com gl ajustado	1,670	4	190,371	,159
	Com base em média aparada	1,837	4	202	,123
JCQ_MédiaAgregada	Com base em média	1,863	4	202	,118
	Com base em mediana	1,570	4	202	,184
	Com base em mediana e com gl ajustado	1,570	4	186,982	,184
	Com base em média aparada	1,805	4	202	,129
PWB_Média	Com base em média	3,376	4	202	,011
	Com base em mediana	2,196	4	202	,071
	Com base em mediana e com gl ajustado	2,196	4	173,525	,071
	Com base em média aparada	3,216	4	202	,014
WE_Média	Com base em média	2,177	4	202	,073
	Com base em mediana	1,946	4	202	,104
	Com base em mediana e com gl ajustado	1,946	4	195,236	,104
	Com base em média aparada	2,218	4	202	,068

Table 26: OneWay ANOVA

		Soma dos Quadrados	df	Quadrado Médio	Z	Sig.
Média dos items que compõe a dimensão task no JC	Entre Grupos	6,934	4	1,734	3,387	,010
	Nos grupos	103,402	202	,512		
	Total	110,337	206			
Média dos items que compõe a dimensão cognitive no JC	Entre Grupos	7,980	4	1,995	2,958	,021
	Nos grupos	136,229	202	,674		
	Total	144,209	206			
Média dos items que compõe a dimensão relational no JC	Entre Grupos	12,687	4	3,172	3,830	,005
	Nos grupos	167,283	202	,828		
	Total	179,970	206			
JCQ_MédiaAgregada	Entre Grupos	6,787	4	1,697	3,843	,005
	Nos grupos	89,191	202	,442		
	Total	95,978	206			
PWB_Média	Entre Grupos	6,956	4	1,739	2,135	,078
	Nos grupos	164,488	202	,814		
	Total	171,444	206			
WE_Média	Entre Grupos	8,148	4	2,037	2,332	,057
	Nos grupos	176,415	202	,873		
	Total	184,563	206			

Table 27: Robust Mean Equality Test

Testes Robustos de Igualdade de Médias

		Estatística[a]	df1	df2	Sig.
Média dos items que compõe a dimensão task no JC	Welch	3,358	4	53,061	,016
	Brown-Forsythe	3,060	4	87,030	,021
Média dos items que compõe a dimensão cognitive no JC	Welch	3,235	4	52,519	,019
	Brown-Forsythe	2,633	4	80,503	,040
Média dos items que compõe a dimensão relational no JC	Welch	3,021	4	51,956	,026
	Brown-Forsythe	3,175	4	79,175	,018
JCQ_MédiaAgregada	Welch	3,228	4	52,563	,019
	Brown-Forsythe	3,370	4	79,667	,013
PWB_Média	Welch	2,223	4	52,488	,079
	Brown-Forsythe	1,750	4	60,964	,151
WE_Média	Welch	2,020	4	51,953	,105
	Brown-Forsythe	1,944	4	73,732	,112

a. F distribuído assintoticamente.

Table 28: PostHoc Tests

Comparações múltiplas

Games-Howell

Variável dependente	(I) Idade em Intervalos por categoria	(J) Idade em Intervalos por categoria	Diferença média (I-J)	Erro Padrão	Sig.	Intervalo de Confiança 95%	
						Limite inferior	Limite superior
Média dos items que compõe a dimensão task no JC	18-24	25-34	-,12733	,22515	,979	-,7963	,5416
		35-44	,17937	,23223	,936	-,5041	,8628
		45-54	-,26901	,23599	,784	-,9610	,4230
		>=55	,27460	,29028	,876	-,5676	1,1169
	25-34	18-24	,12733	,22515	,979	-,5416	,7963
		35-44	,30669	,12234	,096	-,0320	,6454
		45-54	-,14168	,12933	,808	-,5030	,2197
		>=55	,40193	,21284	,360	-,2453	1,0491
	35-44	18-24	-,17937	,23223	,936	-,8628	,5041
		25-34	-,30669	,12234	,096	-,6454	,0320
		45-54	-,44837*	,14130	,017	-,8419	-,0548
		>=55	,09524	,22031	,992	-,5657	,7562
	45-54	18-24	,26901	,23599	,784	-,4230	,9610
		25-34	,14168	,12933	,808	-,2197	,5030
		35-44	,44837*	,14130	,017	,0548	,8419
		>=55	,54361	,22427	,149	-,1257	1,2129
	>=55	18-24	-,27460	,29028	,876	-1,1169	,5676
		25-34	-,40193	,21284	,360	-1,0491	,2453
		35-44	-,09524	,22031	,992	-,7562	,5657
		45-54	-,54361	,22427	,149	-1,2129	,1257
Média dos items que compõe a dimensão cognitive no JC	18-24	25-34	-,03213	,25105	1,000	-,7800	,7157
		35-44	,08413	,26749	,998	-,6978	,8661
		45-54	-,32573	,25832	,717	-1,0886	,4371
		>=55	,49683	,34607	,611	-,5092	1,5029
	25-34	18-24	,03213	,25105	1,000	-,7157	,7800
		35-44	,11626	,14625	,932	-,2894	,5219
		45-54	-,29360	,12871	,162	-,6526	,0654
		>=55	,52896	,26382	,308	-,2808	1,3387
	35-44	18-24	-,08413	,26749	,998	-,8661	,6978
		25-34	-,11626	,14625	,932	-,5219	,2894
		45-54	-,40986	,15840	,081	-,8500	,0303
		>=55	,41270	,27952	,589	-,4251	1,2505
	45-54	18-24	,32573	,25832	,717	-,4371	1,0886
		25-34	,29360	,12871	,162	-,0654	,6526
		35-44	,40986	,15840	,081	-,0303	,8500
		>=55	,82256*	,27075	,050	,0006	1,6445
	>=55	18-24	-,49683	,34607	,611	-1,5029	,5092
		25-34	-,52896	,26382	,308	-1,3387	,2808
		35-44	-,41270	,27952	,589	-1,2505	,4251
		45-54	-,82256*	,27075	,050	-1,6445	-,0006
Média dos items que compõe a dimensão relational no JC	18-24	25-34	-,48378	,30264	,515	-1,3875	,4199
		35-44	-,39048	,31162	,721	-1,3120	,5311
		45-54	-,37368	,32426	,777	-1,3227	,5754
		>=55	,45714	,39622	,777	-,6925	1,6068
	25-34	18-24	,48378	,30264	,515	-,4199	1,3875
		35-44	,09331	,14799	,970	-,3165	,5031
		45-54	,11010	,17302	,969	-,3753	,5955
		>=55	,94093*	,28598	,032	,0649	1,8170
	35-44	18-24	,39048	,31162	,721	-,5311	1,3120
		25-34	-,09331	,14799	,970	-,5031	,3165
		45-54	,01679	,18830	1,000	-,5088	,5424
		>=55	,84762	,29548	,067	-,0450	1,7402
	45-54	18-24	,37368	,32426	,777	-,5754	1,3227
		25-34	-,11010	,17302	,969	-,5955	,3753
		35-44	-,01679	,18830	1,000	-,5424	,5088
		>=55	,83083	,30877	,089	-,0884	1,7500
	>=55	18-24	-,45714	,39622	,777	-1,6068	,6925
		25-34	-,94093*	,28598	,032	-1,8170	-,0649
		35-44	-,84762	,29548	,067	-1,7402	,0450
		45-54	-,83083	,30877	,089	-1,7500	,0884

Table 29: PostHoc Teste (cont.)

JCQ_MédiaAgregada	18-24	25-34	-,21441	,19820	,814	-,8030	,3742
		35-44	-,04233	,20826	1,000	-,6519	,5673
		45-54	-,32281	,20653	,533	-,9291	,2835
		>=55	,40952	,28314	,604	-,4155	1,2346
	25-34	18-24	,21441	,19820	,814	-,3742	,8030
		35-44	,17209	,11552	,571	-,1480	,4922
		45-54	-,10839	,11238	,870	-,4222	,2054
		>=55	,62394	,22392	,085	-,0634	1,3113
	35-44	18-24	,04233	,20826	1,000	-,5673	,6519
		25-34	-,17209	,11552	,571	-,4922	,1480
		45-54	-,28048	,12930	,200	-,6401	,0791
		>=55	,45185	,23287	,332	-,2510	1,1547
	45-54	18-24	,32281	,20653	,533	-,2835	,9291
		25-34	,10839	,11238	,870	-,2054	,4222
		35-44	,28048	,12930	,200	-,0791	,6401
		>=55	,73233*	,23133	,038	,0319	1,4327
	>=55	18-24	-,40952	,28314	,604	-1,2346	,4155
		25-34	-,62394	,22392	,085	-1,3113	,0634
		35-44	-,45185	,23287	,332	-1,1547	,2510
		45-54	-,73233*	,23133	,038	-1,4327	-,0319
PWB_Média	18-24	25-34	-,46296	,23582	,314	-1,1581	,2322
		35-44	-,23677	,24775	,872	-,9578	,4842
		45-54	-,63840	,25091	,108	-1,3675	,0907
		>=55	-,34392	,41585	,919	-1,5772	,8894
	25-34	18-24	,46296	,23582	,314	-,2322	1,1581
		35-44	,22619	,15291	,578	-,1972	,6496
		45-54	-,17544	,15797	,800	-,6168	,2659
		>=55	,11905	,36733	,997	-1,0165	1,2546
	35-44	18-24	,23677	,24775	,872	-,4842	,9578
		25-34	-,22619	,15291	,578	-,6496	,1972
		45-54	-,40163	,17529	,157	-,8896	,0863
		>=55	-,10714	,37510	,998	-1,2552	1,0409
	45-54	18-24	,63840	,25091	,108	-,0907	1,3675
		25-34	,17544	,15797	,800	-,2659	,6168
		35-44	,40163	,17529	,157	-,0863	,8896
		>=55	,29449	,37719	,933	-,8574	1,4464
	>=55	18-24	,34392	,41585	,919	-,8894	1,5772
		25-34	-,11905	,36733	,997	-1,2546	1,0165
		35-44	,10714	,37510	,998	-1,0409	1,2552
		45-54	-,29449	,37719	,933	-1,4464	,8574
WE_Média	18-24	25-34	-,68202	,26685	,115	-1,4746	,1106
		35-44	-,44004	,28150	,533	-1,2632	,3832
		45-54	-,58252	,28825	,282	-1,4217	,2566
		>=55	-,27425	,41398	,963	-1,4872	,9387
	25-34	18-24	,68202	,26685	,115	-,1106	1,4746
		35-44	,24198	,15720	,539	-,1937	,6776
		45-54	,09949	,16899	,976	-,3741	,5731
		>=55	,40776	,34184	,755	-,6473	1,4628
	35-44	18-24	,44004	,28150	,533	-,3832	1,2632
		25-34	-,24198	,15720	,539	-,6776	,1937
		45-54	-,14249	,19130	,945	-,6754	,3904
		>=55	,16578	,35339	,989	-,9085	1,2400
	45-54	18-24	,58252	,28825	,282	-,2566	1,4217
		25-34	-,09949	,16899	,976	-,5731	,3741
		35-44	,14249	,19130	,945	-,3904	,6754
		>=55	,30827	,35880	,908	-,7762	1,3927
	>=55	18-24	,27425	,41398	,963	-,9387	1,4872
		25-34	-,40776	,34184	,755	-1,4628	,6473
		35-44	-,16578	,35339	,989	-1,2400	,9085
		45-54	-,30827	,35880	,908	-1,3927	,7762

*. A diferença média é significativa no nível 0.05.

Geographic Area

Table 30: Levene´s Test for variance homogeneity

		Estatística de Levene	df1	df2	Sig.
Média dos items que compõe a dimensão task no JC	Com base em média	,728	3	203	,536
	Com base em mediana	,743	3	203	,528
	Com base em mediana e com gl ajustado	,743	3	195,232	,528
	Com base em média aparada	,732	3	203	,534
Média dos items que compõe a dimensão cognitive no JC	Com base em média	,279	3	203	,840
	Com base em mediana	,095	3	203	,963
	Com base em mediana e com gl ajustado	,095	3	180,943	,963
	Com base em média aparada	,178	3	203	,911
Média dos items que compõe a dimensão relational no JC	Com base em média	3,560	3	203	,015
	Com base em mediana	3,487	3	203	,017
	Com base em mediana e com gl ajustado	3,487	3	184,281	,017
	Com base em média aparada	3,547	3	203	,015
JCQ_MédiaAgregada	Com base em média	,556	3	203	,644
	Com base em mediana	,517	3	203	,671
	Com base em mediana e com gl ajustado	,517	3	188,466	,671
	Com base em média aparada	,533	3	203	,660
PWB_Média	Com base em média	1,663	3	203	,176
	Com base em mediana	1,155	3	203	,328
	Com base em mediana e com gl ajustado	1,155	3	192,335	,328
	Com base em média aparada	1,486	3	203	,219
WE_Média	Com base em média	1,846	3	203	,140
	Com base em mediana	1,511	3	203	,213
	Com base em mediana e com gl ajustado	1,511	3	187,096	,213
	Com base em média aparada	1,548	3	203	,203

Table 31: OneWay ANOVA

		Soma dos Quadrados	df	Quadrado Médio	Z	Sig.
Média dos items que compõe a dimensão task no JC	Entre Grupos	,498	3	,166	,307	,820
	Nos grupos	109,838	203	,541		
	Total	110,337	206			
Média dos items que compõe a dimensão cognitive no JC	Entre Grupos	1,185	3	,395	,561	,641
	Nos grupos	143,023	203	,705		
	Total	144,209	206			
Média dos items que compõe a dimensão relational no JC	Entre Grupos	2,914	3	,971	1,113	,345
	Nos grupos	177,057	203	,872		
	Total	179,970	206			
JCQ_MédiaAgregada	Entre Grupos	,864	3	,288	,614	,606
	Nos grupos	95,114	203	,469		
	Total	95,978	206			
PWB_Média	Entre Grupos	,843	3	,281	,334	,800
	Nos grupos	170,601	203	,840		
	Total	171,444	206			
WE_Média	Entre Grupos	3,838	3	1,279	1,437	,233
	Nos grupos	180,725	203	,890		
	Total	184,563	206			

Academic Qualifications

Table 32: Levene´s Test for variance homogeneity

		Estatística de Levene	df1	df2	Sig.
Média dos items que compõe a dimensão task no JC	Com base em média	,390	2	204	,678
	Com base em mediana	,352	2	204	,703
	Com base em mediana e com gl ajustado	,352	2	200,584	,703
	Com base em média aparada	,356	2	204	,701
Média dos items que compõe a dimensão cognitive no JC	Com base em média	5,343	2	204	,005
	Com base em mediana	5,127	2	204	,007
	Com base em mediana e com gl ajustado	5,127	2	184,055	,007
	Com base em média aparada	5,230	2	204	,006
Média dos items que compõe a dimensão relational no JC	Com base em média	1,487	2	204	,228
	Com base em mediana	1,486	2	204	,229
	Com base em mediana e com gl ajustado	1,486	2	201,548	,229
	Com base em média aparada	1,522	2	204	,221
JCQ_MédiaAgregada	Com base em média	1,487	2	204	,229
	Com base em mediana	1,571	2	204	,210
	Com base em mediana e com gl ajustado	1,571	2	202,855	,210
	Com base em média aparada	1,511	2	204	,223
PWB_Média	Com base em média	4,868	2	204	,009
	Com base em mediana	3,887	2	204	,022
	Com base em mediana e com gl ajustado	3,887	2	169,728	,022
	Com base em média aparada	4,471	2	204	,013
WE_Média	Com base em média	2,179	2	204	,116
	Com base em mediana	1,702	2	204	,185
	Com base em mediana e com gl ajustado	1,702	2	201,498	,185
	Com base em média aparada	2,033	2	204	,134

Table 33: OneWay ANOVA

		Soma dos Quadrados	df	Quadrado Médio	Z	Sig.
Média dos items que compõe a dimensão task no JC	Entre Grupos	10,467	2	5,234	10,690	<,001
	Nos grupos	99,870	204	,490		
	Total	110,337	206			
Média dos items que compõe a dimensão cognitive no JC	Entre Grupos	5,435	2	2,718	3,995	,020
	Nos grupos	138,774	204	,680		
	Total	144,209	206			
Média dos items que compõe a dimensão relational no JC	Entre Grupos	10,238	2	5,119	6,152	,003
	Nos grupos	169,733	204	,832		
	Total	179,970	206			
JCQ_MédiaAgregada	Entre Grupos	8,457	2	4,228	9,856	<,001
	Nos grupos	87,521	204	,429		
	Total	95,978	206			
PWB_Média	Entre Grupos	5,661	2	2,831	3,483	,033
	Nos grupos	165,783	204	,813		
	Total	171,444	206			
WE_Média	Entre Grupos	14,403	2	7,201	8,633	<,001
	Nos grupos	170,160	204	,834		
	Total	184,563	206			

Table 34: Robust Mean Equality Test

Testes Robustos de Igualdade de Médias

		Estatística[a]	df1	df2	Sig.
Média dos items que compõe a dimensão task no JC	Welch	10,262	2	13,430	,002
Média dos items que compõe a dimensão cognitive no JC	Welch	6,032	2	16,139	,011
Média dos items que compõe a dimensão relational no JC	Welch	7,317	2	15,150	,006
JCQ_MédiaAgregada	Welch	10,519	2	14,459	,002
PWB_Média	Welch	3,684	2	13,357	,053
WE_Média	Welch	8,736	2	13,471	,004

a. F distribuído assintoticamente.

Table 35: PostHoc Tests

Comparações múltiplas

Games-Howell

Variável dependente	(I) Habilitações Académicas	(J) Habilitações Académicas	Diferença média (I-J)	Erro Padrão	Sig.	Intervalo de Confiança 95% Limite inferior	Intervalo de Confiança 95% Limite superior
Média dos items que compõe a dimensão task no JC	Licenciatura	Mestrado	-,44823*	,09832	<,001	-,6805	-,2159
		Pós-Graduação	-,51966	,36982	,403	-1,6967	,6574
	Mestrado	Licenciatura	,44823*	,09832	<,001	,2159	,6805
		Pós-Graduação	-,07143	,37120	,980	-1,2471	1,1043
	Pós-Graduação	Licenciatura	,51966	,36982	,403	-,6574	1,6967
		Mestrado	,07143	,37120	,980	-1,1043	1,2471
Média dos items que compõe a dimensão cognitive no JC	Licenciatura	Mestrado	-,29377*	,11318	,027	-,5610	-,0265
		Pós-Graduação	-,57949*	,18208	,030	-1,0966	-,0624
	Mestrado	Licenciatura	,29377*	,11318	,027	,0265	,5610
		Pós-Graduação	-,28571	,17667	,298	-,8007	,2292
	Pós-Graduação	Licenciatura	,57949*	,18208	,030	,0624	1,0966
		Mestrado	,28571	,17667	,298	-,2292	,8007
Média dos items que compõe a dimensão relational no JC	Licenciatura	Mestrado	-,42106*	,13051	,004	-,7294	-,1127
		Pós-Graduação	-,69487	,23793	,054	-1,4050	,0153
	Mestrado	Licenciatura	,42106*	,13051	,004	,1127	,7294
		Pós-Graduação	-,27381	,24216	,527	-,9842	,4366
	Pós-Graduação	Licenciatura	,69487	,23793	,054	-,0153	1,4050
		Mestrado	,27381	,24216	,527	-,4366	,9842
JCQ_MédiaAgregada	Licenciatura	Mestrado	-,38769*	,09243	<,001	-,6060	-,1694
		Pós-Graduação	-,59801	,20159	,055	-1,2116	,0156
	Mestrado	Licenciatura	,38769*	,09243	<,001	,1694	,6060
		Pós-Graduação	-,21032	,20258	,581	-,8236	,4030
	Pós-Graduação	Licenciatura	,59801	,20159	,055	-,0156	1,2116
		Mestrado	,21032	,20258	,581	-,4030	,8236
PWB_Média	Licenciatura	Mestrado	-,33516*	,12190	,018	-,6230	-,0473
		Pós-Graduação	,02991	,51721	,998	-1,6171	1,6770
	Mestrado	Licenciatura	,33516*	,12190	,018	,0473	,6230
		Pós-Graduação	,36508	,51563	,769	-1,2837	2,0138
	Pós-Graduação	Licenciatura	-,02991	,51721	,998	-1,6770	1,6171
		Mestrado	-,36508	,51563	,769	-2,0138	1,2837
WE_Média	Licenciatura	Mestrado	-,52567*	,12592	<,001	-,8231	-,2283
		Pós-Graduação	,17142	,46576	,929	-1,3053	1,6481
	Mestrado	Licenciatura	,52567*	,12592	<,001	,2283	,8231
		Pós-Graduação	,69709	,46542	,363	-,7800	2,1741
	Pós-Graduação	Licenciatura	-,17142	,46576	,929	-1,6481	1,3053
		Mestrado	-,69709	,46542	,363	-2,1741	,7800

*. A diferença média é significativa no nível 0.05.

Sector

Table 36: Levene´s Test for variance homogeneity

		Estatística de Levene	df1	df2	Sig.
Média dos items que compõe a dimensão task no JC	Com base em média	,005	2	204	,995
	Com base em mediana	,012	2	204	,988
	Com base em mediana e com gl ajustado	,012	2	201,749	,988
	Com base em média aparada	,002	2	204	,998
Média dos items que compõe a dimensão cognitive no JC	Com base em média	,814	2	204	,444
	Com base em mediana	,712	2	204	,492
	Com base em mediana e com gl ajustado	,712	2	199,296	,492
	Com base em média aparada	,722	2	204	,487
Média dos items que compõe a dimensão relational no JC	Com base em média	,040	2	204	,961
	Com base em mediana	,123	2	204	,884
	Com base em mediana e com gl ajustado	,123	2	203,297	,884
	Com base em média aparada	,047	2	204	,954
JCQ_MédiaAgregada	Com base em média	,217	2	204	,805
	Com base em mediana	,217	2	204	,805
	Com base em mediana e com gl ajustado	,217	2	202,284	,805
	Com base em média aparada	,209	2	204	,811
PWB_Média	Com base em média	2,616	2	204	,076
	Com base em mediana	2,343	2	204	,099
	Com base em mediana e com gl ajustado	2,343	2	200,581	,099
	Com base em média aparada	2,533	2	204	,082
WE_Média	Com base em média	,781	2	204	,459
	Com base em mediana	,645	2	204	,525
	Com base em mediana e com gl ajustado	,645	2	199,302	,526
	Com base em média aparada	,732	2	204	,482

Table 37: OneWay ANOVA

		Soma dos Quadrados	df	Quadrado Médio	Z	Sig.
Média dos items que compõe a dimensão task no JC	Entre Grupos	1,598	2	,799	1,499	,226
	Nos grupos	108,738	204	,533		
	Total	110,337	206			
Média dos items que compõe a dimensão cognitive no JC	Entre Grupos	2,454	2	1,227	1,766	,174
	Nos grupos	141,755	204	,695		
	Total	144,209	206			
Média dos items que compõe a dimensão relational no JC	Entre Grupos	1,880	2	,940	1,077	,343
	Nos grupos	178,090	204	,873		
	Total	179,970	206			
JCQ_MédiaAgregada	Entre Grupos	1,312	2	,656	1,414	,246
	Nos grupos	94,666	204	,464		
	Total	95,978	206			
PWB_Média	Entre Grupos	5,514	2	2,757	3,389	,036
	Nos grupos	165,930	204	,813		
	Total	171,444	206			
WE_Média	Entre Grupos	6,763	2	3,381	3,880	,022
	Nos grupos	177,800	204	,872		
	Total	184,563	206			

Table 38: Robust Mean Equality Test

Testes Robustos de Igualdade de Médias

		Estatística[a]	df1	df2	Sig.
Média dos items que compõe a dimensão task no JC	Welch	1,457	2	30,942	,249
Média dos items que compõe a dimensão cognitive no JC	Welch	2,078	2	31,663	,142
Média dos items que compõe a dimensão relational no JC	Welch	1,140	2	31,570	,333
JCQ_MédiaAgregada	Welch	1,582	2	31,866	,221
PWB_Média	Welch	2,888	2	32,055	,070
WE_Média	Welch	5,104	2	33,056	,012

a. F distribuído assintoticamente.

Table 39: PostHoc Tests

Comparações múltiplas

Games-Howell

Variável dependente	(I) Em que setor(es) exerce?	(J) Em que setor(es) exerce?	Diferença média (I-J)	Erro Padrão	Sig.	Intervalo de Confiança 95%	
						Limite inferior	Limite superior
Média dos items que compõe a dimensão task no JC	Setor Público	Setor Privado	-,12783	,14520	,656	-,4806	,2250
		Setor Público e Setor Privado	-,31106	,19754	,284	-,8187	,1966
	Setor Privado	Setor Público	,12783	,14520	,656	-,2250	,4806
		Setor Público e Setor Privado	-,18323	,23136	,711	-,7555	,3891
	Setor Público e Setor Privado	Setor Público	,31106	,19754	,284	-,1966	,8187
		Setor Privado	,18323	,23136	,711	-,3891	,7555
Média dos items que compõe a dimensão cognitive no JC	Setor Público	Setor Privado	-,18589	,18209	,568	-,6294	,2577
		Setor Público e Setor Privado	-,36439	,19190	,168	-,8546	,1259
	Setor Privado	Setor Público	,18589	,18209	,568	-,2577	,6294
		Setor Público e Setor Privado	-,17849	,24819	,754	-,7848	,4278
	Setor Público e Setor Privado	Setor Público	,36439	,19190	,168	-,1259	,8546
		Setor Privado	,17849	,24819	,754	-,4278	,7848
Média dos items que compõe a dimensão relational no JC	Setor Público	Setor Privado	,17660	,17998	,593	-,2602	,6134
		Setor Público e Setor Privado	-,24878	,24059	,566	-,8657	,3681
	Setor Privado	Setor Público	-,17660	,17998	,593	-,6134	,2602
		Setor Público e Setor Privado	-,42538	,28150	,301	-1,1212	,2704
	Setor Público e Setor Privado	Setor Público	,24878	,24059	,566	-,3681	,8657
		Setor Privado	,42538	,28150	,301	-,2704	1,1212
JCQ_MédiaAgregada	Setor Público	Setor Privado	-,04571	,12925	,933	-,3592	,2678
		Setor Público e Setor Privado	-,30807	,17176	,201	-,7480	,1319
	Setor Privado	Setor Público	,04571	,12925	,933	-,2678	,3592
		Setor Público e Setor Privado	-,26237	,20071	,403	-,7583	,2336
	Setor Público e Setor Privado	Setor Público	,30807	,17176	,201	-,1319	,7480
		Setor Privado	,26237	,20071	,403	-,2336	,7583
PWB_Média	Setor Público	Setor Privado	,40907	,20623	,130	-,0939	,9120
		Setor Público e Setor Privado	-,22319	,19381	,496	-,7169	,2706
	Setor Privado	Setor Público	-,40907	,20623	,130	-,9120	,0939
		Setor Público e Setor Privado	-,63226	,26546	,056	-1,2784	,0138
	Setor Público e Setor Privado	Setor Público	,22319	,19381	,496	-,2706	,7169
		Setor Privado	,63226	,26546	,056	-,0138	1,2784
WE_Média	Setor Público	Setor Privado	,31817	,20055	,263	-,1700	,8064
		Setor Público e Setor Privado	-,49354*	,19266	,048	-,9827	-,0043
	Setor Privado	Setor Público	-,31817	,20055	,263	-,8064	,1700
		Setor Público e Setor Privado	-,81171*	,25800	,009	-1,4400	-,1834
	Setor Público e Setor Privado	Setor Público	,49354*	,19266	,048	,0043	,9827
		Setor Privado	,81171*	,25800	,009	,1834	1,4400

*. A diferença média é significativa no nível 0.05.

Level

Table 40: Levene´s Test for variance homogeneity

		Estatística de Levene	df1	df2	Sig.
Média dos items que compõe a dimensão task no JC	Com base em média	,774	2	204	,463
	Com base em mediana	,666	2	204	,515
	Com base em mediana e com gl ajustado	,666	2	203,580	,515
	Com base em média aparada	,765	2	204	,467
Média dos items que compõe a dimensão cognitive no JC	Com base em média	2,651	2	204	,073
	Com base em mediana	2,085	2	204	,127
	Com base em mediana e com gl ajustado	2,085	2	185,420	,127
	Com base em média aparada	2,460	2	204	,088
Média dos items que compõe a dimensão relational no JC	Com base em média	2,325	2	204	,100
	Com base em mediana	1,617	2	204	,201
	Com base em mediana e com gl ajustado	1,617	2	189,193	,201
	Com base em média aparada	2,299	2	204	,103
JCQ_MédiaAgregada	Com base em média	2,859	2	204	,060
	Com base em mediana	1,518	2	204	,222
	Com base em mediana e com gl ajustado	1,518	2	187,229	,222
	Com base em média aparada	2,727	2	204	,068
PWB_Média	Com base em média	4,963	2	204	,008
	Com base em mediana	3,515	2	204	,032
	Com base em mediana e com gl ajustado	3,515	2	171,370	,032
	Com base em média aparada	4,577	2	204	,011
WE_Média	Com base em média	3,496	2	204	,032
	Com base em mediana	3,036	2	204	,050
	Com base em mediana e com gl ajustado	3,036	2	193,597	,050
	Com base em média aparada	3,283	2	204	,040

Table 41: OneWay ANOVA

		Soma dos Quadrados	df	Quadrado Médio	Z	Sig.
Média dos items que compõe a dimensão task no JC	Entre Grupos	4,005	2	2,002	3,842	,023
	Nos grupos	106,332	204	,521		
	Total	110,337	206			
Média dos items que compõe a dimensão cognitive no JC	Entre Grupos	3,560	2	1,780	2,582	,078
	Nos grupos	140,648	204	,689		
	Total	144,209	206			
Média dos items que compõe a dimensão relational no JC	Entre Grupos	6,245	2	3,123	3,667	,027
	Nos grupos	173,725	204	,852		
	Total	179,970	206			
JCQ_MédiaAgregada	Entre Grupos	4,214	2	2,107	4,684	,010
	Nos grupos	91,764	204	,450		
	Total	95,978	206			
PWB_Média	Entre Grupos	4,058	2	2,029	2,473	,087
	Nos grupos	167,386	204	,821		
	Total	171,444	206			
WE_Média	Entre Grupos	8,682	2	4,341	5,035	,007
	Nos grupos	175,881	204	,862		
	Total	184,563	206			

Table 42: Robust Mean Equality Test

Testes Robustos de Igualdade de Médias

		Estatística[a]	df1	df2	Sig.
Média dos items que compõe a dimensão task no JC	Welch	3,815	2	42,557	,030
Média dos items que compõe a dimensão cognitive no JC	Welch	2,503	2	40,264	,094
Média dos items que compõe a dimensão relational no JC	Welch	3,829	2	40,028	,030
JCQ_MédiaAgregada	Welch	4,825	2	40,059	,013
PWB_Média	Welch	2,538	2	39,919	,092
WE_Média	Welch	5,274	2	40,375	,009

a. F distribuído assintoticamente.

Table 43: PostHoc Tests

Comparações múltiplas

Games-Howell

Variável dependente	(I) Qual o seu nível?	(J) Qual o seu nível?	Diferença média (I-J)	Erro Padrão	Sig.	Intervalo de Confiança 95% Limite inferior	Intervalo de Confiança 95% Limite superior
Média dos items que compõe a dimensão task no JC	Enfermeiro	Enfermeiro especialista	-,28643*	,10443	,018	-,5331	-,0397
		Enfermeiro gestor	-,05871	,19280	,950	-,5452	,4278
	Enfermeiro especialista	Enfermeiro	,28643*	,10443	,018	,0397	,5331
		Enfermeiro gestor	,22772	,19205	,475	-,2575	,7129
	Enfermeiro gestor	Enfermeiro	,05871	,19280	,950	-,4278	,5452
		Enfermeiro especialista	-,22772	,19205	,475	-,7129	,2575
Média dos items que compõe a dimensão cognitive no JC	Enfermeiro	Enfermeiro especialista	-,22350	,11694	,138	-,4998	,0528
		Enfermeiro gestor	,17487	,26766	,793	-,5048	,8546
	Enfermeiro especialista	Enfermeiro	,22350	,11694	,138	-,0528	,4998
		Enfermeiro gestor	,39837	,26238	,307	-,2724	1,0691
	Enfermeiro gestor	Enfermeiro	-,17487	,26766	,793	-,8546	,5048
		Enfermeiro especialista	-,39837	,26238	,307	-1,0691	,2724
Média dos items que compõe a dimensão relational no JC	Enfermeiro	Enfermeiro especialista	-,36168*	,12964	,016	-,6679	-,0554
		Enfermeiro gestor	-,19646	,31377	,808	-,9973	,6044
	Enfermeiro especialista	Enfermeiro	,36168*	,12964	,016	,0554	,6679
		Enfermeiro gestor	,16522	,31309	,859	-,6345	,9649
	Enfermeiro gestor	Enfermeiro	,19646	,31377	,808	-,6044	,9973
		Enfermeiro especialista	-,16522	,31309	,859	-,9649	,6345
JCQ_MédiaAgregada	Enfermeiro	Enfermeiro especialista	-,29054*	,09426	,007	-,5132	-,0679
		Enfermeiro gestor	-,02677	,22709	,992	-,6062	,5527
	Enfermeiro especialista	Enfermeiro	,29054*	,09426	,007	,0679	,5132
		Enfermeiro gestor	,26377	,22644	,489	-,3146	,8421
	Enfermeiro gestor	Enfermeiro	,02677	,22709	,992	-,5527	,6062
		Enfermeiro especialista	-,26377	,22644	,489	-,8421	,3146
PWB_Média	Enfermeiro	Enfermeiro especialista	-,27183	,12676	,084	-,5713	,0277
		Enfermeiro gestor	,05924	,30543	,979	-,7181	,8365
	Enfermeiro especialista	Enfermeiro	,27183	,12676	,084	-,0277	,5713
		Enfermeiro gestor	,33107	,30021	,525	-,4375	1,0996
	Enfermeiro gestor	Enfermeiro	-,05924	,30543	,979	-,8365	,7181
		Enfermeiro especialista	-,33107	,30021	,525	-1,0996	,4375
WE_Média	Enfermeiro	Enfermeiro especialista	-,41397*	,13103	,005	-,7236	-,1043
		Enfermeiro gestor	-,01361	,29291	,999	-,7563	,7290
	Enfermeiro especialista	Enfermeiro	,41397*	,13103	,005	,1043	,7236
		Enfermeiro gestor	,40036	,28593	,362	-,3304	1,1311
	Enfermeiro gestor	Enfermeiro	,01361	,29291	,999	-,7290	,7563
		Enfermeiro especialista	-,40036	,28593	,362	-1,1311	,3304

*. A diferença média é significativa no nível 0.05.

Specialty

Table 44: Levene´s Test for variance homogeneity

Testes de homogeneidade de variâncias

		Estatística de Levene	df1	df2	Sig.
Média dos items que compõe a dimensão task no JC	Com base em média	1,378	12	194	,179
	Com base em mediana	1,223	12	194	,270
	Com base em mediana e com gl ajustado	1,223	12	166,481	,271
	Com base em média aparada	1,370	12	194	,183
Média dos items que compõe a dimensão cognitive no JC	Com base em média	1,715	12	194	,066
	Com base em mediana	1,449	12	194	,147
	Com base em mediana e com gl ajustado	1,449	12	160,375	,149
	Com base em média aparada	1,623	12	194	,088
Média dos items que compõe a dimensão relational no JC	Com base em média	1,215	12	194	,275
	Com base em mediana	1,001	12	194	,449
	Com base em mediana e com gl ajustado	1,001	12	165,857	,450
	Com base em média aparada	1,186	12	194	,296
JCQ_MédiaAgregada	Com base em média	1,129	12	194	,339
	Com base em mediana	1,003	12	194	,448
	Com base em mediana e com gl ajustado	1,003	12	173,199	,448
	Com base em média aparada	1,144	12	194	,327
PWB_Média	Com base em média	1,496	12	194	,128
	Com base em mediana	1,208	12	194	,280
	Com base em mediana e com gl ajustado	1,208	12	169,216	,281
	Com base em média aparada	1,429	12	194	,155
WE_Média	Com base em média	1,015	12	194	,436
	Com base em mediana	,891	12	194	,557
	Com base em mediana e com gl ajustado	,891	12	159,816	,557
	Com base em média aparada	,960	12	194	,489

Table 45: OneWay ANOVA

		Soma dos Quadrados	df	Quadrado Médio	Z	Sig.
Média dos items que compõe a dimensão task no JC	Entre Grupos	8,898	12	,742	1,418	,160
	Nos grupos	101,439	194	,523		
	Total	110,337	206			
Média dos items que compõe a dimensão cognitive no JC	Entre Grupos	10,162	12	,847	1,226	,268
	Nos grupos	134,047	194	,691		
	Total	144,209	206			
Média dos items que compõe a dimensão relational no JC	Entre Grupos	12,453	12	1,038	1,202	,284
	Nos grupos	167,517	194	,863		
	Total	179,970	206			
JCQ_MédiaAgregada	Entre Grupos	8,234	12	,686	1,517	,121
	Nos grupos	87,744	194	,452		
	Total	95,978	206			
PWB_Média	Entre Grupos	11,491	12	,958	1,161	,314
	Nos grupos	159,953	194	,825		
	Total	171,444	206			
WE_Média	Entre Grupos	12,352	12	1,029	1,160	,315
	Nos grupos	172,211	194	,888		
	Total	184,563	206			

Contract type

Table 46: Levene´s Test for variance homogeneity

		Estatística de Levene	df1	df2	Sig.
Média dos items que compõe a dimensão task no JC	Com base em média	1,453	3	203	,228
	Com base em mediana	,921	3	203	,432
	Com base em mediana e com gl ajustado	,921	3	188,281	,432
	Com base em média aparada	1,373	3	203	,252
Média dos items que compõe a dimensão cognitive no JC	Com base em média	,688	3	203	,560
	Com base em mediana	,403	3	203	,751
	Com base em mediana e com gl ajustado	,403	3	201,176	,751
	Com base em média aparada	,691	3	203	,558
Média dos items que compõe a dimensão relational no JC	Com base em média	1,242	3	203	,295
	Com base em mediana	1,251	3	203	,292
	Com base em mediana e com gl ajustado	1,251	3	190,370	,292
	Com base em média aparada	1,217	3	203	,304
JCQ_MédiaAgregada	Com base em média	,525	3	203	,665
	Com base em mediana	,355	3	203	,785
	Com base em mediana e com gl ajustado	,355	3	177,456	,785
	Com base em média aparada	,523	3	203	,667
PWB_Média	Com base em média	,500	3	203	,682
	Com base em mediana	,345	3	203	,793
	Com base em mediana e com gl ajustado	,345	3	189,401	,793
	Com base em média aparada	,557	3	203	,644
WE_Média	Com base em média	2,778	3	203	,042
	Com base em mediana	1,809	3	203	,147
	Com base em mediana e com gl ajustado	1,809	3	166,935	,148
	Com base em média aparada	2,746	3	203	,044

Table 47: OneWay ANOVA

		Soma dos Quadrados	df	Quadrado Médio	Z	Sig.
Média dos items que compõe a dimensão task no JC	Entre Grupos	2,388	3	,796	1,497	,217
	Nos grupos	107,949	203	,532		
	Total	110,337	206			
Média dos items que compõe a dimensão cognitive no JC	Entre Grupos	2,055	3	,685	,978	,404
	Nos grupos	142,153	203	,700		
	Total	144,209	206			
Média dos items que compõe a dimensão relational no JC	Entre Grupos	9,046	3	3,015	3,581	,015
	Nos grupos	170,924	203	,842		
	Total	179,970	206			
JCQ_MédiaAgregada	Entre Grupos	,100	3	,033	,070	,976
	Nos grupos	95,878	203	,472		
	Total	95,978	206			
PWB_Média	Entre Grupos	5,967	3	1,989	2,440	,066
	Nos grupos	165,477	203	,815		
	Total	171,444	206			
WE_Média	Entre Grupos	5,105	3	1,702	1,925	,127
	Nos grupos	179,458	203	,884		
	Total	184,563	206			

Table 48: Robust Mean Equality Test

Testes Robustos de Igualdade de Médias

		Estatística[a]	df1	df2	Sig.
Média dos items que compõe a dimensão task no JC	Welch	,602	3	9,353	,629
Média dos items que compõe a dimensão cognitive no JC	Welch	,781	3	9,354	,533
Média dos items que compõe a dimensão relational no JC	Welch	11,279	3	10,478	,001
JCQ_MédiaAgregada	Welch	,053	3	9,452	,983
PWB_Média	Welch	1,390	3	9,379	,305
WE_Média	Welch	1,333	3	9,279	,322

a. F distribuído assintoticamente.

Annex H - Linear Regression Model

Table 49: Model Statistics

Modelo	R	R quadrado	R quadrado ajustado	Erro padrão da estimativa
1	,729[a]	,532	,503	,66760

a. Preditores: (Constante), JCQ_MédiaAgregada, Acumula a atividade como enfermeiro em mais do que uma instituição?, Qual o seu regime contratual?, Idade em Intervalos por categoria, Qual a sua especialidade?, Zona Geográfica, Género, Em que setor(es) exerce?, PWB_Média, Habilitações Académicas, Qual o seu nível?, Há quantos anos exerce a sua profissão? Intervalos por categoria

Table 50: OneWay ANOVA

Modelo		Soma dos Quadrados	df	Quadrado Médio	Z	Sig.
1	Regressão	98,098	12	8,175	18,342	<,001[b]
	Resíduo	86,465	194	,446		
	Total	184,563	206			

a. Variável Dependente: WE_Média

b. Preditores: (Constante), JCQ_MédiaAgregada, Acumula a atividade como enfermeiro em mais do que uma instituição?, Qual o seu regime contratual?, Idade em Intervalos por categoria, Qual a sua especialidade?, Zona Geográfica, Género, Em que setor(es) exerce?, PWB_Média, Habilitações Académicas, Qual o seu nível?, Há quantos anos exerce a sua profissão? Intervalos por categoria