

The Impact of Workplace Stressors on Exhaustion and Work Engagement in Policing

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Abstract

This paper uses the challenge-hindrance stressor framework to examine the impact of challenge and hindrance stressors on police officer and staff well-being. Results of two studies conducted in English police forces demonstrate that challenge stressors relate positively to the effort and enthusiasm individuals invest into their work. Findings also indicate that while challenge stressors are positively associated with exhaustion cross-sectionally (Study 1, $N = 469$), they do not impact exhaustion over time (Study 2, $N = 823$). Conversely, hindrance stressors cause exhaustion in the long-term and are negatively associated with work engagement cross-sectionally. Implications for theory and practice are discussed.

Keywords: Challenge-hindrance, Stressors, Exhaustion, Work engagement, Policing.

Introduction

Policing is a stressful, demanding, and frequently dangerous profession (Frank *et al.* 2017; Houdmont 2017; Martinussen *et al.* 2007). In the United Kingdom, the PEEL report by Her Majesty's Inspectorate of Constabulary and Fire and Rescue Services (HMICFRS 2017, 7) notes that despite generally coping well with the varied and increasing demands they face under an unprecedented period of reform, police forces in England and Wales remain under '*significant stress*'. Further, the HMICFRS 2017 Leadership report stresses the importance of well-being of the workforce, observing that 'forces need to address the levels of stress and heavy workloads of officers and staff protecting vulnerable people' (HMICFRS 2018, 33). The Demand, Capacity, and Welfare Survey undertaken by the Police Federation of England and Wales (PFEW) report (Elliott-Davies 2018) notes that almost 80% of police officer respondents acknowledged experiencing stress, low mood, anxiety, or other mental health or well-being difficulties within the previous 12 months. 94% of this sub-sample indicated that their psychological well-being issues were caused or made worse by work (Elliott-Davies 2018). As Hesketh and Cooper (2018, 4) note: '*stress cannot be separated from wellbeing, and neither should it*'.

Organisational stressors can be defined as characteristics of an organisation and conditions in the workplace that can cause employees to experience stress (Violanti and Aron 1995). Prior research in policing has consistently supported the hypothesis that organisational stressors have negative impacts on police officers and staff (Biggam *et al.* 1997; Gershon *et al.* 2009; Houdmont 2017; Shane 2010; Zhou *et al.* 2002). However, seminal work in the stress literature has suggested that there can be both positive and negative forms of stress (Lazarus and Folkman 1984; Selye 1974). Furthermore, the well-established challenge-hindrance stressor framework (Cavanaugh *et al.* 2000) proposes that good stressors, or *challenge stressors*, which refer to perceptions of work-

related demands such as workload, time pressure, responsibility and job complexity, will increase stress, but also hold the potential for increasing work motivation and performance. On the other hand, bad stressors, or *hindrance stressors*, which refer to perceptions of work-related demands such as red tape, role ambiguity, administrative hassles, and office politics, act as barriers to achievement and have harmful effects on employees' wellbeing. Prior research in non-police contexts has provided support for the challenge-hindrance stressor framework in predicting differential impacts of organisational stressors on job attitudes (Cavanaugh *et al.* 2000; Podsakoff *et al.* 2007), performance (LePine *et al.* 2005; Zhang *et al.* 2014), and well-being (Crane and Searle 2016; LePine *et al.* 2005; Van den Broeck *et al.* 2009).

In this paper, we provide a first test of the *challenge-hindrance stressor framework* (Cavanaugh *et al.* 2000) in a policing context to develop a more nuanced understanding of the impact of organisational stressors on individual well-being in policing. Specifically, we examine the impact of challenge and hindrance stressors on exhaustion and work engagement. Exhaustion is *a consequence of intensive physical, affective and cognitive strain, that is, as a long-term consequence of certain job demands* (Demerouti *et al.* 2003), and is central to the experience of burnout (Maslach and Jackson 1981). In turn, burnout is associated with several undesirable personal and organisational outcomes, such as physical and psychological problems, job dissatisfaction and absenteeism (for a recent review, see Salvagioni *et al.* [2017]). Conversely, work engagement is commonly defined as: *'a positive, fulfilling work-related state of mind that is characterised by vigour, dedication and absorption'* (Schaufeli *et al.* 2002, 74). Work engagement has been found to be associated with employee well-being and performance (e.g. Christian *et al.* 2011; Halbesleben 2010).

Drawing on *Conservation of Resources* theory (COR: Hobfoll 1989), we posit that hindrance stressors will be associated with reduced employee well-being, in that it is positively related to exhaustion and negatively related to employee engagement. While we expect that challenge stressors are also positively related to exhaustion, we investigate whether the impact is lower than that of hindrance stressors. We also theorise and test that challenge stressors can be considered as good stressors in contrast to hindrance stressors in that they act to increase motivation and will be positively related to employee engagement. Our hypothesised model is displayed in Figure 1.

Insert Figure 1 about here

While Study 1 is cross-sectional in Study 2 data were collected in two waves; with the dependent variables of engagement and exhaustion measured 24 months after the independent variables of challenge and hindrance stressors. This is important, as most studies of the challenge-hindrance stressor framework utilise cross-sectional designs (Crawford *et al.* 2010; French *et al.* 2019; Yao *et al.* 2015). By temporally separating challenge and hindrance stressors from important individual and organisational outcomes, we meet the calls of Yao and colleagues (2015) and LePine *et al.* (2005) for investigation of the causal influence of the challenge-hindrance stressor framework.

Theory Development and Hypothesis Formation

The Challenge-Hindrance Stressor Framework and Conservation of Resources (COR)

Theory

Conservation of Resources (COR) theory (Hobfoll 1989) posits that individuals strive to develop, maintain, and protect resources. Resources are defined ‘*as those objects, personal characteristics, conditions, or energies that are valued by the individual or that serve as a means for attainment of those objects, personal characteristics, conditions or energies*’ (Hobfoll 1989, 516). According to COR theory, stress occurs under three conditions. *First*, when individuals’ key resources are threatened with loss. *Second*, when resources are lost. *Third*, when individuals fail to gain resources after significant resource investment. Stress experienced under these conditions leads to individuals becoming depleted and experiencing burnout over time (Hobfoll and Freedy 1993) and individuals are only likely to invest their resources (such as effort, time, and energy) into meeting demands that offer the potential for resource gains (Dawson *et al.* 2016).

The Impact of Challenge and Hindrance Stressors on Exhaustion

The stressors-strain approach to work-related stress provides an explanation as to why stressors lead to exhaustion. Exhaustion occurs as a consequence of prolonged intensive physical, affective and cognitive strain experienced as a result of long-term exposure to high job demands (Demerouti *et al.* 2010). Moreover, the information processing activity undertaken as individuals try to cope with and make sense of the demands they face in their work this can have further heavy emotional and physiological costs (Hockey 1997). Increased levels of arousal occur whether stressors are appraised as being positive or negative (Lazarus and Folkman 1984). As such, both challenge and hindrance stressors are likely to result in exhaustion over time. This proposition is supported by previous research, which has found positive relations between exhaustion and both

forms of stressor investigated in the present study. Two meta-analyses reported such effects (Crawford *et al.* 2010; LePine *et al.* 2004), while Yao and colleagues (2015) found the expected relationships across two studies. However, both meta-analyses note that the studies they investigate used cross-sectional designs, as did Yao *et al.* (2015). As such, by undertaking a longitudinal design in Study 2 to examine causality, we make an important contribution to literature.

Hypothesis 1: Challenge stressors are positively related to exhaustion.

Hypothesis 2: Hindrance stressors are positively related to exhaustion.

The Impact of Challenge and Hindrance Stressors on Work Engagement

Work engagement refers to the extent to which employees perceive their work to be meaningful, stimulating and engrossing (Bakker *et al.* 2011; Rich *et al.* 2010). Drawing on COR theory, we expect challenge stressors to motivate individuals to gain more resources, as meeting challenging but rewarding demands can instil a sense of achievement and lead to other resource gains relating to well-being (Widmer *et al.* 2012), goal attainment, and personal development (LePine *et al.* 2004). Therefore, challenge stressors should be engaging. Conversely, because they act as barriers to achievement and personal development, hindrance stressors are likely to be considered as resource threats. Faced with such workplace barriers, employees are likely to conserve their existing resources by reserving their energies and engaging less with their work.

Our theorising is supported by previous research that demonstrates the differential influence of challenge and hindrance stressors on work engagement; that challenge stressors impact positively and hindrance stressors impact negatively on work engagement (Crawford *et al.* 2010; Tadić *et al.* 2015). Based on these findings, we posit:

Hypothesis 3: Challenge stressors are positively related to work engagement.

Hypothesis 4: Hindrance stressors are negatively related to work engagement.

Method

Overview of the research

We used two samples (Study 1 and 2) from different English police forces to test our hypotheses. Study 1 used a cross-sectional sample of 469 police officers and police staff. In Study 2, 823 participants completed a two-wave survey, such that both predictors and outcomes were assessed at Time 1 (baseline), and outcome measures were assessed again 24 months later (Time 2). Using cross-lagged dependent variables was helpful in reducing concerns of assumed direction of causality (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003).

Study 1

Sample and procedures

Participants completed surveys assessing the frequency they experienced challenge and hindrance stressors. Further, we also asked the participants to rate their levels of exhaustion and work engagement. The sample comprised of 469 employees from an English police force (60.8% male and 39.2% female). In terms of job roles, 62.5% were police officers, and 38.5% were police staff. Two percent of them were between 18-24 years old, 19% of them were between 25-34 years old, 33% of them were between 35-44 years old, 35% of them were between 45-54 years old and 11% were 55 years and above. Three per cent had worked in policing for less than 1 year, 12% had worked 1-5 years, 18% had worked 6-10 years, 39% had worked 11-20 years, and 28% of had worked in policing for more than 20 years.

Measures

Stressors. We used six items from Cavanaugh *et al.* (2000) to measure challenge stressors, and seven items from the same scale to measure hindrance stressors. For challenge stressors, sample items included: “having to complete a lot of work”, “having to work very hard” and “having to perform complex tasks” ($\alpha = .89$). For hindrance stressors, sample items included: “bureaucratic constraints to completing work (red tape)”, “administrative hassles” and “unclear job tasks” ($\alpha = .85$). Participants were asked to rate the frequency of experiencing these factors in their daily work, from 1 = *never* to 5 = *extremely often*.

Exhaustion. Exhaustion was measured using the eight-item subscale of the Oldenburg Burnout Inventory developed by Demerouti *et al.* (2003). Items were rated on a scale from 1 = *strongly disagree* to 7 = *strongly agree*. Sample items included: ‘during work, I often feel emotionally drained’ and ‘after my work I usually feel worn out and weary’ ($\alpha = .86$).

Work Engagement. We measured engagement with nine items from Rich and colleagues’ (2010) job engagement scale. Items were rated on a scale from 1 = *strongly disagree* to 7 = *strongly agree*. Sample items include: ‘At work I focus a great deal of attention on my job’ and ‘I exert my full effort to my job’ ($\alpha = .92$).

Control Variables. Prior research shows that demographic variables influence individuals’ work attitudes (e.g., Brouwer *et al.* 2010). We considered gender (0 = male, 1 = female), age (0 = 16-24 years, 1 = 25-34 years, 2 = 35-44 years, 3 = 45-54 years, and 4 = 55 years above), job roles (0 = police officers, 1 = police staff), and tenure in policing (0 = less than 1 year, 1 = 1-5 years, 2 = 6-10 years, 3 = 11-20 years, and 4 = 20 years and above) as control variables in our analyses.

Results

Preliminary results

Table 1 shows the descriptive statistics and correlations among variables in Study 1. We found that challenge stressors had a positive correlation with exhaustion ($r = .40, p < .01$), but were not significantly correlated with work engagement ($r = .09, p = n.s.$). As expected, hindrance stressors were positively correlated with exhaustion ($r = .58, p < .01$), and were negatively correlated with work engagement ($r = -.28, p < .01$).

Insert Table 1 about here

Hypothesis testing

We conducted hierarchical regression analyses in SPSS to test our hypotheses. As shown in Table 2, we first entered demographics as control variables in Model 1a, and then entered challenge stressors and hindrance stressors in Model 2a. Model 2a demonstrates that both challenge stressors and hindrance stressors were positively related to exhaustion ($B = .20, p < .01$ and $B = .67, p < .001$, respectively). These results supported Hypothesis 1 and Hypothesis 2. Examination of the standardised coefficients revealed that the hindrance stressors had a stronger positive relationship between exhaustion than challenge stressors ($\beta = .47, p < .001$ and $\beta = .13, p < .01$, respectively). In addition, Model 2b showed that challenge stressors were positively related to work engagement ($B = .52, p < .001$), while hindrance stressors were negatively related to work engagement ($B = -.51, p < .001$), supporting Hypothesis 3 and Hypothesis 4.

Insert Table 2 about here

Study 2

Study 1 provided initial support for the hypotheses by using cross-sectional data. Study 2 extended Study 1 by using cross-lagged data to address common-method variance concerns. Data were collected from two English police forces different to that in Study 1. First, at Time 1, respondents were asked the rate their experience of challenge stressors and hindrance stressors, as well as their exhaustion and work engagement. Twenty-four months later, at Time 2, respondents were asked to rate their levels of exhaustion and work engagement. To match responses from the two time points, each questionnaire was coded with an assigned identification number. This approach allowed us to conduct autoregression between Time 1 outcomes and Time 2 outcomes, and examine how they change over time.

The matched sample consisted of 823 employees. Of these participants, 458 (55.7%) were male and 365 (44.3%) were female; 411 were police officers (49.9%) and 412 (50.1%) were police staff.

Measures

We used the same scales to assess the challenge and hindrance stressors and exhaustion as those used in Study 1 ($\alpha = .87$ for challenge stressors; $\alpha = .84$ for hindrance stressors; $\alpha = .87$ for Time 1 exhaustion; $\alpha = .86$ for Time 2 exhaustion). To measure work engagement, we used six items selected from the original measure. The items were: ‘I am enthusiastic in my job’, ‘I feel energetic at my job’, ‘At work my mind is focused on my job’, ‘At work I focus a great deal

of attention on my job’, ‘I exert my full effort to my job’, and ‘I devote a lot of energy to my job’ ($\alpha = .87$ for Time 1 and $\alpha = .89$ for Time 2).

Control Variables. We controlled gender (0 = male, 1 = female) and job role (0 = police officers, 1 = police staff) in our analyses.

Results

Preliminary results

Table 3 shows the descriptive statistics and correlations among variables in Study 2. Challenge stressors had a positive correlation with exhaustion measured at both Time 1 ($r = .35, p < .01$) and Time 2 ($r = .28, p < .01$), and with work engagement at both Time 1 ($r = .10, p < .01$) and Time 2 ($r = .13, p < .01$). Hindrance stressors were positively correlated with exhaustion at Time 1 ($r = .50, p < .01$) and Time 2 ($r = .39, p < .01$), and were negatively correlated with work engagement at Time 1 ($r = -.26, p < .01$) and Time 2 ($r = -.13, p < .01$).

Insert Table 3 about here

Hypothesis testing

As in Study 1, we conducted hierarchical regression analyses to test our hypotheses. We included auto-regressions among exhaustion and work engagement measured at each of the two time points.

Table 4 shows that after controlling for baseline exhaustion, challenge stressors were not related to exhaustion at Time 2 (Model 2a: $B = .05, n.s.$) while hindrance stressors significantly increased exhaustion over time ($B = .10, p < .05$). Thus, Hypothesis 2 was supported, but

Hypothesis 1 was not. In addition, after controlling for baseline work engagement, challenge stressors were positively related to work engagement at Time 2 ($B = .10, p < .05$) while hindrance stressors did not have a significant impact on work engagement over time ($B = -.01, n.s.$). These results supported Hypothesis 3, but not Hypothesis 4.

Insert Table 4 about here

Discussion

Police forces in England and Wales face increasingly complex challenges under budget restraints (HMIC 2017a, HMICFRS 2017b). These challenges have resulted in reduced staff levels, and consequently officers and staff have reported high levels of stress (Elliot-Davies 2018). The primary aim of this study was to apply the challenge-hindrance stressor framework (Cavanaugh *et al.* 2000) to the new context of policing based on its successful application in a variety of other contexts (see for example, Cavanaugh *et al.*, 2000; Crane and Searle, 2016; Wallace *et al.* 2009). The reasoning for this was that grouping organisational stressors into a single dimension may inadvertently mask the true relationships between stress and well-being outcomes. For example, workload has been considered as an organisational stressor in prior policing research (i.e. Violanti and Aron 1995) and organisational factors tend to be perceived as more stressful than operational stressors in the police context (Houdmont 2017). However, the challenge-hindrance stressor framework proposes that simply having a high workload, in itself, may not be the main impact on an individuals' well-being, and that organisational stressors do not necessarily lead to negative outcomes. Our findings broadly support the conclusions of previous research conducted in non-

policing contexts into the effects of challenge and hindrance stressors on well-being outcomes (i.e. Crawford *et al.* 2010; LePine *et al.* 2005; Van den Broeck *et al.* 2010; Yao *et al.* 2015). They do so both cross-sectionally and longitudinally, addressing calls in the literature to demonstrate the causal impact of the challenge-hindrance stressor framework (Crawford *et al.* 2010; LePine *et al.* 2005; Yao *et al.* 2015). Specifically, and drawing on Conservation of Resources theory (Hobfoll 1989), we found that challenge stressors positively influenced work engagement both cross-sectionally and over time, and hindrance stressors were positively related to exhaustion cross-sectionally and over time. Further, while challenge stressors were found to have a positive association with exhaustion when measured at the same time, there was no significant relationship when exhaustion was measured 24 months later. Previous cross-sectional work tends to find positive associations between challenge stressors and exhaustion, as we did in Study 1. However, the longitudinal findings of Study 2 provide some preliminary evidence that challenge stressors may not be a primary cause of exhaustion over a longer period of time. We discuss the practical implications of this point in the following section. Hindrance stressors had a negative relationship with work engagement when measured at the same time, but there was no significant relationship with work engagement measured 24 months later. These results indicate the negative impact of hindrance stressors and the potential benefits challenge stressors can hold over time. More broadly, they indicate that the challenge-hindrance stressor framework is applicable in policing and provide a more nuanced understanding of the complex relationship between organisational stressors and employee well-being.

Practical Implications

The findings of our study have several practical implications for police forces. First, and supported consistently by extant research, our results indicate that hindrance stressors have

negative effects on well-being. Indeed, our findings add to the developing body of literature on the negative impact of hindrance stressors (i.e. Cavanaugh *et al.* 2000; Crane and Searle 2016; LePine *et al.* 2005, 2016; Podsakoff *et al.* 2007). To our knowledge, no existing studies on the subject have found any “positive” outcomes of hindrance stressors. As such, they should be reduced or removed where possible. Although hindrances such as red tape, politics, and administrative hassles are simply part of the fabric of organisational life, they *can* be improved upon over time. Further, while making major systemic changes to an organisational framework may be too costly or otherwise not immediately viable, making small, incremental changes to practices, processes, and procedures can make a big difference. As an example from the Participatory Action Research approach undertaken through the Durham University research collaboration project (see Hesketh and Graham 2017), several forces have shared their practices relating to *100 Little Things* initiatives. Pioneered by Durham Constabulary, 100 Little Things is a project that encourages staff to submit suggestions for workplace improvements ranging from the type of pen issued to officers, to new policies, procedures, and working patterns. HMICFRS (2017a) gave Durham Constabulary an “*outstanding*” rating. An aspect of this pertains to how the force understands demand, and HMICFRS (2017a) specifically commended Durham for the inclusive way it turns to its workforce for idea generation, citing the *100 Little Things* project as a success and an example of an outstanding approach to seeking new ideas. The initiative is a mechanism through which employees are given voice and can provide ideas to make their workplace better and their jobs easier. In other words, at its heart, a major purpose of *100 Little Things* is to remove hindrances faced by police officers and staff.

While recommendations relating to reducing hindrance stressors are clear, the impact of increasing challenge stressors should be carefully considered. In line with previous research, our

findings indicate that challenge stressors can lead to greater work engagement (Crawford *et al.* 2010; Tadić *et al.* 2015). Further, prior research has demonstrated other positive effects of challenge stressors, including positive associations with performance (LePine *et al.* 2005, 2016; Zhang *et al.* 2014) and positive job-related attitudes (Cavanaugh *et al.* 2000; Podsakoff *et al.* 2007), suggesting that challenge stressors can be beneficial. However, prior work has found challenge stressors to be positively related to exhaustion (LePine *et al.*, 2004, 2005; Podsakoff *et al.* 2007; Zhang *et al.* 2014). While our results did not replicate these findings over a time period of two years, cross-sectional results were supportive of the expected relationship found in previous work. As such, we believe it is important for forces to consider how to reduce the strain associated with increased challenge stress. There are several ways to do this. One is to provide organisational support by valuing the contributions of staff, caring about their well-being, and fulfilling their socioemotional needs (Eisenberger *et al.* 1986). Indeed, in a US sample of public sector workers, Wallace *et al.* (2009) found that challenge stressors were positively related to in-role performance when organisational support was high, but not when it was low. This suggests that organisations need to be supportive for employees to benefit from challenge stressors. Supervisors are tangible representatives of an organisation, and as such, supportive treatment from one's supervisor should contribute to an employee's overall perceptions of organisational support (Rhoades and Eisenberger 2002) and be considered a valued resource (Hobfoll 1989). In support of this proposal, LePine *et al.* (2016) found that US marines whose leaders were perceived by their superiors to exhibit charismatic leadership behaviours appraised challenge stressors as being more challenging. In turn, the marines were more likely to respond with greater performance. Further, while charismatic leader behaviours negated the negative influence of hindrance stressors on performance. The results of these studies suggest that forces should consider training supervisors

on the importance of being supportive of employees. Prior research suggests that police officers and staff in England and Wales perceive a general shift from the traditional command and control, authoritarian style of leadership to more open, inclusive leadership in policing (Porter *et al.* 2015). We encourage forces to continue on this path in order to support staff in benefiting from challenge stressors, in line with the College of Policing's (2015, 2017) recommendations on promoting and developing effective organisational leadership principles and practices. Forces can also provide tangible resources to officers and staff to support them in reducing the strain associated with challenge stressors. This proposition is based on one of the corollaries of Conservation of Resources theory (Hobfoll 1989), that when people possess strong resource pools, they are more likely to accept or seek out opportunities to risk resources in order to obtain further resource gains. A practical example would be providing training programmes on subjects such as resilience. Robertson *et al.* (2015, 27, emphasis added) note that organisational and personal resilience are imperative 'not only to enhance productivity, but also to foster *well-being and engagement*'. Hesketh *et al.* (2019) studied the effects of resilience training on staff and officers in a provincial police force in the north of England. They found that those who received resilience training reported that their workload, work-life balance, job control, and job conditions had improved compared to those who had not received training, indicating the training's efficacy in improving several aspects of well-being in policing. Providing resilience training while increasing challenge stressors may have a multiplicative effect, as Crane and Searle (2016) found that challenge stressors measured at Time 1 were positively associated with resilience measured at Time 2 (three months later). Further, resilience at Time 1 was negatively related to strain at Time 2, indicating the positive influence resilience can have in reducing strain. The implications of these findings are

that implementing resilience training to support employees in coping with challenge stressors can have positive, reinforcing effects.

Limitations and Directions for Future Research

A strength of the current study is that we were able to broadly replicate Study 1's cross-sectional findings across time in Study 2. In Study 2, we measured the well-being indicators of exhaustion and work engagement two years after collecting data pertaining to challenge and hindrance stressors, reducing the potential impact of common method variance (CMV). CMV refers to the variance attributable to the measurement method undertaken rather than the constructs the measures represent (Podsakoff *et al.* 2003). However, there may be common source effects, which can occur when the respondent providing the measure of the independent variable (i.e. the stressors) and the dependent variable (i.e. the well-being indicators) is the same person (Podsakoff *et al.* 2003). By temporally separating the measurement of the independent and dependent variables, we have taken steps to guard against this, but future studies could build on our findings by obtaining data from multiple sources. For example, asking supervisors or co-workers to rate the respondent's work engagement, and asking a spouse, partner, or close family member to rate their personal well-being (i.e. exhaustion or life satisfaction).

In addition, generalisability of our results cannot be assumed as both of our studies sampled employees of English police forces. While our findings broadly support those reported using samples from a range of professions, the majority of those studies were cross-sectional. As such, we would encourage future research to attempt to replicate our longitudinal results in different contexts. Furthermore, Roach *et al.* (2017) observe that individuals in different occupational roles within policing may be exposed to different levels and forms of stress due to the specific nature of their work. This observation is supported by the findings in a national study of the wellbeing of the policing workforce

within England and Wales (Graham *et al.* 2020) in that average wellbeing was found to vary for different occupational job role for police officers and police staff. Due to the sample and data collection in this study we were unable to investigate how challenge and hinderance stressors are experienced in different occupational roles and would encourage further research to investigate these differences too provide insight and understanding which would be of great value in terms of prioritising corrective action. We also recognise the limitations of the findings in terms of the survey research methodology adopted and suggest that these findings could be built-upon using interviews or focus groups with police officers and staff in specific occupational roles to understand their lived experiences of dealing with different stressors in their work.

Finally, while this study provides further evidence of the efficacy of the hindrance-stressor framework and is the first to do so in a policing context, more research, particularly into challenge stressors, is warranted. Specifically, future research may consider how the impact of training programmes, such as those discussed in the previous section, may influence the effects of challenge and hindrance stressors on well-being outcomes. For instance, employees who undergo resilience training may not feel as exhausted by either type of stressor than those who do not. Further, those who are better able to recover and “recharge” while not at work may experience greater benefits of experiencing challenge stressors due to reducing associated strain. Research into how recovery in non-work time (i.e. Sonnentag *et al.* 2011) influences the effects of challenge stressors on exhaustion would be useful.

Conclusion

The findings of this study provide evidence that the challenge-hindrance stressor framework is a useful way to understand the nuanced relationship between stressors and well-being outcomes in policing. They indicate that hindrance stressors are associated with increased

exhaustion in police officers and staff. As such, forces should aim to eliminate or reduce hindrance stressors where possible. Conversely, challenge stressors are associated with increased engagement. However, challenge stressors were also associated with exhaustion in our cross-sectional study, even if there was no significant relationship between the two variables when exhaustion was measured 24 months later. Notwithstanding, when increasing challenge stressors, forces should be mindful to mitigate any associated strain to guard against burnout and provide the best opportunity for staff to benefit from them.

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Table 1. Variable, Means, Standard Deviations and Correlations in Study 1

Variables	Mean	s.d.	1	2	3	4	5	6	7
1. Gender	.39	.49							
2. Age	2.34	.99	-.16**						
3. Job Roles	.38	.48	.23**	.13**					
4. Tenure in Policing	2.77	1.09	-.19**	.55**	-.27**				
5. Challenge Stressors	4.02	.70	-.11*	-.11*	-.33**	.12**			
6. Hindrance Stressors	3.04	.78	-.07	-.12*	-.35**	.12**	.48**		
7. Exhaustion	4.22	1.12	.01	-.18**	-.36**	.00	.40**	.58**	
8. Engagement	5.62	1.07	.11*	.11*	.20**	-.02	.09	-.28**	-.43**

Notes. N= 469. *s.d.* = standard deviation. Gender was coded as 0 = male, 1 = female; Age was coded as 0 = 16-24 years, 1 = 25-34 years, 2 = 35-44 years, 3 = 45-54 years, and 4 = 55 years above. Job roles was coded as 0 = police officers, 1 = police staff. Tenure in policing was coded as 0 = less than 1 year, 1 = 1-5 years, 2 = 6-10 years, 3 = 11-20 years, and 4 = 20 years and above.

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

Table 2. Regression Analyse Results for Challenge Stressors and Hindrance Stressors in Study1

	Exhaustion		Work Engagement	
<i>Control variables</i>	<i>Model 1a</i>	<i>Model 2a</i>	<i>Model 1b</i>	<i>Model 2b</i>
Gender	.16	.18*	.20*	.24*
Age	-.13*	-.03	.13*	.12*
Job Roles	-.85***	-.45***	.36**	.31**
Tenure in Policing	-.02	-.10	-.02	-.01
<i>Independent variables</i>				
Challenge Stressors		.20**		.52***
Hindrance Stressors		.67***		-.51***
<i>R</i> ²	.15	.40	.06	.19

Notes. N = 469. Unstandardized regression coefficients are shown. Gender was coded as 0 = male, 1 = female; Age was coded as 0 = 16-24 years, 1 = 25-34 years, 2 = 35-44 years, 3 = 45-54 years, and 4 = 55 years above. Job roles was coded as 0 = police officers, 1 = police staff. Tenure in policing was coded as 0 = less than 1 year, 1 = 1-5 years, 2 = 6-10 years, 3 = 11-20 years, and 4 = 20 years and above.

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

Table 3. Variable, Means, Standard Deviations and Correlations in Study 2

Variables	<i>Mean</i>	<i>s.d.</i>	1	2	3	4	5	6	7
1. Gender	1.44	.50							
2. Job Roles	.50	.50	.26**						
3. Challenge Stressors T1	3.95	.66	-.01	-.19**					
4. Hindrance Stressors T1	2.96	.74	-.10**	-.22**	.43**				
5. Exhaustion T1	4.10	1.16	-.04	-.32**	.35**	.50**			
6. Engagement T1	5.67	.95	.08*	.17**	.10**	-.26**	-.44**		
7. Exhaustion T2	4.39	1.09	-.03	-.27**	.28**	.39**	.66**	-.30**	
8. Engagement T2	5.69	.94	.05	.07*	.13**	-.13**	-.30**	.60**	-.40**

Notes. N= 823. *s.d.* = standard deviation. t1 = Time 1. t2 = Time 2, 24 months after Time 1. Gender was coded as 0 = male, 1 = female; Job roles was coded as 0 = police officer, 1 = police staff.

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

Table 4. Regression Analyse Results for Challenge Stressors and Hindrance Stressors in Study 2

	Exhaustion T2		Engagement T2	
<i>Control variables</i>	<i>Model 1a</i>	<i>Model 2a</i>	<i>Model 1b</i>	<i>Model 2b</i>
Gender	.05	.05	.03	.02
Job Roles	-.16*	-.14*	-.05	-.03
Exhaustion T1	.60***	.56***	--	--
Engagement T1			.59***	.58***
<i>Independent variables</i>				
Challenge Stressors T1		.05		.10*
Hindrance Stressor T1		.10*		-.01
<i>R</i> ²	.44	.45	.35	.36

Notes. N = 823. Unstandardized regression coefficients are shown. T1 = Time 1. T2 = Time 2, 24 months after Time 1. Gender was coded as 0 = male, 1 = female; Job roles was coded as 0 = police officer, 1 = police staff.

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

Figure 1 Conceptual Model

