Northumbria Research Link

Northumbria University
NEWCASTLE

UniversityLibrary

Job satisfaction and public service motivation in Australian nurses: The effects of abusive supervision and workplace bullying

Kara Ng[1], Esme Franken[2], Diep Nguyen[3], Stephen Teo[3]

[1] Alliance Manchester Business School, University of Manchester, UK

[2] School of Business and Law, Edith Cowan University, Australia

[3] Newcastle Business School, Northumbria University, Australia

Author Note

Kara Ng https://orcid.org/0000-0001-5547-6725

Esme Franken https://orcid.org/0000-0001-6869-3155

Diep Nguyen https://orcid.org/0000-0002-5454-8835

Stephen Teo https://orcid.org/0000-0001-5025-7937

We have no known conflicts of interest to declare.

Correspondence concerning this article should be addressed to Kara Ng, Alliance Manchester Business School, University of Manchester, Booth Street West, Manchester, M15 5PB. Email: kara.ng@manchester.ac.uk

The data that support the findings of this study are available from Stephen Teo upon reasonable request.

Abstract

Workplace mistreatment is common in healthcare, especially among nurses, who may experience mistreatment from different sources, yet must carry out essential, public-facing duties. However, researchers have typically studied forms of mistreatment in isolation. This paper investigates the combined relationship between abusive supervision (i.e., vertical mistreatment) and workplace bullying (i.e., horizontal mistreatment) on job satisfaction and public service motivation among nurses. Drawing from self-determination theory, we examine how experiencing workplace mistreatment can thwart the fulfilment of psychological needs, operationalised as job satisfaction. Experiencing workplace bullying alongside abusive supervision is predicted to worsen this relationship. In turn, nurses are less likely to internalise their organisation's values, leading to less public service motivation. We tested our hypotheses on 219 Australian public sector nurses via an online survey, with a temporal separation of six weeks. Results suggest that abusive supervision has an indirect negative association with public service motivation, via job satisfaction. Workplace bullying moderated the indirect relationship at high and low levels, though the indirect relationship was stronger at low levels. Our study contributes to a well-rounded understanding of workplace mistreatment, particularly within the context of self-determination theory, and to our understanding of how public service motivation is affected by employees' social environment.

Keywords: Abusive supervision; Workplace bullying; Public service motivation; Workplace mistreatment; Nursing

Word count: 12012

Job satisfaction and public service motivation in Australian nurses: The effects of abusive supervision and workplace bullying

Introduction

The healthcare sector is undoubtedly an important part of a functioning society, with nurses playing a fundamental role. Despite this, years of research have consistently indicated that nurses experience high amounts of workplace mistreatment and at greater rates than non-nursing staff (e.g., Johnson & Rea, 2009; Quine, 2001). Defined as negative interpersonal behaviours directed at someone at work (Dhanani & LaPalme, 2019), workplace mistreatment can come from various sources; notably, there is horizontal mistreatment, perpetrated by colleagues in the form of workplace bullying (e.g., Blackstock et al., 2015), and vertical mistreatment, perpetrated by supervisors via abusive supervision (Mackey et al., 2015). Researchers and practitioners have focused more on this social issue, particularly as we better understand its prevalence and severity. A 2019 survey of 33 London hospital trusts found that 41% of nurses and healthcare assistants reported experiencing bullying, harassment, and abuse (Ford, 2020), while an Australian report suggested a higher figure of 60% (Burnside, 2019). Such figures have negative organisational and societal implications, as indicated by a 2010 American survey found that costs associated with workplace mistreatment in healthcare were estimated at 4.1 billion USD. However, the figure may actually be higher as it does not account for lost productivity, turnover, and litigation costs (Asfaw et al., 2014). Workplace mistreatment is, therefore, a serious topic with negative consequences at the individual, organisational, and societal level. Along with the severe mental and physical effects experienced by targets, there are increasing level of nursing shortages due to high turnover in many countries (Haddad et al., 2020), making it clear that workplace mistreatment is an important topic for both practitioners, hospital administrators, and researchers alike.

One of our key research aims is to understand the influence of simultaneous forms of mistreatment, or 'multisource mistreatment'. Researchers have traditionally studied mistreatment in isolation when, in fact, employees may be victimised by different parties, such as from both colleagues and supervisors (e.g., Zhou et al., 2020). While it is difficult to address external forms of mistreatment, such as from patients or the public, hospital managers may have more power in addressing negative behaviours from staff.

The effects of multisource mistreatment are not well understood, while studies on how mistreatment affects attitudinal outcomes are also relatively lacking. A study by Carter and colleagues (2013) of the UK National Healthcare Service found that negative behaviours were most frequently reported as coming from supervisors (51.5%) and then by peers (31.1%), while Johnson and Rea's (2009) study of the Australian sector found similar results (supervisors: 50%, peers: 38%). Although there are few papers that explicitly measure the prevalence of multisource mistreatment, healthcare research has indicated that targets of abusive supervision are also more likely to carry out bullying between colleagues and unethical behaviours themselves (e.g., Chu, 2014; Mackey et al., 2017). This suggests that, in conjunction with the high prevalence figures, there is a good chance of overlap, whereby employees experience horizontal and vertical mistreatment concurrently. This area has been relatively unexplored but may provide substantial insight into targets' overall experiences of workplace mistreatment.

Our second aim is to examine the effects of workplace mistreatments on nurses' attitudes to their work and beyond within the context of multisource mistreatment. Drawing from Deci and Ryan's (2009) self-determination theory (SDT), we propose that workplace mistreatment thwarts the fulfilment of nurses' basic psychological needs of competency, relatedness, and autonomy, which will negatively affect nurses' job satisfaction. Job satisfaction, defined as one's attitude towards their work (Brayfield & Rothe, 1951), has a

central place in the nomological network that encompasses many of the work-related attitudes and has been conceptualised as the fulfilment of psychological needs in organisational SDT (Deci et al., 2017; Fernandez & Moldogaziev, 2015; Vansteenkiste et al., 2007). This in-role dissatisfaction will 'spill over' beyond their job and negatively affect nurses' wider attitudes towards their sector and duties, which we conceptualise using public service motivation (PSM), defined as one's desire to serve the public through compassion and public interest (Kjeldsen, 2012).

Our study offers several contributions. First, it explores the interactive effects of abusive supervision and workplace bullying, two forms of mistreatment popularly studied in isolation in healthcare and management research. By examining the interactive effects of mistreatment, researchers can have a better overall understanding of nurses' experiences at work. Second, our study contextualises PSM in workplace mistreatment. Studies have typically studied PSM in relation to role- or organisation-specific stressors, such as red tape (e.g., Giauque et al., 2012), rather than interpersonal stressors like abusive supervision or bullying. Moreover, our work builds upon recent research suggesting that PSM is a malleable construct shaped by one's experiences at work, rather than a fixed variable that individuals possess even prior to entering a job (e.g., Corduneanu et al., 2020; Jensen & Vestergaard, 2017). Finally, our study integrates workplace mistreatment, a common organisational behaviour topic, and public administration research by drawing on conceptual similarities using SDT.

Self-determination theory

SDT is one of the most popular macro-theories of motivation and has been used to explain human behaviour and well-being across a variety of settings (e.g., Deci & Ryan, 2009). At its core, SDT proposes that motivation can be generally categorised into two

'types'. The most desirable type is intrinsic motivation, which refers to volitional behaviours that are curious and spontaneous. In intrinsically-motivated behaviours, outcomes are related to the task; that is, simply 'doing' the behaviour is a reward in itself (Ryan & Deci, 2000). Alternatively, extrinsic motivation refers to behaviours that are contingent upon a reward separate from the task. Extrinsic motivation is, therefore, instrumental in that it is focused on a separate outcome (Deci et al., 2017). An example of this may be employees who are motivated to at work for financial or social rewards. Deci and Ryan (2009) further proposed that there should be supportive conditions in place to maintain motivationally optimal states. Specifically, environments should support the fulfilment of basic psychological needs, outlined as the need for autonomy (the desire to be aligned with one's 'true self' by acting how they wish), relatedness (the desire for a sense of belonging, experiencing interpersonal security), and competency (the desire for mastery).

Deci and colleagues (2017) note that a key tension in organisations is ensuring that employees have their psychological needs met in the workplace. It is assumed that intrinsic motivation is higher when employees' needs are fulfilled, which will lead to beneficial outcomes. SDT has also been applied to understanding nurses' motivations, particularly as the job is often associated with altruism and a desire to benefit society while helping others (e.g., Messineo et al., 2019), suggesting that motivations are 'beyond' extrinsic rewards like pay.

Within organisational research, researchers are interested in outcomes related to both workplace performance and attitudes, like job satisfaction (Deci et al., 2017; Vansteenkiste et al., 2007). Job satisfaction is a key workplace attitude in understanding important, distal outcomes, such as performance or turnover (Fernandez & Moldogaziev, 2015). Moreover, recent work (e.g., Breaugh et al., 2018) suggests that SDT has a strong relationship to job satisfaction. Researchers, such as Gagné and Deci (2005), suggest that intrinsically motivated

employees are more likely to feel fulfilled in their roles, and therefore report higher job satisfaction. They argue that job satisfaction can be conceptualised as the fulfilment of basic needs, as satisfied employees are likely to be engaged at work (competency), are not stifled in how they wish to act (autonomy) and feel connected to their workplace (relatedness).

According to Ryan and Deci (2000), SDT emphasises the importance of the social environment in influencing need and motivational fulfilment. We propose that destructive interactions, such as workplace mistreatment, can undermine employee's intrinsic motivation by thwarting their basic needs. Given that nurses encounter a disproportionate amount of mistreatment at work from many sources (e.g., Blackstock et al., 2015; Zhou et al., 2020), it is important to understand how SDT can explain negative events, as well as positive ones. The next section will discuss constructs related to workplace mistreatment and its negative relationship to job satisfaction can be explained through an SDT lens as the thwarting of basic needs and intrinsic motivation.

Workplace mistreatment and self-determination theory

Defined as negative interpersonal behaviours directed at someone at work (Dhanani & LaPalme, 2019), workplace mistreatment can have dire consequences on targets and beyond, making it a popular topic with researchers and practitioners alike. Research has linked workplace mistreatment with poor mental and physical health, turnover intention, and worse job attitudes (e.g., Einarsen et al., 2011). It is important to understand workplace mistreatment in nursing contexts as they are a significant population within the healthcare, with a recent Australian report suggesting that nurses and midwives account for 57% of all healthcare staff (Australian Institute of Health and Welfare, 2020). Moreover, nurses' negative experiences may have direct consequences on patient well-being, as noted in a

recent study suggesting that higher levels of mistreatment, from supervisors and fellow nurses, increased perceptions of patient safety risk (Laschinger, 2014).

Research indicates that nurses are subjected to mistreatment from many sources (Zhou et al., 2020); within the organisation, Johnson and Rea (2009) notes that nurses are vulnerable to abuse from 'above' (abusive supervision) or from colleagues and fellow nurses (workplace bullying). Abusive supervision describes interactions in which followers perceive their supervisors to engage in hostile verbal and non-verbal behaviours (Tepper, 2000), such as hurtful remarks, public humiliation, or scapegoating. It is a form of vertical mistreatment whereby the perpetrator victimises an employee who is below them on the organisational hierarchy (e.g., Mackey et al., 2015).

Within healthcare, abusive supervision appears to be the most common form of mistreatment. Similar to the general working population, nurses who perceive abusive supervision tend to report greater health problems and sustained negative emotions, which deplete nurses' mental and physical health (Chu, 2014; Rodwell et al., 2014). There is also evidence to suggest that abusive supervision is detrimental to attitudinal outcomes, as abused workers report poor job satisfaction and motivation (Fischer et al., 2021).

Workplace bullying, alternatively, is a form of horizontal mistreatment as it is characterised as occurring between colleagues or equals (Johnson, 2009). It is defined as "harassing, offending, or socially excluding someone or negatively affecting someone's work" (Einarsen et al., 2011, p. 22). Workplace bullying is similar to abusive supervision in that it is characterised by repetitive and persistent acts that occur over a period of time. However, there is no formal hierarchical distinction between perpetrator and target, though perpetrators may become more powerful, informally, as the bullying wears targets down (Einarsen et al., 2011).

Within the general population, researchers estimate that an average of 14.6% of employees are experiencing bullying at any one time (Nielsen et al., 2010), though the figure may be higher among nurses, who often work in high stress environments and interact regularly with colleagues. One of the first studies of bullying's prevalence in nurses, within a British National Health Service trust, found that 45% of nursing respondents experienced bullying within the last year, higher than rates reported by other hospital staff (Quine, 2001). Workplace bullying has been linked to lower well-being, such as poor mental health and chronic fatigue among targets (e.g., Nielsen & Einarsen, 2012). Targets also tend to report lower levels of job satisfaction (e.g., Loh et al., 2010).

Researchers have explained the detrimental effects of workplace mistreatment using SDT's framework (e.g., Van den Broeck et al., 2016; Trépanier et al., 2016). Specifically, mistreatment obstructs fulfilment of the people's basic psychological needs, such as those for autonomy, relatedness, and competence. Regarding autonomy, targets may feel unable to act as they truly wish as they are afraid of provoking perpetrators. Further, Trépanier and colleagues (2013) suggest that they may also feel less of a sense of ownership at work. For example, an abusive supervisor with a tendency to micromanage subordinates may stifle feelings of autonomy; a supervisor "invad[ing] my privacy" is an item in a Tepper's (2000) measure of abusive supervision.

Regarding feelings of relatedness, targets are less likely to feel connected to those around them if they are being excluded or mistreated. This lack of relatedness may be compounded if others fail to intervene despite being aware of bullying, as bystanders often remain silent when witnessing incidents (e.g., Ng et al., 2020).

Finally, regarding the need for competence, both workplace bullying and abusive supervision are characterised with behaviours that disparage or invalidate targets' views,

which likely thwarts perceptions of mastery (Notelaer et al., 2019; Tepper, 2000; Trépanier et al., 2013). Low and colleagues (2021) suggest that nurses experiencing abusive supervision are at a career disadvantage compared to non-targeted peers, as they do not have constructive, mentoring-type relationships with supervisors. Therefore, mistreatment not only thwarts existing competency (e.g., feeling assured that your current skills are valid), but also prevents future competencies from developing through the lack of mentorship.

Research consistently links abusive supervision and bullying, both facets of workplace mistreatment, with poor attitudinal outcomes, such as job satisfaction. However, our understanding of the interactive effects of both mistreatment types is limited. We propose that simultaneously experiencing abusive supervision and bullying creates a "resource loss spiral", a term popularised in the Job Demands-Resources literature (e.g., Demerouti et al., 2001), whereby multiple stressors placed upon the individual accumulates and leads to even worse outcomes than if only one is present (Rodríguez-Muñoz et al., 2020). While mainly used in the context of health and work engagement (e.g., Ng et al., 2021), this demand accumulation can be used in SDT to explain how simultaneous negative events interact to worsen perceptions of job satisfaction. As such, they may create a combined obstruction on the fulfilment of needs for autonomy, competence, and relatedness. Employees' needs are thwarted when experiencing abusive supervision, which nurses report as the most frequently experienced form of mistreatment (Quine, 2001); this is further worsened when also experiencing bullying from colleagues. Therefore, we propose:

Hypothesis 1: Workplace bullying will moderate the negative relationship between abusive supervision and job satisfaction. Specifically, the relationship will be stronger when participants experience greater workplace bullying.

Public service motivation and self-determination theory

PSM is a core construct in public administration research, commonly defined as "an individual's predisposition to respond to motives grounded primarily or uniquely in public institutions and organizations" (Perry, 1996, p. 6). It is often associated with altruism and employees working towards a 'greater good' (Perry & Hondeghem, 2008). Researchers suggest that employees with high PSM are better suited to work contexts that promote prosocial, service-oriented behaviours (Bright, 2008; Kjeldsen & Hansen, 2018), such as nursing, where patient outcomes are prioritised. As PSM refers to one's attitudes to serving public interests, it has been conceptualised as a key part of an employee's identity or self-concept (Breaugh et al., 2018; Wehrle & Fasbender, 2018).

There has been much debate surrounding PSM's malleability; that is, whether it is more of a state or a trait. A trait approach is implied in Perry's (1996) definition of PSM, which uses the term "predisposition", and trait PSM is the consensus among scholarship (Vogel & Kroll, 2016). This suggests that PSM is something that employees enter the workforce already possessing, whereby people who are already higher in PSM are more likely to work in public service as they have an innate desire to serve the public anyway.

However, it is important for researchers to exercise caution when approaching the trait versus state debate, particularly as research indicates that social contexts, like the workplace, can affect one's individual differences (Smallfield & Kluemper, 2021). Psychologists emphasise that self-concepts (i.e., their identities or evaluations of self) are dynamic and changing as a result of self-reflection and "feedback from the social world" (Jordan et al., 2015). Researchers have established evidence for some malleability of constructs traditionally viewed as stable (e.g., Jordan et al., 2015; Robinson, 2009). Consequently, there has been a parallel research stream examining the malleability of PSM. Scholars recognise

that PSM, as a dynamic part of one's identity, can change through events in one's life[1] and at work, such as when experiencing workplace mistreatment.

We propose that PSM has trait-like properties but can be shaped by environmental feedback. Moynihan and Pandey (2007) discuss how PSM is used to understand people's motives for pursuing public-facing or non-profit work that is stressful, but not necessarily highly compensated. These motivational characterisations have led some to examine PSM within an SDT framework (see review by Vandenabeele et al., 2014). According to Vandenabeele (2007), PSM is the individual-level internalisation of an organisation's public values and is promoted when organisational environments fulfil basic psychological needs. When environments respond positively to employees' psychological needs, employees are more likely to internalise public service values (i.e., report higher PSM). Such conceptualisations of PSM suggests a degree of malleability and, like SDT, emphasise the role that the (social) environment has on shaping PSM (e.g., Corduneanu et al., 2020).

Scholars have highlighted the role of leadership in influencing PSM, hypothesising that employees are likely to model leaders' values, attitudes, and behaviours (e.g., Newman et al., 2017, for ethical and servant leadership). The role of leadership in PSM has also been explained from an SDT perspective, as leaders can help employees meet their basic psychological needs, which in turn leads to internalisation of public-serving motivation (Jensen & Bro, 2017). For example, Schwarz and colleagues (2020) found that employee PSM is positively related to their supervisors' public leadership behaviours and will emulate these public-serving behaviours themselves.

There appears to be considerably less research on how PSM is affected by *negative* events or forms of leadership, as research has typically focused on the positive effects of

---

[1] At the most basic level, Vogel and Kroll (2016) found that PSM changes with age and organisational tenure.

positive leaders. In addition, there is a lack of research on what occurs when leadership does not satisfy psychological needs in relation to the maintenance or development of PSM. It is therefore imperative for researchers and practitioners to gain a more well-rounded understanding of PSM's malleability by examining how it can be shaped by negative events, like abusive supervision. One can imagine that employees experiencing abuse are less likely to take notice of public values (if they perceive any at all) and are also less likely to internalise them, leading to a decrease in PSM.

The general thesis among public administration scholars, and within empirical public administration studies, is that job satisfaction is an outcome of PSM (Andersen & Kjeldson, 2013; Bright 2008; Steijn 2008). That is, working in public service jobs fulfils and 'makes use' of employees' PSM needs, resulting in higher job satisfaction (Breaugh et al., 2018). Rather than PSM shaping attitudes to the job, we argue that employees' attitudes toward their job actually work to develop and shape their PSM. Highly satisfied employees, for example, may feel more willing and motivated to serve the public and deliver high quality public services. For public servants, these acts often represent the essence and purpose of their job. If they are not satisfied with their job, public employees may lack motivation to fulfil the public-oriented tasks of that job, and feel disconnected from its wider purpose. We elaborate on this relationship further, in relation to SDT, below.

As greater job satisfaction can be operationalised in SDT as the outcome needs being met (Deci et al., 2017), we propose that it is a proxy variable of need fulfilment and an antecedent to PSM, or the internalisation of organisational values. That is, events that impact employees' perceptions of their immediate job role, which would affect wider perceptions, such as towards their organisation or their occupational values, like PSM. In the case of workplace mistreatment, targets would perceive worse job satisfaction as their needs are not fulfilled, which in turn leads to less motivation around generally serving public interests.

The idea of events affecting first one's immediate job situation and then influencing wider attitudes is akin to the spillover effect, a well-documented phenomenon whereby perceptions from one domain transfer to another (Pierce et al., 2016). While a majority of spillover research focuses on job attitudes affecting family attitudes, or vice versa, research also shows that role-specific attitudes, like job satisfaction, can influence wider attitudes in the work domain. A study by Mafini and Dlodlo (2014) of public sector employees found a relationship between job satisfaction and external work motivation. A study by Egan and colleagues (2004) found that organisational culture was indirectly related to learning transfer, via job satisfaction, suggesting a mediating mechanism whereby positive (or negative) events influence proximal attitudes, such as towards one's job, and then affects more distal outcomes, such as one's intention to transfer skills to work.

Hypothesis 2: Abusive supervision will have a negative indirect effect on PSM via job satisfaction.

The overall model

Integrating the above theorisation, we propose a moderated mediation model to explain the outcomes of workplace mistreatment in public sector nurses. We argue that mistreatment thwarts the fulfilment of employees' basic psychological needs, and that workplace bullying (a further form of mistreatment) exacerbates this effect. This is then operationalised as worse job satisfaction. Lower satisfaction in one's job will then lead to worse PSM as nurses will internalise these negative values, attributing them as caused by the institution, which will reduce their motivation to embody public service values. Specifically, we hypothesise that abusive supervision, a form of vertical mistreatment perpetuated by one's supervisor or leader, is associated with worse job satisfaction and worse PSM. This indirect relationship

will be exacerbated if nurses experience another common form of mistreatment, workplace bullying (i.e., horizontal mistreatment perpetuated by colleagues).

Hypothesis 3: The indirect relationship of abusive supervision on public service motivation, via job satisfaction, will be moderated by the extent to which employees experience bullying, such that the indirect effects will be stronger for employees who experience high bullying.

----- INSERT FIGURE 1 HERE -----

Method

Sample and procedure

The research team collected data via an Australian market research company, which provided access to an online panel that met the study's target population of Australian public sector nurses. The research company acted as a pre-screener to ensure participants met sampling criteria, thereby overcoming a potential limitation associated with crowdsourcing platforms where participants can lie about their identities (Palan & Schitter, 2018). By engaging with third-party research companies in participant recruitment, the research team also sought to gain access to employees across a variety of organisations, thereby increasing the study's generalisability compared to traditional sampling methodologies (e.g., Peltokorpi & Ramaswami, 2021).

Participants were emailed two survey questionnaires; the time between both surveys was approximately six weeks to reduce potential issues with common method variance (CMV; Podsakoff et al., 2003). Participants were assigned a unique identification code used in both surveys to match responses and maintain anonymity. 696 participants completed the Time 1 survey and the final sample consisted of 219 participants (overall response rate = 31.5%), of which a majority were female (72.1%) and between the ages of 26 and 30 (32.4%). On

average, participants' job tenure was 3.02 years (SD = 1.23). A majority of participants

(62.6%) did not hold supervisory positions. We conducted independent samples t-tests and χ^2

tests to compare participants who answered Time 1 only with those who completed both

surveys. Participants who completed both surveys were more likely to be older (M = 3.99,

SD = 1.29) than those who completed only T1 (M = 3.66, SD = 1.22), $t(708) = 3.27$, p

< .001). There were also significant differences regarding gender, with more females

completing both surveys (χ^2 (1, N = 710) = 5.71, p < .05), and job tenure (χ^2 (4, N = 710) =

19.62, p < .001). This is in line with research on longitudinal and panel attrition, where men

and younger ages are more likely to drop out (e.g., Frankel & Hillyguys, 2014), which is also

the case among Australian samples (e.g., Satherley et al., 2015; Young et al., 2006). However,

we found no significant difference in T1 reported workplace bullying, abusive supervision,

and job, suggesting that participants who completed only one survey did not have different

perceptions of mistreatment or job satisfaction compared to those who completed both

surveys, or vice versa.

Measures

   Abusive supervision (T1). This construct was measured using Mitchell and Ambrose's

(2007) 5-item version of Tepper's (2000) abusive supervision measure. The scale was

included only in Time 1, where participants were asked to indicate agreement that their

immediate supervisor engages in abusive behaviors on a 7-point Likert-type scale (1 =

"Strongly disagree" to 7 = "Strongly agree"). Sample items include "Tells me I'm

incompetent" or "Puts me down in front of others." The Cronbach's α was .98.

   Workplace bullying (T1). Participants' exposure to workplace bullying was measured

in Time 1 using the 9-item Shortened Negative Acts Questionnaire (S-NAQ; Notelaers &

Einarsen, 2019), which was adapted from the original Negative Acts Questionnaire by

Einarsen and Raknes (1997). The S-NAQ asks participants to indicate the frequency that they have experienced bullying behaviors in the past six months by answering a 5-point Likert scale (1 = "Never" to 5 = "Daily"). All items consist of one bullying behavior, such as "Insults" or "Someone withholding necessary information so that your work gets complicated." The Cronbach's α was .97.

Job satisfaction (T1). Job satisfaction was measured using the shortened form of Brayfield and Rothe's (1951) scale, consisting of 5 items (Judge et al., 1997). It was included in both Time 1 and Time 2 surveys. Participants responded to each item on a 5-point Likert-type scale (1 = "Strongly disagree" to 5 = "Strongly agree"). Sample statements include "Most days I am enthusiastic about my work" and "I feel fairly satisfied with my present job." The Cronbach's α was .73. While this is a moderate value, we note that two items in the measure were reversed, which can lead to lower reliability and may have a slight negative effect on model fits (Weijters & Baumgartner, 2012).

PSM (T2). This was measured using the abridged, global measure of PSM by Perry (1996). This unidimensional 5-item scale has been shown to have similar properties as longer, multidimensional measures, such as the original 40-item item scale (Wright et al., 2013). Participants rated their level of agreement to each item using a 5-point Likert-type scale (1 = "Strongly disagree" to 5 = "Strongly agree"). Sample items include "Meaningful public service is very important to me" and "I am prepared to make enormous sacrifices for the good of society." The Cronbach's α was .80.

Covariates. We included several established demographic variables as covariates. In line with previous public service research, we controlled for gender, age, supervisory position, and tenure (e.g., Leisink & Steijn, 2009; Naff & Crum, 1999). Studies have also shown that PSM is influenced by age and tenure (Vogel & Kroll, 2016). Previous research also suggests

that these variables also influence perceptions and reactions to abusive supervision and workplace bullying (Peltokorpi & Ramaswami, 2019).

Analysis

Participant responses were matched across surveys using their unique identifiers. Preliminary statistical analysis was conducted using IBM SPSS Statistics 26. Confirmatory factor analysis (CFA) was conducted on the overall model using IBM SPSS AMOS with a maximum likelihood estimator; this was done in order to assess the psychometric properties of the study's scales (Einarsen et al., 2018). Hypothesis testing was conducted in SPSS using Models 1 (moderation), 4 (mediation), and 7 (moderated mediation) of Hayes's (2017) PROCESS macro v.3.4.1, a popular add-on for testing direct, indirect, and conditional indirect effects.

Results

Preliminary analyses

Table 1 presents the means, standard deviations, and intercorrelations of the study's variables. The correlations confirm that gender was significantly associated with abusive leadership ($r = -.169$, $p < .01$) and workplace bullying ($r = -.204$, $p < .01$), while both age and tenure had significant relationships with job satisfaction, abusive supervision, and workplace bullying. Workplace bullying and abusive supervision shared a strong correlation ($r = .754$, $p < .01$), while PSM was significantly correlated only with job satisfaction ($r = .433$, $p < .01$).

----- INSERT TABLE 1 HERE -----

We conducted CFA to establish the distinctiveness of our model's key variables. The model fit was evaluated based on the following indices: $\chi2$/df = 2.04, CFI = .96, TLI = .95, RMSEA = .07, SRMR = .14. All factor loadings except for the fourth job satisfaction item

(which was reverse-worded) were significant. These indices indicate acceptable model fit, following the conventional cut-off criteria established by Hu and Bentler (1999). We compared this original model fit to alternative models and conducted a series of χ^2 comparison tests to ensure distinctiveness. Results are detailed in Table 2 and suggest that our original four-factor model (abusive satisfaction, workplace bullying, job satisfaction, PSM) was significantly different than the other models and showed better fit.

----- INSERT TABLE 2 HERE -----

To test the discriminant validity of both workplace mistreatment constructs (workplace bullying and abusive supervision), we conducted two CFAs and compared their model fit. The two-factor model, which separated abusive supervision and workplace bullying into distinct factors, showed better model fit ($\chi^2/df = 1.75$, CFI = .99, TLI = .99, RMSEA = .06, SRMR = .02) than the one-factor model that collapsed both constructs ($\chi^2/df = 11.28$, CFI = .85, TLI = .80, RMSEA = .22, SRMR = .08). A χ^2 test of difference confirmed that both models were significantly different ($\Delta\lambda^2(1)=630.501$, $p < 0.001$). Given the psychometric properties of our model, we proceeded to test our hypotheses.

Hypothesis testing

Hypothesis 1 states that workplace bullying will moderate the relationship between abusive supervision and job satisfaction. Specifically, the relationship will be stronger the more employees experience workplace bullying. The interaction was significant (B = .066, p < .01, 95% CI[.025, .107]. The moderating effect was stronger at lower levels of workplace bullying (-1 SD, effect = -.251, p < .001, 95% CI[-.338, -.165] than at higher levels (+1 SD, effect = -.108, p < .01, 95% CI[-.183, -.032], though both were significant, which is contrary to our expected direction of moderation. As seen in Figure 2, we plotted the interaction effects at +/- 1 SD of the mean moderator score. Job satisfaction was slightly higher in those

who experience both high abusive supervision and bullying, compared to those who experience high abusive supervision and lower bullying. Thus, although the moderation was significant, it did not follow our expected direction and we reject Hypothesis 1.

----- INSERT FIGURE 2 HERE -----

Hypothesis 2 predicted that job satisfaction will mediate the relationship between abusive supervision and PSM. Analyses showed a significant indirect relationship between the variables (B = -.068, 95% CI[-.103, -.037]), showing that abusive supervision had a negative effect on PSM via job satisfaction. Thus, Hypothesis 2 was accepted. The significant moderation and mediation thus allow us to continue with a moderated mediation analysis.

Hypothesis 3 stated that abusive supervision will have a conditional indirect effect on public service motivation, via job satisfaction, such that the indirect negative relationship is stronger when there is more workplace bullying and is weaker when there is less bullying. Analysis of the whole model, illustrated in Table 2, showed a significant index of moderated mediation (index = .023, 95% CI[.008, .044], suggesting that the indirect effect of abusive supervision on PSM, mediated by job satisfaction, was significant at both high (+1 SD) and low (-1 SD) levels of the moderator. Specifically, we found that the indirect effect was stronger at lower levels (-1 SD) of workplace bullying (effect = -.089, 95% CI[-.143, -.045]) than at higher levels (effect = -.038, 95% CI[-.070, -.009].

----- INSERT TABLE 3 HERE -----

Discussion

This study aimed to examine the interactive effects of two forms of workplace mistreatment, abusive supervision, and workplace bullying, on the attitudinal outcomes of Australian public nurses. Specifically, we conceptualise abusive supervision as vertical mistreatment, whereby a superior victimises a subordinate, and workplace bullying as

horizontal mistreatment, where colleagues typically bully each other. Research has consistently indicated that nurses experience mistreatment most frequently from their superiors (e.g., Carter et al., 2013; Johnson & Rea, 2009), suggesting that abusive supervision may have the strongest impact on target outcomes.

Drawing upon SDT (Ryan & Deci, 2000), we propose that mistreatment thwarts the fulfilment of employees' three basic psychological needs: autonomy, competency, and relatedness. Employees who are targets of vertical workplace mistreatment, also known as abusive supervision, will report worse job satisfaction, a proxy measurement for the fulfilment of psychological needs, common when applying SDT in work contexts (e.g., Deci et al., 2017). This negative effect is accentuated when employees are also experiencing mistreatment from another source, such as from their colleagues in the form of workplace bullying.

Drawing from Vandenabeele's (2007) conceptual work, we also integrated PSM to understand how obstructed need fulfilment within one's job role can influence wider motivations towards public service. Specifically, Vandenabeele argues that PSM is the individual internalisation of an organisation's perceived public service orientation. When an employee's work environment is responsive to their psychological needs, the fulfilment of which is conceptualised as job satisfaction, employees are more likely to internalise public service values and report greater PSM. Interpersonal treatment, a key work environment factor, may play a particularly pivotal role in impacting PSM, through satisfying (or thwarting) employees' psychological needs for autonomy, competence and relatedness (Goodboy et al., 2017; Jensen & Bro, 2018).

Employees who experience negative, needs-obstructing events are likely to be dissatisfied, leading to less internalisation and worse subsequent PSM. There is thus a

spillover effect whereby perceptions of one's immediate job role influence perceptions of one's sector or occupational values. Summarising these predictions into an overall model, we propose that nurses who are targets of abusive supervision are likely to report worse job satisfaction and, then, lower PSM. This relationship is strengthened when nurses experience simultaneous mistreatment, such as from their colleagues in the form of workplace bullying.

Consistent with our initial assumptions, we found a negative relationship between abusive supervision and PSM, via job satisfaction. In other words, nurses experiencing abusive supervision were less satisfied in their jobs, leading them to report less motivation to serve the public good. These findings support past research using SDT to explain the detrimental effects of vertical mistreatment, like abusive supervision (e.g., Dai et al., 2019). That is, mistreatment thwarts the fulfilment of employees' basic psychological needs, which can lead to poorer outcomes like reduced job satisfaction. Moreover, our mediation analysis showed that abusive supervision led to worse PSM, via reduced job satisfaction. Our findings suggest a spillover effect whereby the dissatisfaction within one's job, caused by the obstruction of psychological needs, goes on to affect wider perceptions of public service. This echoes research examining the spillover of work attitudes into wider perceptions (Pierce et al., 2016; Rode & Near, 2005). PSM still is confined in the work domain, albeit in a wider sense than job satisfaction, so there may be a boundary condition whereby these negative outcomes may not influence "overall life attitudes" (e.g., life satisfaction). We can also explain this spillover effect by drawing on Vandenabeele's (2007) conceptualisation of PSM as the internalisation of an organisation's identity and values; this occurs when psychological needs are fulfilled. Employees who experience harmful events, like mistreatment, are less likely to be satisfied in their jobs and are therefore less likely to take notice of and internalise their employers' public service values.

Our moderation, and moderated mediation, results were contrary to our hypotheses. We predicted that more bullying would exacerbate the negative relationship between abusive supervision at satisfaction, but our findings showed that higher bullying buffered this relationship. That is, nurses who reported experiencing simultaneous mistreatment from different sources reported greater job satisfaction than those who experienced abusive supervision and lower bullying. One would assume a worsening effect from different forms of mistreatment occurring simultaneously, such as the 'resource loss spiral' phenomenon proposed in the Job Demands-Resources literature (Demerouti et al., 2001). We offer several explanations for this unexpected finding.

First, our chosen outcome, job satisfaction, may operate nonlinearly when examined with workplace mistreatment. There may be a 'cut-off point' whereby experiencing more mistreatment does not have any further detrimental effects, especially if abusive supervision occurs most frequently. A nonlinear effect echoes findings from Giorgi and colleagues' (2015) investigation of bullying and job satisfaction; they found that, at lower bullying levels, employees reported decreased job satisfaction, but this relationship disappeared at higher levels of bullying. To explain this, they suggested that employees who experience higher bullying may have normalised mistreatment such that extra harmful behaviours are 'accepted' as part of the organisational culture.

These observations echo early concepts in social psychology, notably learned helplessness, which is a state where targets 'accept' their powerlessness as they feel they cannot control their surroundings after repeated exposure to negative events like mistreatment (Seligman, 1972). Within organisations, Rizvi and Sikand (2020) postulate that learned helplessness is 'learnt' in unhealthy organisations where leaders fail to empower subordinates, which is surely the case in workplaces with endemic mistreatment cultures. In such cases, it is understandable that employees subsequently fail to internalise their organisation's public

values. Nurses may become resigned to their destructive environment in a form of learned

helplessness, learning that such pervasive mistreatment is nothing out of the ordinary and

become accustomed to it. This may, in turn, lead to nurses tolerating bullying and

contributing to a culture whereby it is normalised.

It may also be the case that abusive supervision is more damaging than workplace

bullying. Therefore, targets may not see 'additional' mistreatment (i.e., further and horizontal

mistreatment) as any worse than what they are already experiencing. This is echoed by a

recent study suggesting that mistreatment where there is a wider power difference between

perpetrator and target, such as the hierarchical difference between supervisor and employee

(Jungert & Holm, 2021).

Next, other factors influencing nurses' experience with high levels of multisource

mistreatment. Nurses in these situations may be protected by factors that mitigate bullying's

worsening effect. At the social level, one can imagine that, in workplaces with a greater

prevalence of bullying, incidents can occur in front of others and provide chances for people

to intervene. Bystanders who respond constructively to witnessed mistreatment (e.g., standing

up to perpetrators, reporting incidents) can act as resources targets can draw upon to mitigate

harmful effects (Ng et al., 2021). While it may be difficult for nurses to stand up to abusive

supervisors, due to power distances and organisational politics, they may feel more

empowered to 'step in' when it is an equal who is committing bullying. Other social factors

that are contingent on bullying occurring frequently may also exert such buffering effects,

though existing research is scant on this topic.

Theoretical implications

Our study offers several theoretical contributions that build upon research in both

workplace mistreatment and PSM. First, we investigated possible interactive effects between

mistreatment occurring at different hierarchical levels: abusive supervision and workplace bullying. To date, there are few studies that include several mistreatment constructs simultaneously to understand their effects. While vertical mistreatment appears to be most commonly experienced by nurses (Carter et al., 2013), it is also very likely that nurses can be mistreated by peers at the same time, as well as by patients and other public members. Our study therefore provides a more holistic understanding of how mistreatment is actually experienced in reality, as previous quantitative research has typically focused on one construct in isolation.

Second, our study integrates workplace mistreatment, a research area typically limited to organisational behaviour research, and public administration. While both research areas have used SDT to explain phenomena (e.g., Goodboy et al., 2020; Vandenabeele, 2007), there has been little work to date seeking to combine both research topics despite certain similar theoretical underpinnings. The two fields operate on different organisational levels, with workplace mistreatment being more individual-level, drawing from behavioural and psychological foundations, and public administration taking into account meso- and macro-level factors. Our study model conceptualiseds PSM as the individual-level internalisation of organisational-level perceived values, which offers a fuller picture of how employees operate within a wider organisational system.

Next, we sought to understand the role of mistreatment in influencing PSM. We examined the factors that are negatively associated with PSM, a research agenda that has recently flourished in the field of public administration, but remains understudied in organisational behaviour (Moynihan, 2010; Vandenabeele, 2011). A focus on factors which may harm or reduce PSM is an essential part of understanding workplace characteristics conducive to its development.

Further, our research builds upon the PSM literature contextualised in healthcare. Past work has typically conceptualised PSM-relevant stressors as unpleasant characteristics inherent within one's job, such as red tape or work overload (e.g., Giauque et al., 2013; Liu et al., 2018). There has been considerably less interest, in contrast, on negative social characteristics, like mistreatment, and how they may influence PSM. This is interesting when taking into account past work indicating that nurses often experience higher levels of mistreatment than other healthcare workers (e.g., Johnson, 2009; Quine, 2001). This study therefore attempts to bridge the gap between research in nurses' workplace mistreatment and in nurses' PSM. Our findings indicated that job satisfaction mediated the relationship between abusive supervision and PSM and, in the full moderated mediation model, that this indirect relationship was significant when there were low levels of bullying. We extend research on job satisfaction as a mediating outcome of abusive supervision, whereby job satisfaction predicts and explains further outcomes such as turnover intention (as in Tepper et al.'s (2004) study) or PSM (as in our study). As abusive supervision has an indirect effect on one's PSM, findings support previous work that conceptualises PSM as a malleable construct, rather than a fixed individual difference (e.g., Jensen & Vestergaard, 2017). PSM's malleability may provide practical avenues for hospital administrators wishing to increase the public service orientation of their employees.

Practical implications

Nurses and other healthcare employees are prone to experiencing abuse from many sources, such as from patients, supervisors, or colleagues (Johnson, 2009). While it is difficult for hospitals to control third-party perpetrators (e.g., patients or family of patients), hospital managers have more control in addressing mistreatment from staff. Early research indicates that other nurses were the most frequent perpetrators of mistreatment (Rowe & Sherlock, 2005); this is particularly concerning as targets must interact and work closely with

their perpetrators on a regular, even daily, basis, thus increasing the chance of further mistreatment. To date, there has been relatively little research on the interactive effects of mistreatment coming from different sources, such as from an abusive supervisor or bullying colleague. This study sheds light on the effects of multisource mistreatment on the nurses' attitudes towards both their jobs and serving the public.

Lower levels of PSM have been associated with poorer job appraisal ratings (Naff & Crum, 1999), decreased organisational citizenship behaviours (Kim, 2006), and greater exhaustion when confronted with stressors (Bakker, 2015). These subsequent effects may have vital implications for the quality of patient care. Employees with less PSM are also more likely to report turnover intention and to consider leaving government/public service (Naff & Crum, 1999; Shim et al., 2015). The latter is especially important for practitioners as many countries, including Australia, are experiencing nursing shortages (Haddad et al., 2020; Pickering, 2020). Further, some countries have also seen public sector nurses move to the private sector due to low pay and poor job satisfaction (e.g., Chan et al., 2013). Hospital administrators should thus address workplace mistreatment from different hierarchical levels; for example, managers may undergo training sessions to foster supportive behaviours and leadership styles, and organisations should develop and advertise transparent and confidential procedures for reporting bullying. To support the value of training in hospitals, a recent study by Sheehan and colleagues (2020) found that employees' perceived effectiveness of anti-bullying HR interventions was associated with lower bullying and less negative attitudinal outcomes.

Practitioners may also wish to apply SDT's tenets to promote employee well-being and reduce psychosocial risks like mistreatment. Interventions should create environments that are more conducive to meeting basic psychological needs. Deci and colleagues' (2017) review of SDT interventions have been shown to improve employee attitudes and satisfaction

compared to control groups and pre-intervention measurements. While particular methods may vary, interventions can involve training leaders, job redesign to promote autonomy, by increasing participative decision-making to promote feelings of relatedness and autonomy, or by providing supportive feedback and training opportunities to promote feelings of competence (e.g., Dysvik & Kuvaas, 2014; Slemp et al., 2021). To account for each organisation's unique context, Lynch and colleagues' (2005) intervention worked with employees and patients of a psychiatric hospital to develop interventions that they believe would promote need fulfilment. In the context of workplace mistreatment, practitioners may want to especially focus on fulfilling employees' need for relatedness, such as through constructive conflict management training (Einarsen et al., 2018) or by introducing networking and support events (e.g., Slemp et al., 2021).

Limitations and avenues for future research

While we believe our study offers novel theoretical and practical implications, it has limitations that we believe offer avenues for future research. First, our study collected data at two time points to address possible issues with CMV (Podsakoff et al., 2003). While there is still temporal separation that provides incremental improvements upon a purely cross-sectional data, best practice suggests that mediation hypotheses measure antecedents, mediator, and outcomes at separate time points (Agnuinis et al., 2017; Goldsmith et al., 2018). However, including more survey time points may be difficult in practice; it is financially burdensome if researchers are paying participants, or logistically burdensome if working with real-life organisations. Given the high attrition rate in our survey, which we discuss below, further rounds of surveys may lead to even higher attrition and an even smaller final dataset. Nevertheless, researchers have suggested other ways to address CMV that do not involve more temporal separation. One such method is by using different data sources to measure variables (e.g., Jordan & Troth, 2020), such as through self- versus other-ratings or via

observation. For example, participants may report their own experiences of abusive supervision, which can be analysed alongside group-level workplace bullying perceptions. Researchers may also use secondary sources to measure attitudes like job satisfaction, such as previous employee surveys. However, given that workplace mistreatment is a sensitive and personal issue, it is important for researchers to maintain high levels of confidentiality and not ask participants to rate or name any specific colleagues in surveys.

Second, we note that our study used a market research company to recruit participants. The company was able to verify that participants met screening criteria, thereby ensuring a level of authenticity in data and preventing participants from falsifying information, as is the case with some traditional crowdsourcing platforms (e.g., Sharpe Wessling et al., 2017). However, we must acknowledge that using such companies may introduce selection bias into our sampling, thus slightly affecting our findings' generalisability, particularly as we provided compensation. Our sample may therefore be skewed towards nurses who have Internet access and are familiar with technology.

We must also acknowledge that we had a relatively high attrition rate between surveys, which affects the external and internal validity of findings. Our analyses showed that participants who completed both surveys were more likely to be female and older than participants who completed only Time 1. There were also significant differences in job tenure. While non-random attrition may be a cause for concern, these differences reflect trends found in panel and longitudinal attrition research. Within the Australian context, Young and colleagues (2006) found that attrition was lower among fluent English speakers, those with higher education, and younger cohorts. Nursing is also a stressful sector and participants may have had high workloads and stress levels, making them less amenable to completing our Time 2 survey in six weeks.

Importantly, however, we found that both groups showed no significant differences in Time 1 abusive supervision, workplace bullying, or job satisfaction. This suggests that there were no significant sample changes that may affect interpretation of our research aims, such as participants experiencing more or less mistreatment being more or less likely to complete both surveys. Future research must still seek to reduce attrition and understand why participants may be dropping out, particularly in surveys examining sensitive topics like mistreatment.

Third, our study drew heavily on SDT and, in line with previous research using SDT at work, operationalised job satisfaction as the fulfilment of SDT's basic psychological needs. However, we did not explicitly measure nurses' perceived autonomy, competence, and relatedness, nor did we measure the different types of motivation conceptualised by Deci and Ryan (2000). Future research can measure these specific constructs in order to examine whether workplace mistreatment has differential effects on each psychological need or motivation. For example, one can imagine that workplace bullying, which occurs among colleagues, will have a worse effect on feelings of relatedness, while abusive supervision may affect autonomy and relatedness more severely. Our study also used spillover effect to explain how reduced job satisfaction negatively impacts PSM, but we also did not explicitly measure spillover in our surveys. As this may be more difficult to measure quantitatively, future researchers may benefit from using qualitative methods to explore our study aims and to understand in better depth participants' experiences of attitudinal spillover.

Finally, our study featured an indirect relationship between abusive supervision and PSM, mediated by job satisfaction. However, we acknowledge that a majority of research suggests that PSM is an antecedent of job satisfaction (e.g., Homberg et al., 2015), not the other way around. We conceptualise PSM as a malleable trait influenced by negative workplace events and employees subsequently failing to take notice of and internalise their

organisation's public values. We hypothesised a spillover effect whereby negative attitudes of one's immediate job influences wider views. Future research can seek to better understand the causal relationship between attitudinal outcomes, like job satisfaction, with PSM. This can be done, for example, through the use of more intensive longitudinal designs and cross-lagged analyses. Researchers can also explore PSM's other effects on employees' attitudes and work experiences, perhaps by adopting more psychological perspectives to ground their research. For example, PSM may act as a resource that employees can draw upon when they are experiencing negative work events, which draws from the Job Demands-Resource theory (Demerouti et al., 2001), or PSM may play a part in the stress appraisal process and help employees cope with the aftermath of mistreatment (Lazarus & Folkman, 1984). Such future work can provide a better understanding of PSM at an individual level, supported by psychological theory.

Conclusion

Nurses are extremely integral players in any healthcare system, and it is a sad reality that they are vulnerable to experiencing mistreatment from various sources. These experiences can lead to nurses becoming less satisfied with their jobs or even less motivated to serve the public. Drawing from SDT's framework, our study addresses several gaps in our understanding of workplace mistreatment by examining the effects of both abusive supervision and workplace bullying in nursing and how mistreatment can influence attitudinal outcomes concerning the target's job role and beyond.

Data availability statement

The data that support the findings of this study are available on request from the corresponding author, K.N. The data are not publicly available due to that their containing information could compromise the privacy of research participants.

References

Aguinis, H., Edwards, J. R., & Bradley, K. J. (2017). Improving our understanding of moderation and mediation in strategic management research. *Organizational Research Methods, 20*(4), 665-685. https://doi.org/10.1177/1094428115627498

Andersen, L. B., & Kjeldsen, A. M. (2013). Public service motivation, user orientation, and job satisfaction: A question of employment sector?. *International Public Management Journal, 16*(2), 252-274. https://doi.org/10.1080/10967494.2013.817253

Asfaw, A. G., Chang, C. C., & Ray, T. K. (2014). Workplace mistreatment and sickness absenteeism from work: Results from the 2010 National Health Interview survey. *American Journal of Industrial Medicine, 57*(2), 202-213. https://doi.org/10.1002/ajim.22273

Australian Institute of Health and Welfare. (2020). *Health workforce.* https://www.aihw.gov.au/reports/australias-health/health-workforce

Bakker, A. B. (2015). A job demands–resources approach to public service motivation. *Public Administration Review, 75*(5), 723-732. https://doi.org/10.1111/puar.12388

Blackstock, S., Harlos, K., Macleod, M. L., & Hardy, C. L. (2015). The impact of organisational factors on horizontal bullying and turnover intentions in the nursing workplace. *Journal of Nursing Management, 23*(8), 1106-1114. https://doi.org/10.1111/jonm.12260

Brayfield, A. H., & Rothe, H. F. (1951). An index of job satisfaction. *Journal of Applied Psychology, 35*(5), 307–311. https://doi.org/10.1037/h0055617

Breaugh, J., Ritz, A., & Alfes, K. (2018). Work motivation and public service motivation: disentangling varieties of motivation and job satisfaction. *Public Management Review, 20*(10), 1423–1443. https://doi.org/10.1080/14719037.2017.1400580

Bright, L. (2008). Does Public Service Motivation Really Make a Difference on the Job Satisfaction and Turnover Intentions of Public Employees? *American Review of Public Administration, 38*(2), 149–166. https://doi.org/10.1177/0275074008317248

Burnside, N. (2019, February 1). Workplace bullying among Canberra health staff 'worst' nurses have seen, report reveals. *ABC News.* https://www.abc.net.au/news/2019-02-01/act-health-toxic-bullying-culture-report-reveals/10770022

Carter, M., Thompson, N., Crampton, P., Morrow, G., Burford, B., Gray, C., & Illing, J. (2013). Workplace bullying in the UK NHS: a questionnaire and interview study on prevalence, impact and barriers to reporting. *BMJ Open, 3*(6), e002628.

Chan, Z. C., Tam, W. S., Lung, M. K., Wong, W. Y., & Chau, C. W. (2013). On nurses moving from public to private hospitals in Hong Kong. *Journal of Clinical Nursing, 22*(9-10), 1382-1390. https://doi.org/10.1111/jocn.12253

Chu, L. C. (2014). Mediating toxic emotions in the workplace - the impact of abusive supervision. *Journal of Nursing Management, 22*(8), 953-963. https://doi.org/10.1111/jonm.12071

Corduneanu, R., Dudau, A., & Kominis, G. (2020). Crowding-in or crowding-out: the contribution of self-determination theory to public service motivation. *Public Management Review, 22*(7), 1070-1089. https://doi.org/10.1080/14719037.2020.1740303

Deci, E. L., & Ryan, R. M. (2000). The" what" and" why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry, 11*(4), 227-268. https://doi.org/10.1207/S15327965PLI1104_01

Deci, E. L., & Ryan, R. M. (2009). Self-determination theory: a consideration of human motivational universals. In P. J. Corr, & G. Matthews. *The Cambridge Handbook Of Personality Psychology* (pp. 441-456). Cambridge.

Deci, E. L., Olafsen, A. H., & Ryan, R. M. (2017). Self-determination theory in work organizations: The state of a science. *Annual Review of Organizational Psychology and Organizational Behavior, 4*, 19-43. https://doi.org/10.1146/annurev-orgpsych-032516-113108

Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology, 86*(3), 499–512. https://doi.org/10.1037/0021-9010.86.3.499

Dhanani, L. Y., & LaPalme, M. L. (2019). It's not personal: A review and theoretical integration of research on vicarious workplace mistreatment. *Journal of Management, 45*(6), 2322-2351. https://doi.org/10.1177/0149206318816162

Dysvik, A., & Kuvaas, B. (2014). Self-determination theory and workplace training and development. In M. Gagné (Ed.), *The Oxford handbook of work engagement, motivation, and self-determination theory* (pp. 218-228). Oxford University Press.

Egan, T. M., Yang, B., & Bartlett, K. R. (2004). The effects of organizational learning culture and job satisfaction on motivation to transfer learning and turnover intention. *Human Resource Development Quarterly, 15*(3), 279-301. https://doi.org/10.1002/hrdq.1104

Einarsen, S., Hoel, H., & Notelaers, G. (2009). Measuring exposure to bullying and harassment at work: Validity, factor structure and psychometric properties of the Negative Acts Questionnaire-Revised. *Work & Stress, 23*(1), 24-44. https://doi.org/10.1080/02678370902815673

Einarsen, S., Hoel, H., Zapf, D., & Cooper, C. (2011). The concept of bullying and harassment at work: The European tradition. In Einarsen, S., Hoel, H., Zapf, D., & Cooper, C. L. (Eds.), *Bullying and harassment in the workplace: Developments in theory, research, and practice* (pp. 3-39). London, UK: CRC Press.

Einarsen, S., Skogstad, A., Rørvik, E., Lande, Å. B., & Nielsen, M. B. (2018). Climate for conflict management, exposure to workplace bullying and work engagement: a

moderated mediation analysis. *The International Journal of Human Resource Management, 29*(3), 549-570. https://doi.org/10.1080/09585192.2016.1164216

Fernandez, S., & Moldogaziev, T. (2015). Employee empowerment and job satisfaction in the US Federal Bureaucracy: A self-determination theory perspective. *The American Review of Public Administration, 45*(4), 375-401. https://doi.org/10.1177/0275074013507478

Fischer, T., Tian, A. W., Lee, A., & Hughes, D. J. (2021). Abusive supervision: A systematic review and fundamental rethink. *The Leadership Quarterly*. Advance online publication. https://doi.org/10.1016/j.leaqua.2021.101540

Ford, S. (2019, December 16). London's nursing staff facing 'harmful harassment and discrimination'. *Nursing Times.* https://www.nursingtimes.net/news/workforce/londons-nursing-staff-facing-harmful-harassment-and-discrimination-16-12-2020/

Frankel, L. L., & Hillygus, D. S. (2014). Looking beyond demographics: Panel attrition in the ANES and GSS. *Political Analysis, 22*(3), 336-353. https://doi.org/10.1093/pan/mpt020

Gagné, M., & Deci, E. L. (2005). Self-determination theory and work motivation. *Journal of Organizational Behavior, 26*(4), 331-362. https://doi.org/10.1002/job.322

Giauque, D., Anderfuhren-Biget, S., & Varone, F. (2013). Stress perception in public organisations: Expanding the job demands–job resources model by including public service motivation. *Review of Public Personnel Administration, 33*(1), 58-83. https://doi.org/10.1177/0734371X12443264

Giorgi, G., Leon-Perez, J. M., & Arenas, A. (2015). Are bullying behaviors tolerated in some cultures? Evidence for a curvilinear relationship between workplace bullying and job satisfaction among Italian workers. *Journal of Business Ethics, 131*(1), 227-237. https://doi.org/10.1007/s10551-014-2266-9

Goldsmith, D. J., McDermott, V. M., & Alexander, S. C. (2000). Helpful, supportive and sensitive: Measuring the evaluation of enacted social support in personal relationships. *Journal of Social and Personal Relationships, 17*(3), 369-391. https://doi.org/10.1177/0265407500173004

Goodboy, A. K., Martin, M. M., & Bolkan, S. (2020). Workplace bullying and work engagement: a self-determination model. *Journal of Interpersonal Violence, 35*(21-22), 4686-4708. https://doi.org/10.1177/0886260517717492

Haddad, L. M., Annamaraju, P., & Toney-Butler, T. J. (2020). Nursing shortage. *StatPearls* [Internet].

Hayes, A. F. (2017). *Introduction to Mediation, Moderation and Conditional Process Analysis: A Regression-Based Approach* (2nd ed.). The Guilford Press.

Homberg, F., McCarthy, D., & Tabvuma, V. (2015). A meta-analysis of the relationship between public service motivation and job satisfaction. *Public Administration Review, 75*(5), 711-722. https://doi.org/10.1111/puar.12423

Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal, 6*(1), 1-55. https://doi.org/10.1080/10705519909540118

Jensen, U. T., & Bro, L. L. (2018). How Transformational Leadership Supports Intrinsic Motivation and Public Service Motivation: The Mediating Role of Basic Need Satisfaction. *American Review of Public Administration, 48*(6), 535–549. https://doi.org/10.1177/0275074017699470

Jensen, U. T., & Vestergaard, C. F. (2017). Public service motivation and public service behaviors: Testing the moderating effect of tenure. *Journal of Public Administration Research and Theory, 27*(1), 52-67. https://doi.org/10.1093/jopart/muw045

Johnson, S. L. (2009). International perspectives on workplace bullying among nurses: A review. *International Nursing Review, 56*(1), 34-40. https://doi.org/10.1111/j.1466-7657.2008.00679.x

Johnson, S. L., & Rea, R. E. (2009). Workplace bullying: Concerns for nurse leaders. *JONA: The Journal of Nursing Administration, 39*(2), 84-90. https://doi.org/10.1097/NNA.0b013e318195a5fc

Jordan, J., Leliveld, M. C., & Tenbrunsel, A. E. (2015). The moral self-image scale: Measuring and understanding the malleability of the moral self. *Frontiers In Psychology, 6*. https://doi.org/10.3389/fpsyg.2015.01878

Jordan, P. J., & Troth, A. C. (2020). Common method bias in applied settings: The dilemma of researching in organizations. *Australian Journal of Management, 45*(1), 3-14. https://doi.org/10.1177/0312896219871976

Judge, T. A., Locke, E. A., Durham, C. C., & Kluger, A. N. (1997). Dispositional effects on job and life satisfaction: The role of core evaluations. *Journal of Applied Psychology, 83*(1), 17-34. https://doi.org/10.1016/j.sbspro.2015.04.917

Jungert, T., & Holm, K. (2021). Workplace incivility and bystanders' helping intentions. *International Journal of Conflict Management.* Advance online publication. https://doi.org/10.1108/IJCMA-08-2021-0131

Kim, S. (2006). Public service motivation and organizational citizenship behavior in Korea. *International Journal of Manpower, 27*(8), 722-740. https://doi.org/10.1108/01437720610713521

Kjeldsen, A. M. (2012). Sector and Occupational Differences in Public Service Motivation: A Qualitative Study. *International Journal of Public Administration, 35*(1), 58–69. https://doi.org/10.1080/01900692.2011.635452

Kjeldsen, A. M., & Hansen, J. R. (2018). Sector Differences in the Public Service Motivation–Job Satisfaction Relationship: Exploring the Role of Organizational Characteristics. *Review of Public Personnel Administration, 38*(1), 24–48. https://doi.org/10.1177/0734371X16631605

Laschinger, H. K. S. (2014). Impact of workplace mistreatment on patient safety risk and nurse-assessed patient outcomes. *JONA: The Journal of Nursing Administration, 44*(5), 284-290. https://doi.org/10.1097/NNA.0000000000000068

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping.* Springer.

Leisink, P., & Steijn, B. (2009). Public service motivation and job performance of public sector employees in the Netherlands. *International Review of Administrative Sciences, 75*(1), 35-52. https://doi.org/10.1177/0020852308099505

Liu, C., Yang, J., Liu, J., & Zhu, L. (2018). The effect of abusive supervision on employee deviant behaviors: an identity-based perspective. *The International Journal of Human Resource Management.* https://doi.org/10.1080/09585192.2018.1511613

Loh, J., Restubog, S. L. D., & Zagenczyk, T. J. (2010). Consequences of workplace bullying on employee identification and satisfaction among Australians and Singaporeans. *Journal of Cross-Cultural Psychology, 41*(2), 236-252. https://doi.org/10.1177/0022022109354641

Low, Y. M., Sambasivan, M., & Ho, J. A. (2021). Impact of abusive supervision on counterproductive work behaviors of nurses. *Asia Pacific Journal of Human Resources, 59*(2), 250-278. https://doi.org/10.1111/1744-7941.12234

Lynch, M. F., Jr., Plant, R. W., & Ryan, R. M. (2005). Psychological Needs and Threat to Safety: Implications for Staff and Patients in a Psychiatric Hospital for Youth. Professional Psychology: *Research and Practice, 36*(4), 415–425. https://doi.org/10.1037/0735-7028.36.4.415

Mackey, J. D., Frieder, R. E., Perrewé, P. L., Gallagher, V. C., & Brymer, R. A. (2015). Empowered employees as social deviants: The role of abusive supervision. *Journal of Business and Psychology, 30*(1), 149-162. https://doi.org/10.1007/s10869-014-9345-x

Mackey, J. D., Frieder, R. E., Brees, J. R., & Martinko, M. J. (2017). Abusive supervision: A meta-analysis and empirical review. *Journal of Management, 43*(6), 1940-1965. https://doi.org/10.1177/0149206315573997

Mafini, C., & Dlodlo, N. (2014). The relationship between extrinsic motivation, job satisfaction and life satisfaction amongst employees in a public organisation. *SA Journal of Industrial Psychology, 40*(1), 1-13. https://hdl.handle.net/10520/EJC152849

Messineo, L., Allegra, M., & Seta, L. (2019). Self-reported motivation for choosing nursing studies: a self-determination theory perspective. *BMC Medical Education, 19*(1). https://doi.org/10.1186/s12909-019-1568-0

Mitchell, M. S., & Ambrose, M. L. (2007). Abusive supervision and workplace deviance and the moderating effects of negative reciprocity beliefs. *Journal of Applied Psychology, 92*(4), 1159–1168. https://doi.org/10.1037/0021-9010.92.4.1159

Moynihan, D. P. (2010). A Workforce of Cynics? The Effects of Contemporary Reforms on Public Service Motivation. *International Public Management Journal, 13*(1), 24–34. https://doi.org/10.1080/10967490903547167

Moynihan, D. P., & Pandey, S. K. (2007). The role of organizations in fostering public service motivation. *Public Administration Review, 67*(1), 40-53. https://doi.org/10.1111/j.1540-6210.2006.00695.x

Naff, K. C., & Crum, J. (1999). Working for America: Does public service motivation make a difference?. *Review of Public Personnel Administration, 19*(4), 5-16. https://doi.org/10.1177/0734371X9901900402

Newman, A., Schwarz, G., Cooper, B., & Sendjaya, S. (2017). How servant leadership influences organizational citizenship behavior: The roles of LMX, empowerment, and proactive personality. *Journal of Business Ethics, 145*(1), 49-62. https://doi.org/10.1007/s10551-015-2827-6

Ng, K., Niven, K., & Hoel, H. (2020). 'I could help, but...': A dynamic sensemaking model of workplace bullying bystanders. *Human Relations, 73*(12), 1718-1746. https://doi.org/10.1177/0018726719884617

Ng, K., Niven, K., & Notelaers, G. (2021). Does bystander behavior make a difference? How passive and active bystanders in the group moderate the effects of bullying exposure. *Journal of Occupational Health Psychology.* Advance online publication. https://doi.org/10.1037/ocp0000296

Nielsen, M. B., & Einarsen, S. (2012). Outcomes of exposure to workplace bullying: A meta-analytic review. *Work & Stress, 26*(4), 309-332. https://doi.org/10.1080/02678373.2012.734709

Nielsen, M. B., Matthiesen, S. B., & Einarsen, S. (2010). The impact of methodological moderators on prevalence rates of workplace bullying. A meta-analysis. *Journal of Occupational and organizational Psychology, 83*(4), 955-979. https://doi.org/10.1348/096317909X481256

Notelaers, G., Van der Heijden, B., Hoel, H., & Einarsen, S. (2019). Measuring bullying at work with the short-negative acts questionnaire: identification of targets and criterion validity. *Work & Stress, 33*(1), 58-75. https://doi.org/10.1080/02678373.2018.1457736

Palan, S., & Schitter, C. (2018). Prolific. ac—A subject pool for online experiments. *Journal of Behavioral and Experimental Finance, 17,* 22-27. https://doi.org/10.1016/j.jbef.2017.12.004

Peltokorpi, V., & Ramaswami, A. (2021). Abusive supervision and subordinates' physical and mental health: the effects of job satisfaction and power distance orientation. *The International Journal of Human Resource Management, 32*(4), 898-919. https://doi.org/10.1080/09585192.2018.1511617

Perry, J. L. (1996). Measuring public service motivation: An assessment of construct reliability and validity. *Journal of Public Administration Research and Theory, 6*(1), 5-22. https://doi.org/10.1093/oxfordjournals.jpart.a024303

Perry, J. L., & Hondeghem, A. (2008). Building Theory and Empirical Evidence about Public Service Motivation. *International Public Management Journal, 11*(1), 3–12. https://doi.org/10.1080/10967490801887673

Pickering, C. (2020, April 2). Skill shortages may undermine our healthcare system. *Hospital and Healthcare*. https://www.hospitalhealth.com.au/content/nursing/article/skill-shortages-may-undermine-our-healthcare-system-1573304554#axzz6mZjcM646

Pierce, J. L., Gardner, D. G., & Crowley, C. (2016). Organization-based self-esteem and well-being: Empirical examination of a spillover effect. European Journal of Work and Organizational Psychology, 25(2), 181-199. https://doi.org/10.1080/1359432X.2015.1028377

Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: a critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88*(5), 879. https://doi.org/10.1037/0021-9010.88.5.879

Quine, L. (2001). Workplace bullying in nurses. *Journal of Health Psychology, 6*(1), 73-84. https://doi.org/10.1177%2F135910530100600106

Rizvi, Y. S., & Sikand, R. (2020). Learned Helplessness at the Workplace and Its Impact on Work Involvement: An Empirical Analysis. *Global Business Review*. Advance online publication. https://doi.org/10.1177/0972150920976693

Robinson, O. C. (2009). On the social malleability of traits: Variability and consistency in Big 5 trait expression across three interpersonal contexts. *Journal of Individual Differences, 30*(4), 201-208. https://doi.org/10.1027/1614-0001.30.4.201

Rode, J. C., & Near, J. P. (2005). Spillover between work attitudes and overall life attitudes: Myth or reality?. *Social Indicators Research, 70*(1), 79-109. https://doi.org/10.1007/s11205-005-7525-9

Rodríguez-Muñoz, A., Antino, M., Ruiz-Zorrilla, P., Sanz-Vergel, A., & Bakker, A. B. (2020). Short-term trajectories of workplace bullying and its impact on strain: A latent class growth modeling approach. *Journal of Occupational Health Psychology, 25*(5), 345-356. https://doi.org/10.1037/ocp0000232

Rodwell, J., Brunetto, Y., Demir, D., Shacklock, K., & Farr‑Wharton, R. (2014). Abusive supervision and links to nurse intentions to quit. *Journal of Nursing Scholarship, 46*(5), 357-365. https://doi.org/10.1111/jnu.12089

Rowe, M., & Sherlock, H. (2005). Stress and verbal abuse in nursing: do burned out nurses eat their young?. *Journal of Nursing Management, 13*(3), 242-248. https://doi.org/10.1111/j.1365-2834.2004.00533.x

Satherley, N., Milojev, P., Greaves, L. M., Huang, Y., Osborne, D., Bulbulia, J., & Sibley, C. G. (2015). Demographic and psychological predictors of panel attrition: Evidence from the New Zealand attitudes and values study. *Plos One, 10*(3), e0121950. https://doi.org/10.1371/journal.pone.0121950

Schwarz, G., Eva, N., & Newman, A. (2020). Can public leadership increase public service motivation and job performance? *Public Administration Review, 80*(4), 543–554. https://doi.org/10.1111/puar.13182

Seligman, M. E. (1972). Learned helplessness. *Annual Review of Medicine, 23*(1), 407-412. https://doi.org/10.1146/annurev.me.23.020172.002203

Sharpe Wessling, K., Huber, J., & Netzer, O. (2017). MTurk character misrepresentation: Assessment and solutions. *Journal of Consumer Research, 44*(1), 211-230. https://doi.org/10.1093/jcr/ucx053

Sheehan, M., McCabe, T. J., & Garavan, T. N. (2020). Workplace bullying and employee outcomes: a moderated mediated model. *The International Journal of Human Resource Management, 31*(11), 1379-1416. https://doi.org/10.1080/09585192.2017.1406390

Shim, D. C., Park, H. H., & Eom, T. H. (2017). Street-level bureaucrats' turnover intention: does public service motivation matter?. *International Review of Administrative Sciences, 83*(3), 563-582. https://doi.org/10.1177/0020852315582137

Slemp, G. R., Lee, M. A., & Mossman, L. H. (2021). Interventions to support autonomy, competence, and relatedness needs in organizations: A systematic review with recommendations for research and practice. *Journal of Occupational and Organizational Psychology, 94*(2), 427-457. https://doi.org/10.1111/joop.12338

Smallfield, J., & Kluemper, D. H. (2021). An Explanation of Personality Change in Organizational Science: Personality as an Outcome of Workplace Stress. *Journal of Management.* Advance online publication. https://doi.org/10.1177/0149206321998429

Steijn, B. (2008). Person-environment fit and public service motivation. *International Public Management Journal, 11*(1), 13-27. https://doi.org/10.1080/10967490801887863

Tepper, B. J. (2000). Consequences of abusive supervision. *Academy of Management Journal, 43*(2), 178-190. https://doi.org/10.5465/amj.2007.20159918

Tepper, B. J., Duffy, M. K., Hoobler, J., & Ensley, M. D. (2004). Moderators of the Relationships Between Coworkers' Organizational Citizenship Behavior and Fellow Employees' Attitudes. *Journal of Applied Psychology, 89*(3), 455–465. https://doi.org/10.1037/0021-9010.89.3.455

Trépanier, S. G., Fernet, C., & Austin, S. (2013). Workplace bullying and psychological health at work: The mediating role of satisfaction of needs for autonomy, competence and relatedness. *Work & Stress, 27*(2), 123-140. https://doi.org/10.1080/02678373.2013.782158

Trépanier, S. G., Fernet, C., & Austin, S. (2016). Longitudinal relationships between workplace bullying, basic psychological needs, and employee functioning: A simultaneous investigation of psychological need satisfaction and frustration. *European Journal of Work and Organizational Psychology, 25*(5), 690-706. https://doi.org/10.1080/1359432X.2015.1132200

Van den Broeck, A., Ferris, D. L., Chang, C. H., & Rosen, C. C. (2016). A review of self-determination theory's basic psychological needs at work. *Journal of Management, 42*(5), 1195-1229. https://doi.org/10.1177/0149206316632058

Vandenabeele, W. (2007). Toward a public administration theory of public service motivation: An institutional approach. *Public Management Review, 9*(4), 545-556. https://doi.org/10.1080/14719030701726697

Vandenabeele, W. (2011). Who wants to deliver public service? Do institutional antecedents of public service motivation provide an answer?. *Review of Public Personnel Administration, 31*(1), 87-107. https://doi.org/10.1177/0734371X10394403

Vandenabeele, W. (2014). Explaining public service motivation: The role of leadership and basic needs satisfaction. *Review of Public Personnel Administration, 34*(2), 153-173. https://doi.org/10.1177/0734371X14521458

Vandenabeele, W., Brewer, G. A., & Ritz, A. (2014). Past, present, and future of public service motivation research. *Public Administration, 92*(4), 779-789. https://doi.org/10.1111/padm.12136

Vansteenkiste, M., Neyrinck, B., Niemiec, C. P., Soenens, B., De Witte, H., & Van den Broeck, A. (2007). On the relations among work value orientations, psychological need satisfaction and job outcomes: A self-determination theory approach. *Journal of Occupational and Organizational Psychology, 80*(2), 251-277. https://doi.org/10.1348/096317906X111024

Vogel, D., & Kroll, A. (2016). The stability and change of PSM-related values across time: Testing theoretical expectations against panel data. *International Public Management Journal, 19*(1), 53-77. https://doi.org/10.1080/10967494.2015.1047544

Wehrle, K., & Fasbender, U. Self-Concept. In V. Zeigler-Hill & T. K. Schackelford (Eds.) *Encyclopedia of Personality and Individual Differences*. https://doi.org/10.1007/978-3-319-28099-8_2001-1

Weijters, B., & Baumgartner, H. (2012). Misresponse to reversed and negated items in surveys: A review. *Journal of Marketing Research, 49*(5), 737-747. https://doi.org/10.1509/jmr.11.0368

Wright, B. E., Christensen, R. K., & Pandey, S. K. (2013). Measuring public service motivation: Exploring the equivalence of existing global measures. *International Public Management Journal, 16*(2), 197-223. https://doi.org/10.1080/10967494.2013.817242

Young, A. F., Powers, J. R., & Bell, S. L. (2006). Attrition in longitudinal studies: who do you lose?. *Australian And New Zealand Journal of Public Health, 30*(4), 353-361. https://doi.org/10.1111/j.1467-842X.2006.tb00849.x

Zhou, Z. E., Che, X. X., & Rodriguez, W. A. (2020). Nurses experiences of workplace mistreatment. In R. J. Burke & S. Pignata (Eds.), *Handbook of Research on Stress and Well-Being in the Public Sector* (pp. 85-105). Edward Elgar Publishing. https://doi.org/10.4337/9781788970358.00015

Figure 1

Full study model
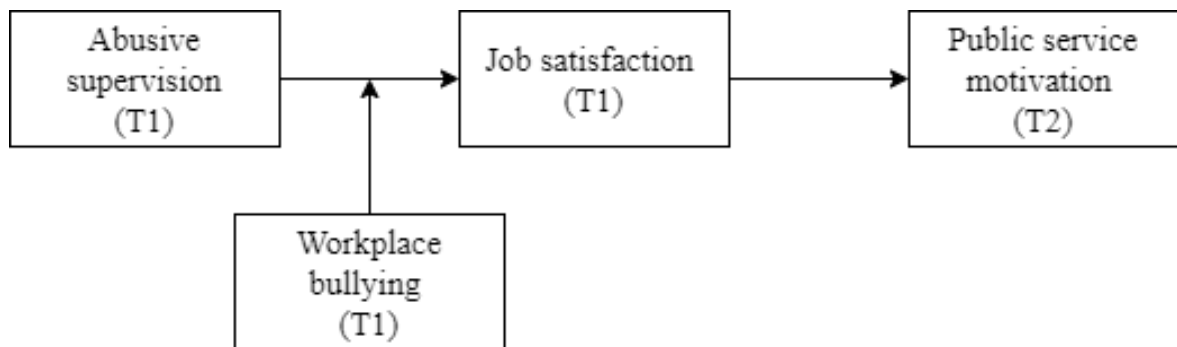
Figure 2

Plotted interactions of moderation analysis
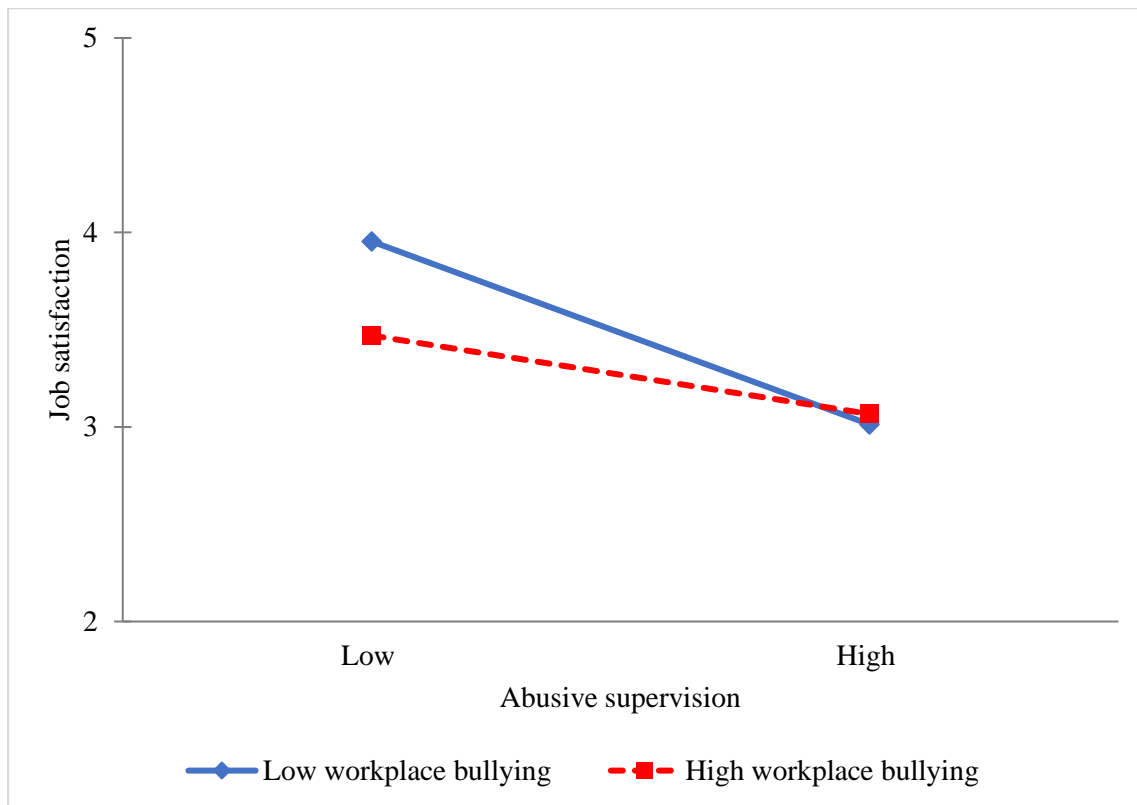
Table 1

Descriptive statistics and correlations (n = 219)

	M	SD	1	2	3	4	5	6	7
1. Gender	1.72	.449							
2. Age	3.99	1.29	.019						
3. Tenure	3.02	1.23	.009	.535**					
4. Supervisory position	1.63	.485	.109	-.079	.012				
5. Abusive leadership (T1)	3.00	1.87	-.169*	-.234**	-.255**	-.089			
6. Workplace bullying (T1)	2.32	1.09	-.204**	-.279**	-.213**	-.072	.745**		
7. Job satisfaction (T1)	3.48	.742	.003	.284**	.160*	.051	-.502**	-.433**	
8. Public service motivation (T2)	3.75	.696	.002	.108	.017	.013	-.018	.008	.298**

NB: Gender: 1 = Male, 2 = Female; Tenure: 1 = Less than a year, 2 = 1 to < 3 years, 3 = 3 to < 5 years, 4 = 6 to < 10 years, 5 = Over 10 years; Age: 1 = < 18, 2 = 18 to 25 years; 3 = 26 to 30 years; 4 = 31 to 40 years; 5 = 41 to 50 years; 6 = 51 to 60 years; 7 = 60 <; Supervisory position: 1 = Yes; 2 = No

** $p < .01$, * $p < .05$

Table 2

Results of CFA and χ2 tests

	$\chi2/df$	CFI	TLI	RMSEA	SRMR	χ2 comparison
Original four-factor model (abusive supervision; bullying; job satisfaction; PSM)	2.04	.96	.95	.07	.14	
Three-factor model (abusive supervision; bullying; job satisfaction + PSM)	2.53	.94	.93	.08	.15	Δλ2(3) = 122.022 $p < 0.001$
Two-factor model (abusive supervision; bullying + job satisfaction + PSM)	4.25	.87	.84	.12	.12	Δλ2(5) = 532.516 $p < 0.001$
One-factor model (all variables combined)	6.91	.76	.72	.17	.12	Δλ2(6)=1167.085 $p < 0.001$

NB: df = Degrees of freedom; CFI = Comparative fit index; TLI = Tucker-Lewis Index; RMSEA = Root-mean-square of approximation; PSM = Public service motivation

Table 3

Results of the moderated mediation model (n = 219)

Variable	Job satisfaction (M)		PSM (Y)	
	Coefficient	*SE*	*Coefficient*	*SE*
Tenure	-.039	.041	-.016	.044
Age	.103*	.040	.032	.043
Supervisory position	.034	.088	.018	.094
Gender	-.133	.096	.046	.103
Abusive supervision (X)	-.332***	.348	.069*	.029
Workplace bullying (W)	-.296*	.064		
Abusive supervision * Workplace bullying	.066*	.021		
Job satisfaction (M)			.355***	.072
Model M Summary	$R^2 = .33$***			
Model Y Summary			$R^2 = .116$***	

Conditional indirect effects of abusive supervision (X) on PSM (Y) via job satisfaction (M) at high and low levels of workplace bullying (W)

Workplace bullying	Effect	Boot SE	Boot 95% CI
Low levels	-.089	.025	-.143, -.045
High levels	-.038	.016	-.070, -.009

Note: PSM = Public service motivation.

X = Independent variable; M = Mediator; W = Moderator; Y = Dependent variable.

* $p < .05$; ** $p < .01$; *** $p < .001$