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Exploring the Curves: The Relationship Between Public Service Motivation, Person Organisation Fit, and Burnout Dynamics Among Student Doctors in the Irish Healthcare System.

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Abstract

At present, employee well-being is of increasing concern in the literature as it has been linked to organisational performance. Public Service Motivation (PSM), Person-Organisation fit (PO fit), and burnout are well-established concepts. While the linear relationship of these constructs has been examined positively and negatively, the possibility of a curvilinear relationship remains unclear. Healthcare sector employees have been reporting higher levels of burnout when compared to other sectors. Healthcare professionals experience unique work stressors, exposing them to a greater risk of burnout. Student doctors experience these stressors once they enter their clinical placement whilst simultaneously balancing their academic responsibilities. For the sample, student doctors in Ireland with clinical experience were approached to complete an online quantitative survey (N=119). The analysis found that a curvilinear relationship was not present within the data set. The current study emphasises the complexities that exist between motivation and organisational fit, while also demonstrating the crucial role that these concepts have on the well-being of student doctors in Ireland. While there are several limitations of the present study, due to its pivotal nature, there are endless opportunities for future research to build upon.

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1. Introduction

Employee well-being has been subject to growing concern within human resource (HR) policies and practices, with several recent studies finding a positive correlation between the promotion of employee well-being and organisational outcomes (Guest, 2017, Krekel et al., 2019). The same ideological framework can be applied to the healthcare system, especially as burnout within the healthcare sector has become a topic of increasing academic interest (Murthy, 2022). Burnout is characterised by four key dimensions; exhaustion, emotional impairment, cognitive impairment, and mental distance (W. Schaufeli et al. 2020). The issue of burnout has become alarmingly prevalent among physicians, nurses and other healthcare workers, given the multifaceted challenges and stressors the workers encounter during their careers, including high workload, long hours, occupational culture, range of emotional demands and lack of support (Dyrbye et al., 2014, Oró et al., 2021). Healthcare workers report higher rates of absences due to psychological distress and job burnout than workers in other sectors (Buchanan et al., 2018). Caregivers suffering from burnout have been found to develop negative feelings towards themselves and others, causing less satisfaction in their work and can affect patient care (Buchanan et al., 2018; Oró et al., 2021; Shanafelt et al., 2002; Sulaiman et al., 2017). The growing link between burnout and poor patient care creates a compelling argument to investigate potential preventative measures. The motivation of healthcare providers is essential in the understanding of their well-being. Healthcare professions are service-providing roles, which can often require a certain type of motivation, also known as Public Service Motivation (PSM).

PSM is an important factor that contributes to employee well-being. In public sector organizations, PSM refers to the intrinsic motivation an employee possesses to engage in behaviours that contribute positively to society and its citizens (Perry & Wise, 1990). Since

its formalisation, PSM has been linked to many valuable individual and organisational outcomes. Several findings have indicated that employees who demonstrate a motivation to serve the public interest possess greater job satisfaction, organisational commitment, performance, job crafting, and organisational citizenship behaviours when compared to workers who do not share the same motivations (Caillier, 2014, Harari et al., 2017, Taylor & Westover, 2011). PSM is of particular importance for healthcare workers as their work requires a great deal of commitment and dedication as the people they care for require special care and attention (Chmielewska et al., 2020). Despite this, there is a growing body of literature investigating the dark side of PSM. Studies have found that PSM may also impact employees negatively, for instance, with higher rates of stress (Giauque et al., 2012), burnout and job dissatisfaction (Van Loon et al., 2015), long-term absenteeism and presenteeism (Jensen et al., 2019; Koumenta, 2015), and impacting physical well-being (Liu et al., 2015). While these empirical studies have focused on the linear relationship between PSM and burnout, there is limited research examining if an excess of PSM is causing negative consequences, ultimately increasing levels of burnout. Additionally, it is imperative to remember that context matters. The Person-Environment (PE) fit provides this contextualisation. PE fit can be broadly defined as the compatibility of an individual and a work environment (e.g., job, groups, and organisations), occurring when the characteristics of both are matched well (Kristof-Brown et al., 2005). According to this theory, this fit, or lack thereof can have a significant impact on the attitudes and behaviours of the individuals. (Kristof-Brown et al., 2005). Additionally, in recent years there has been an increase in literature investigating the non-linear negative consequences of previously accepted positive linear effects (Pierce & Aguinis, 2013; Potipiroon, 2023; Xi et al., 2020). Coined by Pierce & Aguinis (2013), the 'Too Much of a Good Thing' effect describes an excessive level of a positive factor that may cease to yield additional benefits or even result in unintended

negative consequences once it reaches a context-specific “inflection” point, demonstrating an overall pattern of curvilinearity. This study seeks to expand upon this existing literature by investigating whether the TMGT effect can be applied to the relationships between PSM, PE fit, and burnout within the context of the Irish healthcare system.

1.1 Relevance

1.1.1 Scientific Relevance:

This research aims to contribute to the scientific literature in several ways. Currently, there exists a broad body of literature examining burnout (W. B. Schaufeli et al., 2009), and both the positive and negative effects of PSM (Jensen et al., 2019; Koumenta, 2015; Liu et al., 2015; Petrovsky & Ritz, 2014; Van Loon et al., 2015; Wright & Grant, 2010) and PE fit (Chuang et al., 2013; Gander et al., 2020; Li et al., 2023; Rauvola et al., 2020; T.-Y. Kim et al., 2013). The positive connotations of PSM are predicated on the assumption that individuals with high PSM are expected to perform well in pursuit of serving the “greater good” (Perry & Wise, 1990). As further research has developed, PSM has become increasingly international, multi-sectoral, and multidisciplinary. Therefore, it has been argued that a variety of contextual factors play a pivotal role in the analysis of PSM (Awan et al., 2020; van Loon et al., 2018). Understanding the various characteristics, motives, and dimensions of PSM is essential for exploring its implications within the public service context. The present study will provide insights into these core components within the healthcare setting and how student doctors value the public sector. Additionally, the proponents of the *dark side* of PSM have emphasised a correlation between PSM and ‘resigned satisfaction’ and increased stress (Giauque et al., 2012), burnout and job dissatisfaction (Van Loon et al., 2015), turnover intention, involuntary absenteeism,

presenteeism (Jensen et al., 2019; Koumenta, 2015), and negatively impacting physical well-being (Liu et al., 2015). Some findings rely on the Person-Environment misfit theory, suggesting that individuals may not fulfil their inherent desire to serve the public due to contextual constraints or the belief that organizational values differ from their values (Schott & Ritz, 2017). Despite these findings, there is limited research investigating the relationship of an excess of PSM with burnout and PE fit. This research seeks to fill this void by investigating whether having too much PSM and PE fit can cause an increase in the risk of burnout. This study hones in on PSM at the individual level. It is proposed that there could be a curvilinear relationship between PSM and burnout, in which an excess of PSM causes an increased risk of burnout for student doctors. Additionally, as context is necessary while examining PSM, the relationship between too much PE fit and burnout must also be considered.

PE fit has been documented to foster job satisfaction and life satisfaction of employees (Gander et al., 2020; Li et al., 2023; Rauvola et al., 2020). Therefore, PE fit has been considered to be negatively associated with burnout, implying that the more an individual 'fits' within their organisation, the more their risk of burnout decreases (Andela & van der Doef, 2019). Moreover, literature has demonstrated that in the occurrence of a 'misfit', there can be negative psychological and physical effects (Kristof-Brown et al., 2005). The idea of a 'misfit' suggests that the individual no longer aligns their values, motivations, beliefs, and characteristics with those of their environment which can result in decreased job satisfaction, reduced commitment, higher turnover intentions, and reduced performance (Chuang et al., 2013; T.-Y. Kim et al., 2013). However, this study proposes an alternative perspective, suggesting that an excessive amount of PE fit is responsible for the negative outcomes. Therefore, it is once again proposed that a curvilinear relationship exists between PE fit and burnout within the context of student doctors in Ireland.

1.1.2 Practical Relevance:

The exploration of the relationships raises key findings which may be of practical relevance to organisations and researchers alike. Investigating the intricate relationship between employee well-being, PSM and PE fit, sheds light on key factors influencing both organisational outcomes and employee performance. Organisationally, comprehending the balance between the employee's intrinsic motivations and their fit within the organisational context is crucial for designing effective HRM interventions and policies. Employee attitudes and decisions are strongly influenced by the various types of fit (Kristof-Brown et al., 2005), highlighting the necessity for organisations to consider their employees' fit when designing and implementing HR policies and interventions. This study can provide managerial insights for the healthcare sector.

The specific focus on student doctors is borne out of the requirement to fulfil a dual role, both as students and as 'doctors'. This typically involves the student going on clinical placement, whilst simultaneously completing several modules and sets of exams. In addition, student doctors are not paid for their time on placement, resulting in many students having to balance part-time jobs alongside their studies. Consequently, student doctors endure long hours, high-pressure environments, and emotionally taxing experiences, which often expose them to elevated levels of stress and burnout (IsHak et al., 2013; Oró et al., 2021; Wallace et al., 2009). According to a study by the Royal College of Surgeons Ireland (RCSI), levels of burnout increased as their students entered the clinical environment (Fitzpatrick et al., 2019). The high stress and burnout levels encountered by medical students are associated with decreased life satisfaction, serious thoughts of dropping out and even suicidal ideation in extreme cases (Fares et al., 2016). This highlights the fundamental improvements necessary to allow student doctors to begin their careers psychologically healthy. As previously mentioned, within the context of students in the clinical setting, where students are exposed

to an intense working environment, high workloads, and additional study, student welfare must be considered. As stated by Pierce & Aguinis (2013), well-intended organisational interventions can sometimes lead to unexpected negative organisational outcomes when taken too far. This demonstrates the importance of having an understanding of the TMGT effect. The present research practitioners can aid in this understanding and limit the application of their interventions based on their comprehension of the TMGT effect, promoting their employee's well-being. This research will provide insight into the importance of motivation and fit within an organisation and their relation to burnout, in which practitioners can utilise this research to ensure a positive training experience and improved individual and organisational outcomes.

1.1.3 Societal Relevance:

Several aspects of this research may be of particular societal relevance in Ireland. The relationship between doctors and burnout is noteworthy. It has been stated that doctors in hospital settings experience an elevated rate of work-related stress relative to other European countries (Hayes et al., 2019). The roots of this phenomenon can be traced back to the economic recession of 2008, which sparked severe austerity measures to be placed on the healthcare system actions creating higher work volume, tighter deadlines and dissatisfaction among patients (Thomas et al., 2014). The situation was exacerbated by the mass medical emigration and the national shortage of nurses and doctors (Humphries et al., 2015).

Additionally, PSM concerns public servants' alignment towards providing services to people to do good for others and society (Andersen et al., 2021). It has been argued that PSM can contribute to the attraction and retention of individuals in the public sector (Andersen et al., 2021). However, the present study intends to add to the current understanding by examining whether there can be too much PSM, resulting in the opposite of the intended

effect of providing services for the greater good. Within this research, the specific focus is on student doctors who are yet to begin their careers. Despite this, it is expected that the students should inherently possess this type of motivation as they are the future of the healthcare sector. Additionally, understanding the students' fit within the organisation is crucial as it impacts employee career development at various stages of the organisation's life cycle (Greguras & Diefendorff, 2009). This is of societal relevance as it ensures the quality and longevity of public sector organisations and individuals. Consequently, the training and retention of Irish medical students is of vital importance to Irish society and the lessons gleaned from this research may be applicable in other countries.

1.2 Aim

The primary aim of this study is to examine the curvilinear relationship between PSM-Burnout, PSM-PO fit, and PO fit-burnout among student doctors. As previously mentioned, the medical educational system is characterised by a demanding workload and influenced by work environment dynamics, individual career motivations, and satisfaction with training experiences. The primary objectives of this study include the assessment of the relationship between PSM and burnout investigating the potential for a U-shaped curvilinear pattern. Considering contextual factors, we aim to investigate the relationship between PSM and PO fit while also studying the relationship between PO fit and burnout. Additionally, this study aims to add to the gap in the empirical literature on the TMGT effect. This study intends to contribute to the field of public healthcare, medical education, and human resource management by providing insights into the current attitudes and opinions of Ireland's student doctors. By underscoring these perspectives, the study intends to inform and foster an opportunity for meaningful change, addressing the large workload and academic pressures that are faced by future doctors. By conducting this comprehensive investigation into the

curvilinear relationships, the research will provide empirical evidence that future research can utilise to identify best practices to support or challenge existing practices in medical education.

1.3 Research Question

With the above taken into consideration, the following research question is presented:

To what extent does a curvilinear relationship exist between PSM-Burnout, PSM-PO fit, and PO fit-Burnout among student doctors within the Irish healthcare system?

2. Theoretical Framework

To facilitate the understanding of the relationship between PSM-Burnout, PSM-PO fit, and PO fit-Burnout an introduction to each concept is individually provided. Initially, the concept of burnout is examined, developing from chronic work-related stressors and investigating its multifaceted implications for individuals and their organisations. PSM is traditionally considered a catalyst for positive work outcomes, but recent research has suggested negative connotations, exploring the *dark side* of PSM. Following this, the PE fit is explored, and more specifically PO fit, investigating its significance in aligning individual characteristics with the demands and culture of the work environment. Through the various relationships between these variables, three main hypotheses have been drawn. The conceptual model for the thesis is formed following this section.

2.1 Burnout

Burnout is a psychological syndrome that occurs as a response to chronic interpersonal stressors in a work setting (Maslach & Leiter, 2016). In science, burnout is regarded as a multidimensional concept in which exhaustion is the core element (W. Schaufeli et al., 2020). While there are a number of burnout definitions and tools, W. Schaufeli et al. (2020) argue that there are four key dimensions that constitute burnout; 1) exhaustion, 2) emotional impairment, 3) cognitive impairment, and 4) mental distance. The authors define exhaustion as the severe loss of energy that causes feelings of physical and mental tiredness (W. Schaufeli et al., 2020). Emotional impairment is characterised by intense emotional reactions and feeling overwhelmed by the emotions (W. Schaufeli et al., 2020). Cognitive impairment refers to issues with one's memory, for example, difficulties and poor cognitive functioning (W. Schaufeli et al., 2020). Finally, mental distance is defined by the authors as

psychologically distancing oneself from the work, this withdrawal can manifest mentally and physically (W. Schaufeli et al., 2020). These four dimensions explain the state in which individuals find themselves in a work-related state of exhaustion (W. Schaufeli et al., 2020).

Since its emergence in the 1970s, researchers have investigated what burnout is, why it happens, and how to combat it and prevent it (W. B. Schaufeli et al., 2009). Originally believed to only affect young, naive, idealistic service professionals, who became discouraged by their environment, the recognition of burnout has demonstrated otherwise (W. B. Schaufeli et al., 2009). It was suggested that providing services to people requires a unique amount of energy, effort, attention, and empathy which can be emotionally taxing (W. Schaufeli et al., 2020). As a result, it was proposed that when interpersonal stress increases and recovery is insufficient, mental exhaustion may transpire (Schaufeli et al. 2009). As the focus of the modern organisation has shifted its focus to the management of human capital, Schaufeli et al. (2009) argue that ensuring employees are motivated, engaged, proactive, responsible and involved is required for organisations to prosper. As the body of research on burnout expands, there is an emerging incentive for organisations to mitigate its risks. However, Demerouti et al. (2021) emphasises that the relevance of burnout extends beyond its prevalence, impacting individuals and organisations alike.

For individuals, burnout has been found to have long-term effects on one's health with several studies demonstrating that high levels of burnout resulted in a greater risk of mental health problems (Ahola et al., 2005; Borritz et al., 2010; Salvagioni et al., 2017; Toppinen-Tanner et al., 2005) and even a higher rate of physical health issues (Acker, 2010; Salvagioni et al., 2017; Toppinen-Tanner et al., 2005; Toker et al., 2012). Meanwhile, from an organisational perspective, burnout has been associated with lower productivity, reduced effectiveness, job satisfaction, and commitment to the job and organisation (Maslach & Leiter, 2016; Schaufeli & Enzmann, 1998; W. B. Schaufeli et al., 2009). Additionally,

employees suffering from burnout can negatively impact the rest of the organisation, causing disruption or conflict and reducing productivity (Maslach & Leiter, 2016). Moreover, burnout has been reported to negatively affect individuals' work-home interface, as burnt-out employees are more likely to be tense, anxious, upset, and angry at home, causing them the withdraw from their families and friends (Pluut et al., 2018). In light of the multifaceted implications, it is evident that addressing burnout within the healthcare sector is of paramount importance given its pervasive impact on both individual well-being and organisational effectiveness.

Due to the constant provision of support for other people, the healthcare sector experiences one of the most elevated rates of burnout, with 7 out of 10 Irish doctors at high risk of burnout (Report of the IMO Survey of Doctor Mental Health and Well-Being, 2021). Various factors contribute to the heightened risk among doctors including heavy workload, long hours, occupational culture, range of emotional demands and insufficient support (Dyrbye et al., 2014, Oró et al., 2021). Additionally, research has revealed that burnout is also a widespread risk among student doctors (IsHak et al., 2013, Wallace et al., 2009). At least fifty per cent of all medical students in the United States are believed to be affected by burnout at some point throughout their education (IsHak et al., 2013). This can be attributed to the high workload medical students are subjected to, balancing long hours of studying, and attending lectures while also completing clinical rotations. Relative to the general population of their age, medical students are subject to a particular type of stress in caring for others (Oró et al., 2021). The necessary time and emotional investments that are required are thought to contribute to a lack of work-life balance which can potentially result in social isolation and fatigue (Nason et al., 2013). The repercussions of this imbalance extend beyond personal well-being as the long-term effects are of great concern, potentially resulting in a

loss of empathy with patients, poor quality of care and a loss of professional ethics (Dyrbye et al., 2010, Ebrahimi & Atazadeh, 2018).

In conclusion, the extensive impact of burnout within the healthcare sector demonstrates the urgent need for proactive measures to address its multifaceted implications. Transitioning to a broader perspective, the concept of PSM offers valuable insights into the motivations of individuals within the public sector.

2.2 PSM

As recognised by Rainey (1982), the concept of public service encompasses a varied array of facets. Consequently, PSM has been characterised in several ways including, a government calling (Vandenabeele, 2008) and a prosocial orientation (Taylor, 2010). In general, PSM is regarded as an individual's commitment to public service or interests (Scott & Pandey, 2005). Perry and Wise (1990) distinguish three motives of PSM: 1) rational motives define actions grounded in individual utility maximisation, 2) norm-based motives involve actions generated by efforts to pursue the common good and further public interest, and 3) affective motives refer to triggers of behaviour that are grounded in emotional responses to various social contexts. The authors argue that PSM is predominantly associated with the normative motive (Perry & Wise, 1990). While also defining the four dimensions of PSM, attraction to public policy-making, commitment to the public interest, compassion, and self-sacrifice (Perry & Wise, 1990), a comprehensive framework is provided for understanding the complex nature of an individual's motives and behaviours in public service contexts. The positive connotations that are associated with PSM are grounded in the assumption that individuals who have high PSM are expected to perform well as they are working to provide services that they deem to be of importance in serving the greater good (Perry & Wise, 1990; Petrovsky & Ritz, 2014; Wright & Grant, 2010). However, since its conceptualisation,

research on PSM has become increasingly international, multi-sectoral, and multidisciplinary. As the research on PSM has developed, empirical testing has diversified, incorporating a range of measurement techniques, data sources from various countries, and statistical methodologies (Awan et al., 2020). As a result, contextual factors play a crucial role when analysing PSM. For example, PSM can be considered an organisational resource if the employees believe that their role contributes to society (van Loon et al., 2018). The present study considers these factors made by empirical researchers when examining PSM within the healthcare sector. According to the World Health Organisation (WHO), the motivation of healthcare employees should be considered as a key indicator of the quality of the services (WHO, 2006). It has been found that physicians who are motivated achieve better treatment outcomes as well as higher personal and patient satisfaction when compared to less motivated physicians (DeVoe et al., 2002; Franco et al., 2002). Overall, understanding the various characteristics, motives, and dimensions of PSM is essential for exploring its implications within the public service context.

The *dark side* of PSM has recently become a topic of increasing debate throughout the literature. First introduced in 2012 when a correlation was established between PSM and 'resigned satisfaction', i.e. employees did not care about their work yet felt satisfied (Giauque et al., 2012). Additionally, PSM has been associated with increased rates of stress, burnout and job dissatisfaction (Giauque et al., 2012; Van Loon et al., 2015), turnover intention, involuntary absenteeism, presenteeism (Jensen et al., 2019; Koumenta, 2015), and negatively impacting physical well-being (Liu et al., 2015). However, a number of these findings rely on the idea of the Person-Environment misfit (Kristof-Brown et al., 2005) to explain the negative attitudinal outcomes of PSM. These findings demonstrate that if individuals cannot fulfil their inherent desire to serve the public due to contextual constraints and burdens or believe the values of their organisation differ from their individual values, negative

implications will occur (Schott & Ritz, 2017). However, Van Loon et al. (2015) found that it was the societal impact of the work that determined the relationship between PSM and dissatisfaction. Once again this highlights the critical relevance of contextual factors. Within the setting of the healthcare system, where contextual elements are integral, it is evident that the present study will provide a deeper understanding of the intricate dynamics of PSM providing a solid foundation for exploring its potential implications, including the nuanced interplay with the TMGT effect and its application within the realm of PSM research.

2.3 PSM and Burnout

This investigation explores the use of the too-much-of-a-good-thing (TMGT) effect as a perspective to bridge the gap between the positive effects of PSM and burnout. Pierce & Aguinis (2013), argue that an extreme level of something positive may have no additional benefit or even unintended negative consequences once it reaches a context-specific "inflection" point, resulting in an overall pattern of curvilinearity. There is a growing body of empirical management literature which suggests certain variables, previously widely accepted as having positive linear effects, are in fact, leading to negative non-linear consequences (Pierce & Aguinis, 2013; Potipiroon, 2023; Xi et al., 2020). For example, employees with strong social impact potential in people-changing organisations would be willing to do "too much" and overreach individual resources, ultimately causing decreased satisfaction (Van Loon et al., 2015). Within this perspective, gains and losses highlight the dynamic changes with the growth of independent variables (Pierce & Aguinis, 2013).

The same ideology has been applied to Transformational Leadership (TFL). TFL is expected to inspire followers to perform beyond expectations (Bass, 1985). Similarly to PSM, it is assumed that TFL can improve individual, group, and organisational outcomes (Wang et

al., 2011). Furthermore, TFL is particularly effective in the public sector (R. Sun & Wang, 2017). According to Molines et al. (2022), a curvilinear relationship exists between TFL and emotional exhaustion. It is argued that TFL reduces emotional exhaustion to a certain inflection point, at which there are no additional benefits of more TFL, in which TFL becomes detrimental to followers as they feel overburdened and lack job autonomy (Molines et al. 2022). Their findings suggest that Leader-Member Exchange (LMX) as a mediator reaches a point in which it no longer reduces emotional exhaustion (Molines et al. 2022). The authors propose that followers are likely to respond to transformational leaders with a decrease in performance and well-being, and increased levels of exhaustion (Molines et al. 2022). Beyond this point, the increasing relationship between LMX quality and emotional exhaustion is likely to become positive due to continuously expanding obligations, according to the social exchange rationale (Molines et al. 2022). The social exchange rationale suggested by Molines et al. (2022), explains how increased obligations and expectations can result in emotional exhaustion. This notion can be extended to PSM as individuals with PSM are inherently committed, compassionate and self-sacrificial (Perry & Wise, 1990). While there are clear distinctions between PSM and TFL there are reasons to justify the application of the same curvilinear principle for the present study. Just as TFL is expected to inspire followers to perform beyond their expectations, PSM is suggested to enhance performance as they are contributing to society (Perry & Wise, 1990; Petrovsky & Ritz, 2014; Wright & Grant, 2010). Therefore, both aim to improve individual, group, and organisational outcomes. Furthermore, similarly to PSM, TFL has been found to be particularly effective in the public sector (R. Sun & Wang, 2017). As a result, the curvilinear relationship that was explained by Molines et al. (2022) can be expected in the present study.

From the Conservation of Resources (COR) perspective, burnout is viewed as a loss of resources over time (Alarcon et al., 2011). The resources may include physical health,

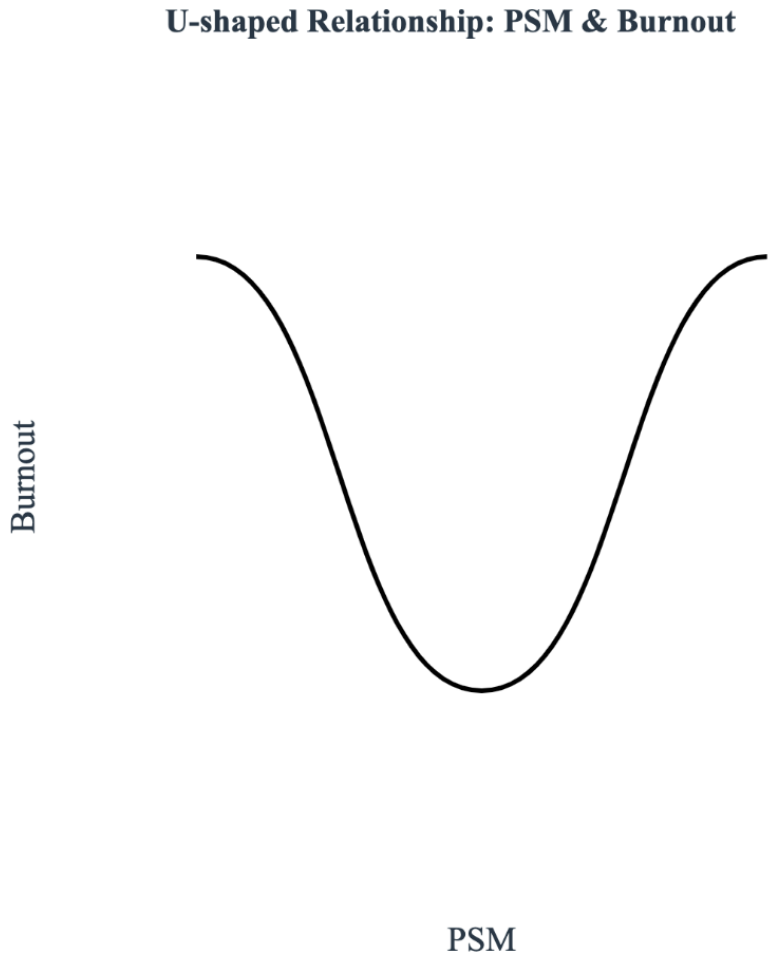
time, self-esteem, and social support which can cause suboptimal coping strategies, further increasing resource loss in a vicious cycle. For the students, these resources may be gained when working with patients, enhancing their motivation, self-esteem, well-being, and health. Initially, PSM decreases burnout. However, as increased levels of PSM are related to performance when individuals perceive their work as contributing to the greater good (Perry & Wise, 1990; Petrovsky & Ritz, 2014; Wright & Grant, 2010), it can be suggested that as time continues, when employees have increased levels of PSM they are more likely to continue to push themselves by seeing more patients, working more hours, or devoting more energy to their work. Within the clinical setting for student doctors, where the job demands are high, balancing long hours of studying, and attending lectures while also completing clinical rotations, medical students are subject to a particular type of stress in caring for others (Oró et al., 2021). As the students enter the clinical setting, the enforcement of these demands is likely to increase. Before entering the clinical setting, the medical students are similar to the general population of students in which the demands are enforced by their lecturers and peers. However, once the students enter the clinical setting the range of demands increases, in addition to their academic work, the students are now in a work environment in which long working hours must be endured, and job demands and pressure increase (Dyrbye et al., 2014, Oró et al., 2021). As stated prior, it has been argued that the risk of burnout increases once medical students enter the clinical setting (Fitzpatrick et al., 2019). The students are introduced to a high-stress environment in which they have gained the burdensome responsibility of patient care as well. Furthermore, burnout manifests itself in four dimensions; exhaustion, emotional impairment, cognitive impairment, and mental distance (W. Schaufeli et al., 2020). These manifestations prevent individuals from behaving and working effectively. The COR theory states that a loss of resources is stressful for

individuals (Hobfoll, 1989). Therefore, when there is resource depletion and stress for too long the risk of burnout increases.

This study argues that the students' PSM can only last a finite amount of time before the risk of burnout increases. As previously mentioned, the time and emotional commitment that is required may contribute to an absence of work-life balance which can potentially result in social isolation and fatigue (Nason et al., 2013). The consequences of this discrepancy not only affect an individual's well-being but potentially result in a loss of empathy with patients, poor quality of care, and a loss of professional ethics (Dyrbye et al., 2010, Ebrahimi & Atazadeh, 2018).

Although PSM undoubtedly has numerous positive effects, in the context of this study, when there is an increase in PSM, individuals may initially experience "gains" in their engagement, satisfaction, enthusiasm, and commitment to their work. However, as PSM continues to increase, there comes a point at which the associated demands and expectations, such as the workload, and patient care begin to outweigh the benefits, resulting in increased feelings of burnout and exhaustion. Despite the initial positive results, the increasing motivation, pressure and workload may lead to burnout among student doctors, resulting in a U-shaped curvilinear relationship between PSM and the risk of burnout. This leads to the following hypotheses.

Hypothesis 1: PSM has a direct U-shaped curvilinear relationship with the risk of burnout among student doctors, such that burnout initially decreases with increasing levels of PSM, reaches a point of inflection, and then increases as PSM continues to rise.



2.4 The Person-Environment Fit Perspective

PE fit occurs when the characteristics of an individual and the work environment are matched well (Kristof-Brown et al., 2005). It is argued that PE fit can be achieved in two ways; complementary or supplementary. Complementary fit occurs when an individual's characteristics compensate for the unmet needs of the environment, or vice versa, whereas, supplementary fit occurs when the individual and the environment are similar, therefore having their needs met (Kristof-Brown et al., 2005). The overall concept has been used to demonstrate that better-fit leads to beneficial work outcomes such as job satisfaction, intent to stay and organisational identification (Chatman, 1991; Edwards & Cable, 2009; Kristof,

1996). There are different types of PE fits, including person-organisation (PO) fit, person-group (PG) fit, person-supervisor (PS) fit, and person-job (PJ) fit. Understanding the level of PE fit is crucial as it impacts employee career development at various stages of the organisation's life cycle (Greguras & Diefendorff, 2009). Given the collaborative nature of the student doctors' environment, the four different fits each have their relevancies, however, in the context of the present study, PO will be taken into consideration when analysing the relationship between PE fit and PSM and its effects on the student doctors. PO fit is characterised by the compatibility between people and the entire organisation (Kristof-Brown et al., 2005). However, some research has found that there can be negative consequences when individuals find that there is a 'misfit' as a misalignment between themselves and aspects of their work environment, including psychological and physical effects (Kristof-Brown et al., 2005). Despite this, it is also suggested that a high degree of PO fit results in job satisfaction and organisational commitment (Kristof-Brown et al., 2005; Verquer et al., 2003). PO fit has also been linked to job retention, as over time, employees with a strong alignment with the organisation are more likely to remain with the organisation (Priyadarshi & Premchandran, 2018). With the use of PO fit, a framework can be utilised to investigate the alignment between the motivations, values, goals and characteristics of the individuals with those of the organisation in the public service sector, such as healthcare. By investigating this fit between the student's motivations and the demands and culture of the job and organisation, insights into how PE influences career choices, job satisfaction, and organisational commitment can be gained. This study suggests that, similarly to PSM, PE fit can be too much of a good thing. While initially, PE fit and specifically PO fit, can be perceived to be beneficial to PSM and result in positive work outcomes, at a certain inflection point, in which there is too much fit, negative consequences occur.

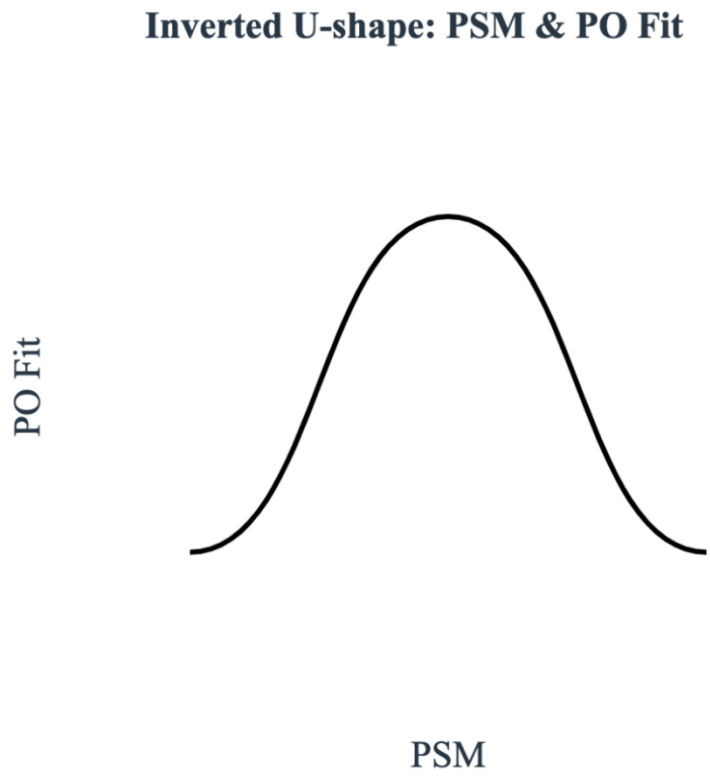
2.5 PSM and PO Fit

It is suggested in the literature that PSM has both direct and indirect effects on employees' attitudes towards their work through its influence on PO fit (S. Kim, 2012). Despite the general academic consensus that increased fit tends to promote positive work outcomes, Vleugels & Flatau Harrison (2023) argue that the relationship between fit and behavioural outcomes can be curvilinear, challenging the long-held 'more fit is better' logic. Individuals with high PSM may prioritize public service and social impact over other organizational goals or values. As previously discussed, PSM is an intrinsic motivation employees have to provide services that they regard to be of importance in serving others and society (Perry & Wise, 1990; Petrovsky & Ritz, 2014; Wright & Grant, 2010). Therefore, if the organization's goals and values do not align closely with those of the individual, or they feel as if they are not serving the greater good, it can lead to a sense of mismatch or dissonance, reducing PO fit (Kristof-Brown et al., 2005). These feelings of mismatch may result in decreased job satisfaction, reduced commitment, higher turnover intentions, and reduced performance (Chuang et al., 2013; T.-Y. Kim et al., 2013), as employees experience that their individual goals and values are in opposition with those of their organisation. Additionally, studies have found that there is a significant relationship between organisational loyalty and PO fit within the healthcare sector (M. Sun et al., 2023). However, this is not always a beneficial outcome. Loyal employees have been targeted by organisations and managers for exploitative practices and are more willing to make personal sacrifices for the objects of their motivation and loyalty (Stanley et al., 2023). Although commitment and fit within the organisation are important to ensure positive work outcomes (Sun et al., 2023;Vleugels & Flatau Harrison, 2023), it is important to note that within the context of student doctors, their desire to 'fit in', and display organisational loyalty and motivation may be increased due to their willingness to learn. PSM has been identified as a significant contributor to PO fit in the context of public

organisations, while also indirectly enhancing the performance of these employees (Bright, 2007). This underscores the notion that a linear positive relationship exists between PSM and PO fit. However, demonstrating the advantages of using the TMGT lens, Vleugels & Flatau Harrison (2023) posit a novel approach that the consideration of non-linear effects, concerning behavioural outcomes. Within this context of PO fit, the curvilinearity suggests that creating experiences of high fit has the potential to waste resources, as there are no improvements or additional benefits despite the increase of inputs, while also having the potential to lead to detrimental consequences (Vleugels & Flatau Harrison, 2023).

This study seeks to expand upon this existing research by investigating the curvilinear relationship between PSM and PO fit among student doctors, in which an excess of motivation, causes an individual's organisational fit to reduce. Leading to feelings of reduced job satisfaction, decreased commitment, turnover intention, and decreased performance (Chuang et al., 2013; T.-Y. Kim et al., 2013). Through this investigation, insights into whether too much motivation negatively impacts an individual's PO fit within the context of the healthcare system will be drawn, thus leading to the following hypotheses.

Hypothesis 2: PSM has an inverted U-shaped curvilinear relationship with the PO fit among student doctors, such that the PO fit initially rises with increasing levels of PSM, reaches a point of inflection, and then decreases as PSM continues to rise.



2.6 PO Fit and Burnout

Combining the concepts previously discussed, this research also proposes the direct U-shaped effect of PO fit on the risk of burnout of student doctors. As discussed, there can be negative implications when individuals find that a 'misfit' has occurred (Kristof-Brown et al., 2005). Misfits have proven to cause a range of challenges for organisations including producing organisationally directed detrimental outcomes, such as a decline in company reputation, tension within teams, and toxic organisational culture (Williamson & Perumal, 2021). There are also individual implications of PE misfit, including reduced levels of self-confidence, increased feelings of depression, and negatively impacting their health (Williamson & Perumal, 2021). This demonstrates the importance of PE fit when considering both organisational and individual success. While there is a significant relationship between PE fit

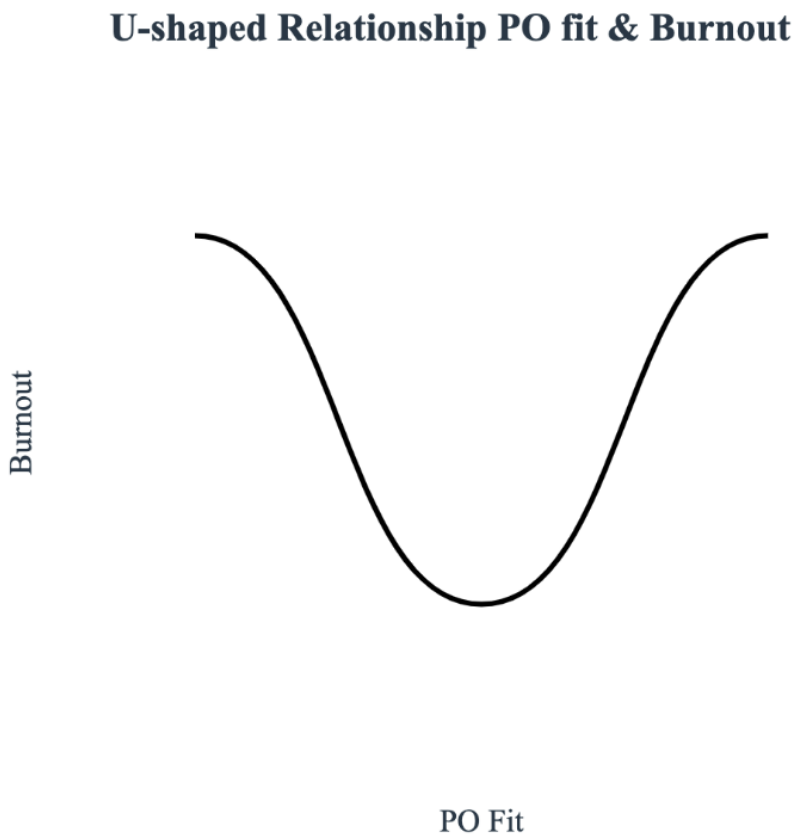
and burnout (Andela & van der Doef, 2019), the concept of an excess PO fit has not yet been explored. This study proposes that similarly to PSM, an excess of PO fit can also have detrimental effects.

Analysing work engagement can serve as a benchmark for further evaluation of PO fit, especially when considering them in excess. Bakker & Leiter, (2010) highlight that based on the COR theory, engaged employees increase their positive resources at work through a "gain-spiral", in which resources create more resources. However, with this spiral comes consequences. As previously explained, burnout is considered a decrease in resources over time (Alarcon et al., 2011). The resources lost can be physical health, time, self-esteem, and social support which may lead to suboptimal coping strategies, further increasing resource loss in a vicious cycle. When work engagement is considered, overly engaged employees can find themselves with a higher workload (Körner et al., 2012), increasing job demands and working hours causing emotional exhaustion, psychosomatic complaints, and a decrease in work engagement over time (Sonnentag et al., 2010). This demonstrates the curvilinear relationship that exists between employee engagement and burnout (Nerstad et al., 2019). While work engagement and PO fit are distinct constructs, they can be regarded as a resource that, according to the COR theory, diminishes over time, leading to burnout. Therefore, similarly to the curvilinear relationship between work engagement and burnout, the present study argues the same relationship can be expected between PO fit and burnout. When an individual 'fits' too well within an organisation, engagement and therefore workload, pressure and expectations are set to rise, leading to depletion of resources which in turn is set to increase the risk of burnout.

While initially, PO fit is perceived to be valuable in reducing burnout and resulting in positive individual and organisational outcomes, yet, at a certain inflection stage, in which

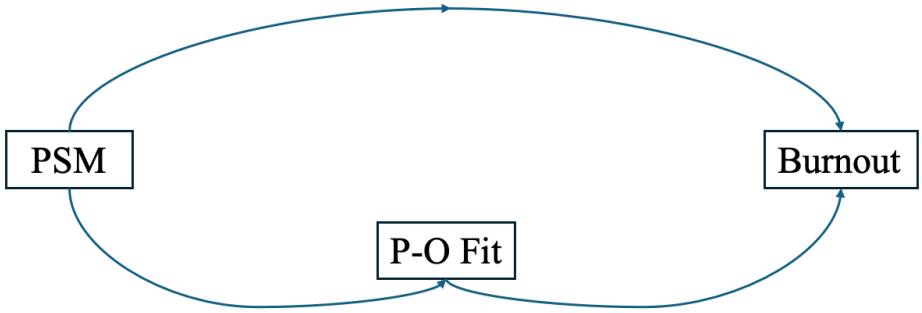
there is ‘too much fit’, the risk of burnout begins to increase. This leads to the final hypothesis.

Hypothesis 3: PO fit has a direct U-shaped curvilinear relationship with the risk of burnout among student doctors, such that burnout initially decreases with increasing levels of PO fit, reaches a point of inflection, and then increases as PO fit continues to rise.



Conceptual Framework

Below is a visualisation of the above-mentioned framework. It has been made evident that the relationships between the variables are expected to be curvilinear. The arrow from PSM to burnout represents hypothesis one. The second hypothesis is visualised by the arrow from PSM to PO fit. Finally, the third hypothesis is represented by the arrow from PO fit to burnout.



3. Methodology

In this chapter, the core focus is the description of the methodology that was used to answer the proposed research question. Firstly the research design will be explained. Following this, the sample of the study will be discussed, in which key characteristics of the population and how they were gathered will be described. In this section, why the methodology was chosen and how it was carried out will be clarified. Furthermore, the measures of the study will individually be stated and explained. Finally, the data analysis process and techniques will be described.

3.1 Procedure

To answer the main research question that has been developed in the theoretical framework of examining curvilinear relationships, a quantitative approach was adopted using primary data. A structured questionnaire was administered to the sample of students, capturing data on their levels of PSM, burnout symptoms, and their fit. The survey is included in the appendix (Appendix 1). A quantitative approach allows the use of formalised and established hypothesis testing procedures, providing the opportunity to organise and report research variables, hypotheses, data collection, and analysis before concluding (Sheard, 2018). This method provided valuable insights into the opinions of student doctors while also allowing the opportunity to test the curvilinear effects of the variables. Cross-sectional data was gathered through an online survey. The survey was formed using Qualtrics. The survey was introduced by briefly explaining the goal of the study and that participation was completely voluntary. The questionnaire was distributed electronically, ensuring the anonymity and confidentiality of respondents. Data collection lasted for 14 days, from the 7th to the 21st of May 2024. During the data collection, 168 responses were recorded. However, 49 were

excluded due to incompletion, therefore, the completed survey results consisted of 119 participants.

3.2 Sample

The sample consisted of student doctors in medical schools across Ireland with clinical placement experience. Participation requirements included being above 18 years old, a student doctor in an Irish university, and having placement experience. Snowball sampling was utilised to gather participants through the researcher's network as well as an email sent from a faculty member of one of the universities. Additionally, social platforms were used to spread the request for respondents. For this purpose, an online flyer was designed to entice participants (Appendix 2). The sample was chosen for several reasons. Firstly, in Ireland, doctors working in hospitals have higher rates of occupational stress relative to other European countries (Hayes et al., 2019). The origins of this can be traced back to the economic recession of 2008, when the healthcare system suffered a series of cutbacks, creating higher work volume, tighter deadlines and dissatisfaction among patients (Thomas et al., 2014). The situation deteriorated further as a result of the mass medical emigration and the national shortage of nurses and doctors (Humphries et al., 2015). Therefore, the training and retention of Irish medical students are vital. If the students have a positive experience during their medical training and maintain motivation throughout their studies, they may be more inclined to stay in Ireland once they qualify as doctors.

Utilising the researchers' network within the medical community, student doctors and university faculty we contacted. These personal connections were provided with an explanation of the research and asked to share the survey link with students who met the requirement criteria via messaging platforms or email. The student doctors followed up with their peers a week after the study went live, reminding them once more to complete the survey. The sample was drawn from all six universities in Ireland with medical programs. By

leveraging personal connections within the targeted sample, access to potential participants was facilitated and enhanced the likelihood of a robust and representative study. A G*Power analysis was completed. The test family was F tests, the statistical test was a linear multiple regression, R^2 deviation from zero, and A priori: Compute required sample size type of power analysis. The result of this analysis states that the expected sample size should be a minimum of 107 participants to ensure statistical significance.

3.3 Measures

This study employs a multifaceted approach. To test the central question of this study and the subsequent sub-questions, an online survey will be created using the program Qualtrics. The survey consisted of three sub-themes (1) Burnout, (2) PSM, (3) PO fit, and a set of control questions. In the following paragraph, the varying factors and their measurement scales will be explained and discussed.

3.3.1 Burnout

Burnout, evaluated through the Burnout Assessment Tool (BAT) serves as the dependent variable which is characterised by exhaustion, mental distance, and emotional and cognitive impairment (W. Schaufeli et al., 2020). The BAT scale is used to assess burnout and consists of 4 scales and 23 items. As the Maslach Burnout Inventory (MBI) was developed over forty years ago, it demonstrates several conceptual, technical, and practical imperfections, therefore BAT was chosen (W. Schaufeli et al., 2020). Each scale has an excellent internal consistency as they are higher than 0.70, representing a high internal consistency. The Cronbach's ranges from 0.90 to 0.92 (i.e., exhaustion; 0.92, mental distance: 0.91, cognitive impairment: 0.92, and emotional impairment: 0.90) and 0.95 for the total BAT scale. This is

in line with the current study, with an overall Cronbach's Alpha of 0.912. The BAT scale of measurement consists of a 5-point frequency scale. The four scales were measured ranging from "1 (never), 2 (sometimes), 3 (regular), 4 (often), 5 (always)". The mean score for each question was used to represent 'burnout'. For the purpose of the factor analysis, the four dimensions were analysed separately, all items measuring exhaustion, mental distance, emotional impairment, and cognitive impairment loaded on one factor (see Table 1).

Table 1. Factor loading for burnout

Exhaustion	Factor 1
On placement, I feel mentally exhausted	.726
Everything I do on placement requires a great deal of effort	.618
After a day on placement, I find it hard to recover my energy	.813
On placement, I feel physically exhausted	.791
When I get up in the morning, I lack the energy to start a new day on placement	.720
I want to be active on placement, but somehow I am unable to manage	.577
When I exert myself on placement, I quickly get tired	.738
At the end of my working day, I feel mentally exhausted and drained	.834
Mental Distance	
I struggle to find enthusiasm for my work	.818
At work, I do not think much about what I am doing and I function on autopilot	.699
I feel a strong aversion towards my job on placement	.839

I feel indifferent about my job on placement	.784
I am cynical about what my work means to others	.653
Emotional Impairment	
On placement, I feel unable to control my emotions	.762
I do not recognise myself in the way I react emotionally on placement	.661
During placement I become irritable when things don't go my way	.644
I get upset or sad on placement without knowing why	.772
On placement I may overreact unintentionally	.807
Cognitive Impairment	
On placement, I have trouble staying focused	.828
On placement, I struggle to think clearly	.867
I am forgetful and distracted on placement	.875
When I am on placement, I have trouble concentrating	.847
I make mistakes on placement because I have my mind on other things	.782

3.3.2 PSM

The scale most commonly used to assess PSM has been the four-dimensional model introduced by Perry (1996). These dimensions include attraction to policymaking, commitment to the public interest, compassion, and self-sacrifice. However, this model is criticised as it is believed to be too long for inclusion in multi-purpose surveys (Coursey & Pandey, 2007) and has difficulty contextually adapting (Giauque et al., 2011). As this is a multi-purpose survey and is contextually unique, this study used Vandenabeele and Penning

de Vries's four-item measurement scale for PSM from an unreleased article. In addition to the four-item scale, two dummy variables were included 'Our society is a cohesion of individuals' and 'The cohesion of our society is not what it used to be'. The Cronbach's Alpha for the present study is 0.729, demonstrating a high internal consistency. Following the results of the factor analysis, the dummy questions did not load on the same factor. However, the remaining four items measuring PSM loaded and resulted in one factor (see Table 2).

Table 2. Factor loadings for PSM

	Factor 1
I am very motivated to contribute to society	.827
I find it very motivating to contribute to society	.921
Making a difference in society, no matter how small, is very important to me	.871
Defending the public interest is very important to me	.752

3.3.3 PO Fit

As previously mentioned, PE fit is divided into four dimensions by Kristof-Brown et al. (2005). For the purpose of this study, PO fit will be used to measure PE fit among the respondents. PO fit will be measured using the Bright (2021) scale. While that study uses a 6-point scale to measure its item, the present study will use a 5-point Linkert scale to limit the possibility of a neutral answer and to remain cohesive with the rest of the measures. There are three items in this scale and the survey questions have a good internal validity, with

Cronbach's alpha for PO fit: 0.79. Following the results of the factor analysis, the items that are measured in PO fit loaded on one factor (see Table 3).

Table 3. Factor loadings for PO Fit

	Factor 1
My values and goals are very similar to the values and goals of my organisation	.848
I feel a strong sense of belonging to my organisation	.829
What this organisation stands for is important to me	.839

3.3.4 Control Variables

In the study, several control variables were tested including, age, gender, placement experience, and workload. These were used to regulate variables that may affect the dependent variable and other confounding variables (M. Li, 2021). Then gender variables were recoded using a dummy variable. As three genders were recorded, a dummy variable for both Male and Female were created. Since age is a continuous variable, it did not require recoding and was recorded in terms of years. Placement experience was originally recorded in terms of years or months but was standardised to months for consistency. The Cronbach's Alpha for the workload scale was 0.802, demonstrating high internal consistency. Two reverse questions were used in the survey, 'I engage in activities to promote my well-being' and 'I utilise academic support resources to help manage academic stress'. These two items were recoded to have them align with the other items in the scale. Based on the outcomes of the factor analysis, the reverse questions did not load the same factor, however, the remaining six items measuring workload loaded on one factor and can be seen in the table below (see Table 4).

Table 4. Factor loadings for Workload

	Factor 1
I feel overwhelmed by the academic demands of my coursework	.841
I feel that academic pressure negatively affects my well-being and performance	.834
I find it challenging to manage my time	.812
I feel that there are not enough hours in the day to complete my tasks	.823
I find it difficult to balance academic responsibilities with personal life activities	.819
I feel guilt or stress when taking time off from academic work	.734

3.4 Data analysis

Using the statistical software SPSS, the data gathered in Qualtrics is transferred to SPSS and the incomplete surveys were deleted. Following this, the internal reliability of each of the tested variables was analysed to discover the Cronbach's Alpha of each measure. The means of the different variables were calculated and a descriptive analysis was completed to gain insight into the group of respondents. After exploring the data, some statistical data analysis techniques were done in SPSS. Assumption checks for the data were carried out. These checks included testing for linearity, independence of errors, homoscedasticity, normality of errors, and no multicollinearity, the dataset did not violate these checks. Subsequently, a correlation analysis was completed in which the strengths of the central and control variables of the study were examined. A correlation between two variables reflects the strength and direction of the underlying relationship, and this also refers to the significance of a

relationship (Zou et al., 2003). Following this, A regression analysis was employed to explore the relationship between PSM and burnout, and PSM and PO fit while controlling for the abovementioned variables. This regression analysis was completed, resulting in three models. The models of analysis determined whether or not a hypothesis could be rejected or accepted.

4. Results

The products of the statistical analysis of the data gathered by this research are discussed in this chapter. The descriptive findings will initially be examined, and the correlation of the various variables will be provided and studied. The regression analyses will then be discussed, including the curvilinear relationship between the variables. Finally, based on the results of the study the hypotheses will be tested and either approved or rejected.

4.1 Descriptive Statistics

In total 168 people participated in the survey, with 119 people completing the study. The age varied from 21 to 34 with an average age of twenty-four. 36 participants were male, 80 were female, and three were non-binary/third gender. Experience on placement ranged from one month to thirty-eight months therefore the average time on placement was 22.64 months (see Table 5).

Table 5. Means and Frequencies of Descriptive Variables

Variable	Mean/Frequency
Gender	
Female	80 (67.2%)
Male	36 (30.3%)
Non Binary/ Other	3 (2.5%)
Age (years)	24.24
Experience (months)	22.64

4.2 Correlation Tests

A correlation analysis was conducted to measure the strength of the relationship between variables (Zou et al., 2003). The results of the correlation analyses are demonstrated in the table below. The central variables and the control variable for this research model are present in the analysis. The core variables are burnout, PSM, and PO fit. The control variables are age, gender, time on placement, and workload. Additionally, the quadratic terms of PO fit and PSM were included.

As demonstrated by the table below, age was found to not have significant correlations with any of the other variables. Whereas, male gender has a significant negative correlation with workload ($r = -0.234$, $p < 0.05$) which suggests that females report higher workloads than males ($r = 0.310$, $p < 0.01$). PO Fit also displayed a significant negative relationship with gender ($r = -0.222$, $p < 0.05$). This suggests that males report higher PO fit than females. PO^2 also displayed a significant negative relationship ($r = -0.219$, $p < 0.05$), suggesting again that females report lower PO than males.

Experience has no significant relationship with age, both genders, workload, and burnout. However, a significant positive relationship is present between experience and PSM ($r = 0.237$, $p < 0.01$), suggesting that more experienced individuals have higher levels of PSM. A similar positive relationship can be seen between PSM^2 which reinforces the significant positive relationship ($r = 0.239$, $p < 0.01$). Additionally, PO Fit has a significant positive relationship with experience ($r = 0.194$, $p < 0.05$). Moreover, PO^2 displays a significant positive relationship ($r = 0.187$, $p < 0.05$), suggesting that more experienced individuals report higher PO fit.

The variable workload has a significant positive correlation with burnout ($r = 0.519$, $p < .01$) eluding to a higher workload being associated with higher burnout levels. Workload did not have a significant relationship with the other variables within the data set.

Burnout had a significant negative relationship with PO fit ($r = -0.346$, $p < .01$) and PO^2 ($r = -0.338$, $p < .01$). This demonstrated that better PO fit is associated with lower levels of burnout.

PSM has a significant positive correlation with PO Fit ($r = 0.409$, $p < .01$) which could mean that higher PSM is associated with higher PO fit. A similar result is evident for PO^2 ($r = 0.390$, $p < .01$), reinforcing the same principle. As expected, a strong positive relationship is displayed between PSM and PSM^2 ($r = 0.992$, $p < .01$), since PSM^2 is derived from PSM.

PO fit and PSM^2 demonstrate a significant positive relationship ($r = 0.399$, $p < .01$), once again proposing that higher PO fit is correlated with higher PSM^2. As anticipated, there is a strong positive relationship between PO fit and PO^2 ($r = 0.987$, $p < .01$). Finally, PSM^2 and PO^2 have a significant positive correlation ($r = 0.384$, $p < .01$). The significance of the correlation suggests a possible non-linear relationship between the variables.

Table 6. Means, Standard Deviations and Correlations between Study Variables

	N	M	SD	1	(M)	(F)	3	4	5	6	7	8	9
1. Age	115	24.2435	1.998	-									
2. Gender					-								
(M)	119	0.3025	0.4613	.052		**-.943****							
(F)		0.6723	0.4714	-.109	**-.943****								
3.Experience	119	22.64	11.88	.059	.074	-.091	-						
4.Workload	119	3.725	0.784	-.134	**-.234***	**.310****	-.038	-					
5. Burnout	119	2.146	0.552	-.051	-.072	.026	-.045	**.519****	-				
6. PSM	119	4.181	0.571	-.054	-.086	.122	**.237****	.013	-.118	-			
7. PO Fit	119	3.353	0.884	-.067	**-.222***	**.259****	**.194***	-.055	**-.346****	**.409****	-		
8. PSM²	119	17.801	4.485	-.017	-.088	.102	**.239****	-.006	-.105	**.992****	**.399****	-	
9. PO²	119	12.018	5.712	-.074	**-.219***	**.247****	**.187***	-.058	**-.338****	**.390****	**.987****	**.384****	-

Note. M= Male; F= Female; PSM= Public Service Motivation; PSM²= Public Service Motivation Squared.
**p < .05, **p < .01*

4.3 Regression Analysis and Hypothesis Testing

Following the relevant regression assumption checks which included testing for linearity, independence of errors, homoscedasticity, normality of errors, and no multicollinearity, a linear regression was conducted to examine the relationships between the predictor variables. Each test was carried out separately. Burnout and PSM were first analysed, then PSM and PO fit, and finally, PO fit and burnout. Burnout acted as the dependent variable for the first and

third hypothesis tests and then PO fit was the dependent for the second hypothesis test. In the first model, the independent effects of the control variables and the dependent variables were tested. In the second model, the independent variables of the study are added. The third model includes the quadratic term of the predictor variable. The three models provided the opportunity to investigate the most appropriate type of analysis for the dataset.

Table 7. Regression analysis PSM x Burnout

	Model	**1**			**Model**	**2**			**Model**	**3**		
Variables	***B***	***SE***	***β***	***p***	***B***	***SE***	***β***	***p***	***B***	***SE***	***β***	***p***
Age	-0.006	0.660	-0.023	0.767	-0.008	0.022	-0.027	0.724	-0.010	0.022	-0.035	0.665
Gender												
(M)	-0.942	0.280	-0.777	0.001	-0.905	0.281	-0.747	0.002	-0.840	0.329	-0.693	0.012
(F)	-1.082	0.282	-0.912	<.001	-1.003	0.284	-0.871	<.001	-0.966	0.333	-0.815	0.005
Workload	0.457	0.059	0.635	<.001	0.455	0.059	0.633	<.001	0.454	0.059	0.631	<.001
Experience	-0.001	0.004	-0.023	0.766	0.000	0.004	0.003	0.974	0.000	0.004	0.003	0.970
PSM					-0.099	0.078	-0.101	0.205	-0.381	0.733	-0.387	0.604
PSM²									0.036	0.093	0.761	0.700
N	114				114				114			
F	13.04***				11.20***				9.55***			
R^2	.374				.384				.384			
Adjusted R^2	.346				.349				.344			

Note. M= Male; F= Female; PSM= Public Service Motivation; PSM²= Public Service Motivation Squared.
**p < .05, **p < .01, ***p < .001.*

The first hypothesis in this study states that *'PSM has a U-shaped curvilinear relationship with the risk of burnout'.* This implies that burnout initially decreases with increasing levels of PSM, then burnout reaches a point of inflection, and following this point it increases as PSM continues to rise. In this case, burnout is the dependent variable with PSM as the predictor variable.

Model 1 tests the independent effects of the control variables and burnout. Age and experience do not show significant relationships with burnout ($p > .05$). For gender, males are significantly associated with higher burnout when compared to females ($B = -0.942$, $SE = 0.280$, $\beta = -0.777$, $p = 0.001$), indicating that females experience lower burnout levels compared to males. Workload is significantly associated with higher burnout ($B = 0.457$, $SE = 0.059$, $\beta = 0.631$, $p < 0.001$) suggesting that a higher workload contributes to increased burnout. The model fit statistics provide insight into how the various models explain the variation in burnout and how the addition of variables affects the model fit. For model 1 (adjusted $R^2 = 0.346$) the variance explained is low, suggesting that only 34.6 per cent of the variance in burnout is explained by the control variables after accounting for the number of predictors.

Model 2 incorporated PSM as the independent variable. The coefficient for PSM is not statistically significant within this model ($B = -0.099$, $SE = 0.078$, $\beta = -0.101$, $p = 0.205$), demonstrating no significant linear relationship between PSM and burnout. While the control variables such as age, experience and male gender are not statistically significant, female gender and workload remain statistically significant in this model ($p < 0.001$). The inclusion of PSM as an independent variable does not significantly improve the model fit (Adj $R^2 = 0.349$).

Model 3 included the addition of the quadratic term. However, the coefficient for the linear effect remains insignificant within this model ($B = -0.381$, $SE = 0.733$, $\beta = -0.387$, $p =$

0.604). Despite squaring PSM, the coefficient for the quadratic term is not significant, suggesting that the quadratic relationship is not supported (B = 0.036, SE = 0.093, β = 0.761, p = 0.700). Both the linear and quadratic terms for PSM are not significant in this model. The R^2 does not increase compared to Model 2, and while the F-statistic has statistical significance (F = 9.55***), it decreases, indicating that the quadratic term does not improve the model.

Table 8. Regression analysis PSM x PO fit

	Model	**1**			**Model**	**2**			**Model**	**3**		
Variables	***B***	***SE***	***β***	***p***	***B***	***SE***	***β***	***p***	***B***	***SE***	***β***	***p***
Age	-0.024	0.040	-0.053	0.555	-0.017	0.038	-0.039	0.650	-0.020	0.039	-0.045	0.610
Gender												
(M)	0.584	0.522	0.302	0.266	0.383	0.492	0.198	0.439	0.471	0.575	0.243	0.415
(F)	1.163	0.525	0.614	0.029	0.895	0.497	0.472	0.074	0.986	0.583	0.520	0.094
Workload	-0.210	0.109	-0.183	0.057	-0.201	0.103	-0.174	0.053	-0.202	0.103	-0.176	0.053
Experience	0.017	0.007	0.222	0.014	0.010	0.006	0.135	0.121	0.010	0.007	0.135	0.121
PSM					0.545	0.136	0.347	<.001	0.162	1.284	0.103	0.900
PSM^2									0.049	0.163	0.243	0.765
N	118				114				114			
F	3.84**				6.32***				5.38***			
R^2	.150				.260				.260			
Adjusted R^2	.111				.219				.212			

Note. M= Male; F= Female; PSM= Public Service Motivation; PSM^2= Public Service Motivation Squared.
**p < .05, **p < .01,* ***p < .001.

The second test hypothesis states that *'PSM has an inverted U-shaped curvilinear relationship with PO fit among student doctors.'* This means that PO fit initially increases with rising levels of PSM, reaches a peak, and then decreases as PSM continues to rise. For this, PO fit was made the dependent variable and PSM fit is the independent variable.

Model 1 tests the independent effects of the control variables and PO Fit. Age and male gender are not significantly related to PO fit ($p < 0.05$). However, female gender is significantly associated with higher PO fit when compared to males ($B = 1.163$, $SE = 0.525$, $\beta = 0.614$, $p = 0.029$). Workload demonstrated a marginal negative relationship with PO fit ($B = -0.210$, $SE = 0.109$, $\beta = -0.183$, $p = 0.057$). Moreover, experience is significantly positively related to PO fit ($B = 0.017$, $SE = 0.007$, $\beta = 0.222$, $p = 0.014$). The adjusted R^2 (Adj $R^2 = 0.111$) suggests that when the control variables are included, only 11.1 per cent of the variance in PO fit is explained.

Model 2 includes the addition of PSM as an independent variable. This model suggests that PSM is significantly associated with a higher PO fit in a linear form ($B = 0.545$, $SE = 0.136$, $\beta = 0.347$, $p < 0.001$). This suggests that as PSM increases, PO fit also increases. The coefficients for age, male gender, workload and experience continue to be included but remain essentially unchanged from Model 1. The adjusted R^2 (Adj R^2 =0.219) improves when compared to Model 1. This suggests that additional factors beyond the ones included in this analysis may influence PO fit.

Model 3 highlights that the linear effect of PSM is no longer significant in predicting PO fit ($B = 0.162$, $SE = 1.284$, $\beta = 0.103$, $p = 0.900$). With the incorporation of the quadratic term, the coefficient is not significant, proposing that the hypothesised inverted U-shape relationship does not exist ($B = 0.049$, $SE = 0.163$, $\beta = 0.243$, $p = 0.765$). The adjusted R^2 (Adj $R^2 = 0.212$) slightly decreases compared to Model 2, suggesting that the quadratic term does not improve the model fit. While the F-statistic is statistically significant (F = .5.38***),

it indicates that the quadratic term does not improve the model. The inclusion of the quadratic term does not improve the model fit or contribute significantly to explaining PO fit. Therefore, the positive linear effect of PSM remains the primary predictor.

Table 9. Regression analysis Burnout x PO fit

Model	**1**				**Model**	**2**			**Model**	**3**		
Variables	***B***	***SE***	***β***	***p***	***B***	***SE***	***β***	***p***	***B***	***SE***	***β***	***p***
Age	-0.006	0.660	-0.023	0.767	-0.011	0.021	-0.038	0.603	-0.011	0.021	-0.038	0.604
Gender												
(M)	-0.942	0.280	-0.777	0.001	-0.837	0.267	-0.691	0.002	-0.839	0.272	-0.692	0.003
(F)	-1.082	0.282	-0.912	<.001	-0.873	0.273	-0.736	0.002	-0.875	0.278	-0.738	0.002
Workload	0.457	0.059	0.635	<.001	0.419	0.057	0.583	<.001	0.419	0.057	0.583	<.001
Experience	-0.001	0.004	-0.023	0.766	0.002	0.004	0.041	0.583	0.002	0.004	0.041	0.586
PO fit					-0.179	0.049	-0.286	<.001	-0.170	0.284	-0.272	0.551
PO^2									-0.001	0.044	-0.015	0.973
N	114				114				114			
F	13.04***				14.38***				12.21***			
R^2	.374				.444				.444			
Adjusted R^2	.346				.413				.408			

Note. M= Male; F= Female; PO Fit= Person Organisation Fit; PO^2= Person Organisation Fit Squared.
*$p < .05$, **$p < .01$, ***$p < .001$.

For the final test, the hypothesis of this study states that *'PO fit has a U-shaped curvilinear relationship with the risk of burnout among student doctors.'* This means burnout initially decreases with increasing levels of PO fit, reaches a point of inflection, and then increases as PO fit continues to rise. Burnout is once again the dependent variable and PO fit is the independent variable.

Model 1 tested the independent effects of the control variables and burnout. The results show that age and experience are not significantly related to burnout ($p > .05$). However, both male and female gender have significant negative coefficients (Male: $B = -0.942$, $SE = 0.280$, $\beta = -0.777$, $p = 0.001$; Female: $B = -1.082$, $SE = 0.282$, $\beta = -0.912$, $p < 0.001$). This suggests that male gender is significantly associated with lower burnout compared to females. Female gender is associated with lower burnout. Workload has a significant positive coefficient ($B = 0.457$, $SE = 0.059$, $\beta = 0.635$, $p < 0.001$). Indicating that a higher workload is related to increased levels of burnout. Once again, the adjusted R^2 (Adj $R^2 = 0.346$) is quite low suggesting that the control variables only account for a marginal amount of the variance in burnout.

Model 2 incorporated the PO fit variable. The control variables remain essentially the same. Once again, gender and workload are significant predictors of burnout, with workload being positively related to burnout. A significant negative coefficient is evident with the inclusion of PO fit ($B = -0.179$, $SE = 0.049$, $\beta = -0.286$, $p < 0.001$). Including PO fit improves the model fit (Adj $R^2 = 0.413$). This model highlights that PO fit is a significant predictor of burnout. The coefficient indicates a significant negative relationship, suggesting that as PO fit increases, burnout decreases linearly.

Model 3 saw the inclusion of the quadratic term. Once again the control variables remain largely similar, gender and workload remain statistically significant, whereas age and experience remain insignificant. The negative coefficient for PO fit is negative but

statistically insignificant in this model (B = -0.170, SE = 0.284, β = -0.272, p = 0.551). This proposes that when the quadratic term for PO fit is included, PO fit alone does not have a significant linear relationship with burnout. The coefficient for the quadratic term is close to zero while also not statistically significant (B = -0.001, SE = 0.044, β = -0.015, p = 0.973). Both the linear and quadratic terms for PO fit are not significant in this model. The adjusted R^2 does not increase compared to Model 2, it slightly decreases (Adj R^2 = 0.408). While the F-statistic decreases F = 12.21 ($p < 0.001$), it remains significant, demonstrating that the model as a whole is statistically significant. However, the linear term is insignificant, and the addition of the quadratic term for PO fit does not support a U-shaped relationship.

5. Discussion

In this section, the focus is the interpretation of the results. First of all, the hypotheses will either be accepted or rejected based on the data. Following this, the theoretical contributions of the data and the study as a whole will be discussed. The limitations and suggestions for future research will then be explained and proposed, with the conclusions of the study discussed.

5.1 Discussion

The research question posed in this study was as follows: *To what extent does a curvilinear relationship exist between PSM-Burnout, PSM-PO fit, and PO fit-Burnout among student doctors within the Irish healthcare system?* These three variables are well known to us, however, their direct relationships and their possibility to form a curvilinear relationship are not. Therefore, this study explored whether a curvilinear relationship existed between the three variables among student doctors in Ireland. A total of 119 participants completed the research which consisted of a five-minute survey. These participants ranged in age from 21 to 34 with a mean age of 24. Experience on placement ranged from one month to thirty-eight months, and the mean experience was 22.64 months.

The first hypothesis was that '*PSM has a direct U-shaped curvilinear relationship with the risk of burnout among student doctors'.* The expectation was that burnout initially decreases with increasing levels of PSM, then at a point of inflection, burnout increases as PSM continues to rise. This study found no significant relationship between PSM and burnout. Based on the data in *Table 7*, the hypothesis of a U-shaped curvilinear relationship between PSM and burnout is not supported. While the control variables, gender and workload significantly predict burnout, the coefficient for PSM remains insignificant. As PSM is not a

significant predictor of burnout in the second or third models and the quadratic term for PSM is not statistically significant the hypothesis of the U-shaped relationship is rejected.

The second hypothesis was that '*PSM has a direct inverted U-shaped curvilinear relationship with PO fit among student doctors'.* In that PO fit initially increases with the rising level of PSM however, at an inflection point, the PO fit begins to decrease as the PSM continues to increase. The data suggests that a linear relationship exists between PO fit and PSM, demonstrating that higher levels of PSM are associated with increased PO fit. Moreover, as the quadratic term for PSM is not statistically significant, the hypothesis of an inverted U-shaped curvilinear relationship between PSM and PO fit is not supported. While PSM is a significant predictor of PO fit in a linear form in Model 2, it is not when the quadratic term is included and therefore the U-shaped relationship hypothesis is rejected.

The third hypothesis was that '*PO fit has a direct U-shaped curvilinear relationship with the risk of burnout among student doctors'*. Therefore it was expected that burnout initially decreases with increasing levels of PO fit, and once an inflection point is reached, burnout increases as PO fit continues to rise. As demonstrated in *Table 9,* PO fit is a significant predictor of burnout, when considered linearly. However, the hypothesis of a U-shaped curvilinear relationship between PO fit and burnout cannot be supported, as both the linear and quadratic terms for PO fit become insignificant in Model 3.

In conclusion, the current study did not find the data to support the hypotheses that were theorised. Therefore, the answer to the research question is that a curvilinear relationship does not exist between PSM-Burnout, PSM-PO fit, and PO fit-Burnout within the present study.

5.2 Theoretical Contributions

The main findings presented in the previous section underscore several key and interesting insights for theoretical consideration. As the hypotheses of the study were rejected, the

theoretical framework proposed cannot be validated. The following section will discuss the theoretical insights that the study contributes to the scientific literature.

A central finding from the research is that the relationship between PSM and burnout is insignificant, in both the correlation and regression analysis. The findings of PSM and burnout did not align with the proposed TMGT effect when considering TFL and emotional exhaustion. Therefore, with this data set, higher levels of PSM cannot confidently be associated with lower levels of burnout. Despite this, it is theorised by several studies that individuals with a higher PSM are more likely to be more engaged in their work and perform well, therefore experiencing less burnout (J. Kim, 2018; Petrovsky & Ritz, 2014; Wright & Grant, 2010). On the other hand, research investigating the dark side of PSM has found that PSM has also been associated with increased feelings of stress, burnout, job dissatisfaction, turnover intention, involuntary absenteeism and presenteeism (Giauque et al., 2012; Jensen et al., 2019; Koumenta, 2015;Van Loon et al., 2015). PSM is often defined as an intrinsic motivation, in which internal rewards and a sense of fulfilment to public service or interests drive individuals (Scott & Pandey, 2005). Conversely, burnout is often associated with extrinsic factors such as workload, long hours, occupational culture, and insufficient support (Dyrbye et al., 2014, Oró et al., 2021). In this context, if these extrinsic factors influence burnout more, the intrinsic motivation of PSM may not be enough to effectively mitigate burnout for these student doctors. This is evident when examining the relationship between workload and burnout. The significant positive coefficients across the multiple models indicate that as the workload increases, burnout levels also increase. The dataset provides an explanation as to why this may be the case. For PSM, the mean score is relatively high (Mean = 4.181, SD = 0.571), this suggests that student doctors generally report high levels of PSM. However, the mean score for burnout was relatively low (Mean = 2.146, SD = 0.552), indicating that the burnout levels are not as high among the participants. The correlation

between PSM and burnout is negative but insignificant. This indicates that higher levels of PSM are slightly associated with lower burnout. However, the relationship is not strong enough to be significant. Additionally, the significant positive correlation between workload and burnout, demonstrates that high workload is associated with higher burnout. This underscores that workload is an essential factor explaining burnout among student doctors.

A further key takeaway from the study was that a positive linear relationship was found while testing the relationship between PSM and PO fit. While the hypothesised curvilinear relationship was not supported due to the quadratic term being statistically insignificant, a significant positive relationship linear relationship was demonstrated. The suggested non-linear effects concerning behavioural outcomes by Vleugels & Flatau Harrison (2023) do not have a curvilinear effect in the present study. The data set demonstrates a positive linear relationship between PSM and PO fit, indicating that creating experiences of high fit is not a waste of resources and has beneficial implications for individuals and organisations. Similar to other findings (Bright, 2021), it is evident that the greater the alignment of the fit, values, goals and characteristics of the students with those of the organisation, the greater the motivations.

A core reason for the unsupported hypothesis is due to the fact that detecting certain interaction effects is notoriously difficult due to methodological and statistical artefacts that decrease statistical power (Aguinis, 2004). As stated by Pierce & Aguinis, (2013) the TMGT effect is also likely to suffer from low statistical power. This suggests that even when a curvilinear effect is present, the probability of detecting its effect is low. As a result, researchers are advised to take measures to allow for detection, such as a larger sample size, as it will better detect the power of the study (Aguinis & Gottfredson, 2010). From the dataset of the present study, it can be concluded that these conditions have not been met, and the sample size does not carry enough statistical power. While there is a positive linear

relationship between PSM and PO fit, the conditions for a curvilinear relationship using the TMGT effect were not established. As previously mentioned, PSM has explicit and indirect effects on employees' attitudes towards their work through its influence on PO fit (S. Kim, 2012). This suggests that individuals with higher levels of PSM are expected to feel as if their personal values, goals, and motivations align with those of their organisation. The linear relationship established in the study underscores the importance of PSM as a driver of organisation alignment. It is understood that PSM has been a significant contributor to PO fit in the context of public organisations, while additionally incidentally enhancing the performance of employees (Bright, 2007). This is particularly relevant in a healthcare environment, as motivation to serve the public can significantly influence the work experience and ultimately, patient outcomes (DeVoe et al., 2002; Franco et al., 2002). The present study contributes to this body of literature as the significant positive relationship between PSM and PO fit provides insight into how these student doctors feel about their fit within their organisation and how this relates to their motivation. The absence of a curvilinear relationship implies that the influence of PSM on PO fit is linear rather than complex.

Finally, when considering the third hypothesis, the negative coefficient for PO fit is significant indicating that higher burnout is associated with lower PO fit. Once again, the addition of the quadratic term did not improve the model, which suggests that only a linear relationship exists. While this does not support the present study hypothesis, the data is in line with previous literature that suggests that an improved PO fit reduces symptoms of burnout (Andela & van der Doef, 2019; El-Sakka, 2016). The suggested comparison between PO fit and burnout and work engagement and burnout utilising the COR theory cannot be validated. As demonstrated by the results PO fit is a significant predictor of burnout when considered linearly. According to the study, increased fit reduces the risk of burnout.

As previously mentioned, burnout is often associated with extrinsic factors such as workload, long hours, occupational culture, and insufficient support (Dyrbye et al., 2014, Oró et al., 2021). However, it is evident that within the context of PO fit, the intrinsic elements are enough to effectively mitigate the extrinsic factors of burnout for these student doctors. These findings also reinforce the importance of the correct alignment between the individual and environmental factors suggested by Kristof-Brown et al. (2005), especially when mitigating burnout.

While there is no evidence of a curvilinear relationship, the significant relationships found between PO fit-PSM and PO fit-Burnout, suggest that improving PO fit and fostering higher PSM could have beneficial effects on reducing burnout and enhancing the experience and fit of student doctors in the Irish healthcare system.

5.3 Limitations and Future Research

There are several limitations of the present study that should be considered. Firstly, while the sample size surpassed the G*Power analysis, some of the results may be insignificant due to the small sample size. The sample of the current study is 119 participants, therefore, only a small proportion of the population is represented. As the study utilised the TMGT effect, the results were more likely to suffer from low statistical power (Pierce & Aguinis, 2013). The authors suggest that even when a curvilinear effect is present, the probability of detecting its effect is low. As a result, the researchers are advised to take measures to allow for detection (Aguinis & Gottfredson, 2010). There are several measures suggested by Pierce & Aguinis (2013). It is advised to 1) include the full range of scores on the predictor variable, 2) utilise meta-analytic techniques to estimate effect sizes and mythological and statistical artefacts, 3) carefully plan the numbers and intervals between observations on theoretical considerations, 4) consider growth modelling techniques, and 5) avoid artificially dichotomising the

continuous variables (Pierce & Aguinis, 2013). Through the incorporation of these design measures, future researchers can enhance their ability to detect and analyse curvilinear relationships within the field of management.

Additionally, the sample was gathered through a convenience sample and snowballing. Therefore, the population came from personal connections, relying on them to spread and share the survey. Despite achieving the desired responses, possible bias within the sample cannot be completely ruled out. Furthermore, the focus on student doctors provided limitations in terms of range and diversity. While the specific focus on students was intentional, it has been found that generalising from students to the general population can be challenging when personal and attitudinal variables are used (Hanel & Vione, 2016). Therefore, it is proposed that future research be conducted within a nonstudent sample, alternative results are likely, and possibly even a curvilinear effect.

A further limitation is the cross-sectional nature of the study, hence the data was collected at one point in time. This limits the possibility of making causal inferences. If the study had followed a longitudinal design, the data could have provided stronger evidence for the directionality and nature of the relationships between risk factors (Caruana et al., 2015). As burnout is a condition that develops over time (W. Schaufeli & Enzmann, 1998), utilising a longitudinal research design would allow for the tracking of burnout and the specific stages and critical points at which it progresses. Moreover, using a longitudinal design to investigate PSM and PO fit would provide the same opportunity as tracking the development of burnout (Caruana et al., 2015). Additionally, the causal relationships between the variables would be discovered, providing insight into how PSM and PO fit affect burnout over time. It may be within this format that a curvilinear relationship is seen. As students' progress in their studies and careers, external factors such as long working hours, workload, academic pressure, job demands, and pressure (Dyrbye et al., 2014, Oró et al., 2021), are likely to change. Therefore

examining these relationships longitudinally would provide an understanding of their experiences and even provide an opportunity to identify possible points of intervention.

Furthermore, the study lacked additional demographic questions, such as which university the participants are enrolled in. Demographic questions provide context for the data, providing the opportunity for improved analysis (Dobosh, 2017). Moreover, the similarities and differences felt by the students of the universities, hospitals, and organisations could have been gathered. In addition to this, the study would have benefited from an increase in the number of control variables. It is important not to include control variables thoughtlessly as it can violate the theoretical assumptions (M. Li, 2021). However, it is evident from the data that context-specific control variables would have been beneficial to rule out alternative explanations (M. Li, 2021). Control variables for future research could include controlling for work-life balance, support systems, institutional culture, and mentorship quality. With the addition of these variables, the confounding bias can be managed and further insights into the organisational culture, support, and work environment of the universities could be gained.

Moreover, investigating potential mediators and moderators could explain how PSM and PO fit affect burnout. The introduction of mediators and moderators requires an integrated research design in which these third variables are set to enhance the understanding of a causal relationship (Wu & Zumbo, 2008). Introducing a mediator such as job satisfaction, work engagement or organisational commitment to explain the process through which PSM or PO fit influences burnout. Mediating variables explain the process by which two variables are related, resulting in one variable causing a mediating variable which ultimately causes the dependent variable (MacKinnon, 2011). Moderating variables provide an understanding of whether two variables have the same relation across groups (MacKinnon, 2011). Researching possible moderators such as organisational culture, leadership styles, and

support systems would provide valuable insights into the strength or direction of the relationship. The inclusion of moderation variables acknowledges the complexity of behaviour, detects sub-groups, can test whether an intervention has similar effects across groups, and provides practical information for possible interventions (MacKinnon, 2011). Therefore, utilising both mediating and moderating variables demonstrated the specifics of how and for whom certain intervention achieve their effects (MacKinnon, 2011).

Despite the limitations of the study, the area is currently under-researched, providing countless possibilities worth further exploration. Future research could increase the sample size and broaden the population to build on the findings. Allowing cross-cultural analysis and various sectors analysing their employees' experiences with burnout, PSM and PO fit could provide valuable insights. Tomoaia-Cotisel et al., (2013) highlight that reporting critical contextual factors is of importance within research. By investigating the relationship in various environments and among different populations, both in and outside of healthcare, researchers could examine whether these concepts have a curvilinear effect within their specific contexts. Investigating other contexts may lead to entirely new avenues within this body of research and could lead to the possibility of a curvilinear relationship

5.4 Conclusion

The present study was designed to examine the relationship between burnout, PSM, and PO fit and to what extent a curvilinear relationship existed between these constructs. The study was executed using an online survey which was targeted towards student doctors in Ireland. The purpose of this study was to contribute a new perspective to the well-known concepts within the world of management of PSM and PE fit. At present, the literature has widely investigated the linear relationship of these theories however, there is very little examining whether there is a curvilinear effect. While the hypotheses of the research were not accepted, insight into how student doctors feel about their fit within their organisation and how this

relates to their motivation was gained. While there was no significant relationship between burnout and PSM, the results demonstrated that there is a significant direct relationship between PSM and PO fit, meaning that when PO rises, PSM increases too. Additionally, there was a significant negative relationship between burnout and PO fit. The results revealed that when burnout increases, PO fit decreases. The current study underscores the intricate dynamics that exist between motivation and organisational fit, highlighting the crucial role that these concepts have on the well-being of student doctors in Ireland. At present, there are countless possibilities for future research in exploring curvilinear relations. Unravelling the complexities or simplicities could pave the way for more targeted interventions to enhance student doctors' well-being, motivation and organisational engagement.

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Appendix:

Appendix 1

PSM-Burnout-PE fit Survey

Introduction

Dear respondent,

Thank you very much for participating in our research. This survey is part of the master thesis of Sara Jane Leavey. Sara Jane is an Irish student who is finishing up her master's in Strategic Human Resource Management together with her supervisor Roos Mulder at Utrecht University, Netherlands.

For this survey, we are interested in the relationship between Public Service Motivation (PSM), Person-Environment Fit (PE fit) and Burnout among student doctors in Ireland. PSM, burnout and PE fit are concepts well-known to us but often not to people not involved in HR literature. With your participation, we hope to create a better understanding of the relationships between PSM, PE fit, and burnout and contribute to your well-being and patient care throughout placement.

The survey consists of several questions you can answer on a scale from 1 to 5, which will take 5 minutes. Please don't think too long about your answers and go with what you think is the most accurate. There are no right or wrong answers. All survey responses will be processed anonymously, and only the researchers have access to this data.

For any questions, you can contact Sara Jane (s.j.leavey@students.uu.nl).
Thank you in advance for your participation!

Sara Jane Leavey

Below you will find the legal information (GDPR) of this research and you will confirm your participation. At the bottom of the page, you can confirm your participation and move on to the next page.

How will my data be used?
This research complies with the European and national legislation (GDPR). If you decide to participate in this research, your participation will be anonymised. Information will not be traceable to individuals. The only people with access to the survey results are the researchers. Once the research is completed, all data gathered in Qualtrics will be deleted.

Do I have to take part?
Your participation is voluntary. If at any moment during the survey, you do not want to continue participation, you can stop filling in the survey without consequences. You may withdraw at any point by closing your browser window. If you wish to withdraw after finishing the survey, you can contact the researchers.

Who do I contact if I have questions or wish to complain?
For questions, complaints and other remarks you can contact Sara Jane at s.j.leavey@students.uu.nl. If you would prefer to communicate with the supervisor of the study, please email Roos Mulder at a.r.mulder@uu.nl.

Can I participate?
Participants have to be at least 18 years old. To participate you must be currently enrolled at one of the medical universities in Ireland and have had some clinical experience/ time on placement.
If after reading the above information you want to participate in this survey you can click 'I consent' to participate in this survey. The survey will then start. If you do not want to participate, you can close your browser window.

Do you consent to participating in the following study

- ○ I consent (1)
- ○ I do not consent (2)

End of Block: Introduction

Start of Block: General Information

The first series of questions are about some demographic characteristics. These answers will be processed anonymously and cannot be traced back in any way.

Q1 What year were you born?

_____

Q2 What is your gender

- ○ Female (1)
- ○ Male (2)
- ○ Non-binary / third gender (3)
- ○ Prefer not to say (4)

Q3 What experience do you have on placement? Please formulate your answer in months or years.

The following questions are about feelings of exhaustion. Remember there are no right or wrong answers, we are interested in your opinion.
How often do you experience the following?

	Never (1)	Sometimes (2)	Regular (3)	Often (4)	Always (5)
On placement, I feel mentally exhausted (1)	○	○	○	○	○
Everything I do on placement requires a great deal of effort (2)	○	○	○	○	○
After a day on placement, I find it hard to recover my energy (3)	○	○	○	○	○
On placement, I feel physically exhausted (4)	○	○	○	○	○
When I get up in the morning, I lack the energy to start a new day on placement (5)	○	○	○	○	○
I want to be active on placement, but somehow I am unable to manage (6)	○	○	○	○	○
When I exert myself on placement, I quickly get tired (7)	○	○	○	○	○
At the end of my working day, I feel mentally exhausted and drained (8)	○	○	○	○	○

Mental distance The following questions are about feelings of mental distance. Remember there are no right or wrong answers, we are interested in your opinion.
How often do you experience the following?

	Never (1)	Sometimes (2)	Regular (3)	Often (4)	Always (5)
I struggle to find enthusiasm for my work (1)	○	○	○	○	○
At work, I do not think much about what I am doing and I function on autopilot (2)	○	○	○	○	○
I feel a strong aversion towards my job on placement (3)	○	○	○	○	○
I feel indifferent about my job on placement (4)	○	○	○	○	○
I am cynical about what my work means to others (5)	○	○	○	○	○

Emotional impairment The following questions are about feelings of emotional impairment. Remember there are no right or wrong answers, we are interested in your opinion.
How often do you experience the following?

	Never (1)	Sometimes (2)	Regular (3)	Often (4)	Always (5)
On placement, I feel unable to control my emotions (1)	○	○	○	○	○
I do not recognise myself in the way I react emotionally on placement (2)	○	○	○	○	○
During placement I become irritable when things don't go my way (3)	○	○	○	○	○
I get upset or sad on placement without knowing why (4)	○	○	○	○	○
On placement I may overreact unintentionally (5)	○	○	○	○	○

Cognitive impairment The following questions are about feelings of cognitive impairment. Remember there are no right or wrong answers, we are interested in your opinion. How often do you experience the following?

	Never (1)	Sometimes (2)	Regular (3)	Often (4)	Always (5)
On placement, I have trouble staying focused (1)	○	○	○	○	○
On placement, I struggle to think clearly (2)	○	○	○	○	○
I am forgetful and distracted on placement (3)	○	○	○	○	○
When I am on placement, I have trouble concentrating (4)	○	○	○	○	○
I make mistakes on placement because I have my mind on other things (5)	○	○	○	○	○

Societal attitude The following questions are about public service motivation. Remember there are no right or wrong answers, we are interested in your opinion. To what extent do you agree with the following statements?

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree nor disagree (3)	Somewhat agree (4)	Strongly agree (5)
I am very motivated to contribute to society (1)	○	○	○	○	○
I find it very motivating to contribute to society (2)	○	○	○	○	○
Making a difference in society, no matter how small, is very important to me (3)	○	○	○	○	○
Defending the public interest is very important to me (4)	○	○	○	○	○
Our society is a cohesion of individuals (5)	○	○	○	○	○
The cohesion of our society is not what it used to be (6)	○	○	○	○	○

PO fit The following questions are about your fit within the organisation. Remember there are no right or wrong answers, we are interested in your opinion. To what extent do you agree with the following statements?

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree nor disagree (3)	Somewhat agree (4)	Strongly agree (5)
My values and goals are very similar to the values and goals of my organisation (1)	○	○	○	○	○
I feel a strong sense of belonging to my organisation (2)	○	○	○	○	○
What this organisation stands for is important to me (3)	○	○	○	○	○

Q17 The following questions are about academic pressure and workload. Remember there are no right or wrong answers, we are interested in your opinion. How often do you experience the following?

	Never (1)	Sometimes (2)	Regular (3)	Often (4)	Always (5)
I feel overwhelmed by the academic demands of my coursework (1)	○	○	○	○	○
I feel that academic pressure negatively affects my well-being and performance (2)	○	○	○	○	○
I find it challenging to manage my time (3)	○	○	○	○	○
I feel that there are not enough hours in the day to complete my tasks (4)	○	○	○	○	○
I find it difficult to balance academic responsibilities with personal life activities (5)	○	○	○	○	○
I feel guilt or stress when taking time off from academic work (6)	○	○	○	○	○
I engage in activities to promote my well-being (7)	○	○	○	○	○

I utilise academic support resources to help manage academic stress (8)	○	○	○	○	○

Appendix 2