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**The relationship between psychological wellbeing, social support, and personality in an
English police force**

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Abstract

1
2 Police employees are exposed to a variety of complex, work-related stressors and are
3 susceptible to experiencing reduced psychological wellbeing. To advance understanding of
4 the personal and social factors underpinning psychological wellbeing in this population, the
5 purpose of this study was to examine the relationship between psychological wellbeing,
6 perceived support from colleagues, received support from colleagues, and personality factors
7 in police employees. A sample of 381 police employees from a county police force in
8 England completed an online questionnaire assessing: psychological wellbeing; perceived
9 support; received support; and personality factors. Psychological wellbeing was significantly
10 and positively associated with perceived support from colleagues, received support from
11 colleagues, extraversion, agreeableness, conscientiousness, emotional stability, and openness
12 to experience. Further investigation of these relationships using multiple logistic regression
13 analysis found that perceived support from colleagues, received support from colleagues,
14 extraversion, and emotional stability significantly predicted psychological wellbeing. Given
15 growing concerns about psychological wellbeing in police forces, the findings could help to
16 inform the promotion of psychological wellbeing across operational and non-operational
17 police employees. The results suggest that increasing both perceptions of available support
18 and the amount of support received amongst employees in police forces is important for
19 enhancing psychological wellbeing in this population. Furthermore, police employees with
20 lower levels of extraversion and emotional stability should also be considered for additional
21 support to promote psychological wellbeing.

22 **Keywords:** perceived support; received support; emergency services; stress; mental health;
23 police staff; police officer.

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2 **English police force**

3 Psychological wellbeing is a broad construct that encompasses the presence of
4 positive markers of psychological adjustment, such as high self-esteem, positive affect, and
5 life satisfaction, as well as lower signs of psychological maladjustment, including low
6 negative affect, life satisfaction, and stress (Carter et al., 2016; Houben et al., 2015). The
7 workplace can play a crucial role in determining an individual's psychological wellbeing
8 (Johnson et al., 2018). Emergency service personnel are often exposed to stressful and
9 traumatic events (Brough, 2004; Lucas et al., 2012), and the nature of working in such high-
10 risk occupations can increase susceptibility to experiencing negative stress outcomes, such as:
11 absenteeism (Magnavita & Garbarino, 2013); burnout (Martinussen et al., 2007); and
12 impaired psychological wellbeing (Johnson et al., 2005).

13 Policing is widely regarded as a highly stressful occupation (e.g., Noblet et al., 2009a,
14 2009b; Russell, 2014; Van Hasselt et al., 2008). By its nature, police work can involve
15 exposure to a variety of acute and chronic stressors, such as: witnessing or discussing
16 distressing scenes; experiencing dangerous situations; and risk of injury. Consequently, it is
17 widely acknowledged that the nature of police work can have a detrimental impact on
18 physical and psychological health in this population (e.g., Garbarino et al., 2013; Juniper et
19 al., 2010; Lawson et al., 2012; Magnavita et al., 2018; Shucard et al., 2012). From a
20 psychological health perspective, police employees have reported lower than average scores
21 on psychological wellbeing relative to other occupations (e.g., Johnson et al., 2005). Given
22 the important role of police in society, susceptibility to impaired psychological wellbeing in
23 police employees, and beneficial impact of enhanced psychological health for optimal
24 functioning, it is paramount to investigate psychosocial correlates and predictors of
25 psychological wellbeing in this population.

1 To date, the majority of research on psychological health in policing has focused on
2 police officers (e.g., Acquadro Maran et al., 2015; Duran et al., 2019; Ma et al., 2015).
3 However, recent research has highlighted that police employees in non-operational roles can
4 often be exposed to traumatic events directly (e.g., distressing calls) or vicariously, and are
5 also susceptible to experiencing negative psychological outcomes in their work (Kerswell et
6 al., 2019). In turn, this suggests that further research on psychological wellbeing in policing
7 should adopt a broader perspective and also consider employees working in non-operational
8 roles to ensure that a more holistic understanding of psychological wellbeing in this
9 occupation can be developed. Therefore, this study sought to develop understanding of the
10 personal and work-related factors that contribute to psychological wellbeing in policing by
11 examining the relationship between psychological wellbeing, social support, and personality
12 in police employees, comprising both operational (i.e., employees who deliver police or
13 police-related services) and non-operational staff (i.e., professional and support staff).

14 **Theoretical Framework**

15 **Social Support**

16 One construct that has been widely associated with a myriad of positive physical and
17 mental health outcomes is social support (e.g., Berkman et al., 2000; Holt-Lunstad et al.,
18 2010; Uchino et al., 2012). In police employees, social support has been associated with
19 reduced post-traumatic stress disorder symptoms (Stephens et al., 1997), enhanced general
20 mental health (Hansson et al., 2017), increased job satisfaction (Brough & Frame, 2004), and
21 decreased perceptions of organisational stress (Graf, 1986). Social support in the workplace
22 refers to the general levels of aid and assistance provided through social interactions with
23 both co-workers and supervisors (Karasek & Theorell, 1990). Work colleagues can act as key
24 support providers (Shoss et al., 2013) and can often provide experientially salient information
25 that allows an individual to foster a sense of control, which can subsequently promote

1 psychological wellbeing (Taylor & Stanton, 2007). While support can be obtained from many
2 sources in an individual's social network, supervisors and colleagues have been identified as
3 key social support providers for ameliorating the negative effects of stress in police
4 employees (Brough & Frame, 2004; Stephens et al., 1997). However, further research is
5 required to understand the nature of the relationship between social support from colleagues
6 and psychological wellbeing in this population.

7 **Functional perspective.** Social support is a complex construct that incorporates both
8 structural and functional elements of interpersonal relationships (Cohen & Willis, 1985).
9 Whereas a structural analysis of social support would focus on the size, range, and
10 interconnectedness of social ties, functional support can be divided into two components:
11 perceived availability of support (i.e., perceived support); and received support (Barrera,
12 2000; Cohen, 1988). Perceived support refers to a prospective appraisal of available support
13 (e.g., Norris & Kaniasty, 1996). Alternatively, received support, which is sometimes termed
14 enacted support, constitutes a retrospective rating of support transactions that an individual
15 perceives have occurred, usually within a specific time frame (e.g., Schwarzer & Knoll,
16 2010). Despite the intuitive conceptual overlaps between perceived and received support,
17 evidence suggests that a weak relationship exists between these constructs (Haber et al.,
18 2007; Lakey et al., 2010). One possible explanation for the weak association between
19 perceived and received support could be that perceived support reflects a general
20 perspective of support based on interactions across day-to-day activities over a relatively
21 long period of time, whereas received support is usually restricted to an exact period of
22 time and could relate to specific stressful situations (Bolger & Amarel, 2007; Hobfoll,
23 2009).

24 To date, researchers have generally found that perceived support is positively
25 related to psychological wellbeing (e.g., Lakey & Orehek, 2011; Thoits, 2011). Findings

1 concerning the relationship between received support and wellbeing are, however, more
2 ambiguous (Reinhardt et al., 2006). For example, some research has found positive
3 associations between received support and aspects of wellbeing (e.g., Chu et al., 2010),
4 whereas other research has found a negative relationship between these constructs (e.g.,
5 Bolger et al., 2000; Lee et al., 1995). Given that previous research has not always accounted
6 for the differences between perceived and received support, it has been suggested that
7 potential negative reactions caused by received support might counteract any benefits of
8 perceived support (e.g., Bolger & Amarel, 2007; Maisel & Gable, 2009).

9 In explaining the equivocal findings concerning the social support-wellbeing
10 relationship, researchers have argued that differences in the manner in which social support
11 and wellbeing have been both conceptualised and operationally defined in the literature
12 could have contributed to variation in the findings (Siedlecki et al., 2014). Furthermore, it
13 has also been suggested that the received support-psychological wellbeing relationship
14 could be affected by the potential lack of awareness amongst individuals of the receipt of
15 support (Bolger et al., 2000). In acknowledgement of the complex interplay between
16 perceived and received support, researchers have highlighted the importance of
17 approaching social support research from both of these functional perspectives (Reinhardt
18 et al., 2006). Although researchers have examined correlates of social support in police
19 officers previously, the associations between psychological wellbeing and both perceived
20 support and received support have yet to be examined across police employees (i.e.,
21 officers and staff). Therefore, given the potential intricacies of the relationship between
22 psychological wellbeing and both perceived and received support, an investigation of the
23 relationship between psychological wellbeing and both functions of social support in police
24 employees could provide further understanding of the relationship between social support and

1 psychological wellbeing in this occupational setting. Based on the extant literature, it was
2 hypothesised that:

3 H₁: perceived support from colleagues would be positively related to psychological
4 wellbeing;

5 H₂: received support from colleagues would be positively related to psychological
6 wellbeing.

7 **Personality**

8 The personality of an individual is another area that could be relevant to
9 understanding psychological wellbeing in police employees. The most commonly used
10 approach for conceptualising and assessing personality is the big-five personality model
11 (Costa & McCrae, 1980). This model proposes that personality consists of five dimensions,
12 which comprise: (1) *agreeableness* (i.e., likeability and cooperativeness with others); (2)
13 *conscientiousness* (i.e., degree of organisation, persistence, and motivation to achieve a goal);
14 (3) *neuroticism* (i.e., opposite of emotional stability); (4) *extraversion* (i.e., level of
15 assertiveness and contrasts with introversion); and (5) *openness to experience* (i.e., desire to
16 seek out new experiences). Associations have been found between the big-five personality
17 traits and wellbeing (see DeNeve & Cooper, 1998 for a meta-analysis). Notably, researchers
18 have found that certain personality traits, particularly extraversion and neuroticism, were
19 significant predictors of wellbeing (e.g., Gutierrez et al., 2005; Hayes & Joseph, 2003).

20 Within the context of policing, previous studies have also found links between
21 personality dimensions and wellbeing. In police officers, wellbeing was inversely related to
22 neuroticism (Hart et al., 1995; Ortega et al., 2007) and positively associated with extraversion
23 (Hart et al., 2005). However, it should be noted that these studies did not investigate the
24 relationship between wellbeing and each of the big-five personality characteristics.

25 Furthermore, this research only included police officers and did not include employees in

1 non-operational roles. Therefore, this suggests that further work is required to advance
 2 understanding of the relationship between psychological wellbeing and personality in
 3 policing. In line with the existing evidence base, it was hypothesised that:

4 H₃: extraversion and emotional stability would be positively related to, and
 5 significantly predict, psychological wellbeing.

6 No specific hypotheses were formed concerning the relationship between psychological
 7 wellbeing and agreeableness, conscientiousness, and openness to experience due to the lack
 8 of empirical evidence on the relationship between these variables in policing.

9 **The Current Study**

10 The aim of the study was to examine the relationship between psychological
 11 wellbeing, perceived support from colleagues, received support from colleagues, and
 12 personality characteristics in police employees, which comprised both operational and
 13 professional service staff (i.e., individuals in professional, technical, and administrative
 14 roles). To date, the majority of research on psychological health in policing has focused on
 15 police officers. However, it was of interest in the current study to develop understanding of
 16 psychological wellbeing across all police employees. In turn, this study sought to extend the
 17 evidence base on psychological wellbeing in policing by sampling participants from across
 18 the full spectrum of roles in a police force. By doing so, this could help to inform the design
 19 of practical applied recommendations that aim to promote psychological wellbeing in a
 20 variety of policing roles.

21 **Method**

22 **Participants**

23 The participants were 381 (female $n = 187$; male $n = 183$; prefer not to say $n = 11$; M
 24 age = 42.49 years, $SD = 9.85$) employees of a police force in the Midlands region of England.
 25 Participants reported an average of 12.90 years ($SD = 9.29$) of service in the organisation and

1 had been employed in their current role for an average of 6.08 years ($SD = 6.30$). The sample
2 consisted of operational (police officers $n = 208$, police community support officers $n = 15$)
3 and professional service employees (i.e., non-operational employees; $n = 134$), while 24
4 participants did not declare their role within the force.

5 **Measures**

6 **Perceptions of available support.** The level of support that participants perceived to
7 be available from colleagues was measured using the 24-item Social Provisions Scale (SPS;
8 Cutrona & Russell, 1987). The items were presented on a 4-point Likert scale, ranging from 1
9 (*strongly disagree*) to 4 (*strongly agree*). As this study focused on perceptions of available
10 support from work colleagues, participants were required to respond to each statement in
11 relation to relationships with their colleagues in the organisation. A higher total score is
12 indicative of higher levels of perceived available support. Example items included: "*there are*
13 *people I know will help me if I really need it*"; and "*I have a trustworthy person to turn to if I*
14 *have problems*". The measure has demonstrated excellent internal consistency (e.g., Cutrona
15 et al., 1986) and good test-retest reliability scores previously (Russell et al., 1984). The
16 internal consistency of the SPS was found to be excellent ($\alpha = .93$) in the current study.
17 Although the SPS is a multidimensional measure, a total scale score was only used as the
18 current study focused on examining the relationships with global perceptions of available
19 support rather than the distinct social features contained within the SPS.

20 **Received support.** Perceptions of received support was assessed using an adapted
21 version of the Shortened Inventory of Socially Supportive Behaviours (SISSB; Barrera &
22 Baca, 1990). This measure assessed perceptions of the amount of support that participants felt
23 they received from their colleagues over the previous four weeks on a Likert scale ranging
24 from 1 (*not at all*) to 5 (*about every day*). Some example items included: "*told you what they*
25 *did in a situation that was similar to yours*"; and "*went with you to someone who could take*

1 *action*". Although the SISSB contains 19 items, three items were excluded as they were
2 deemed unsuitable for this workplace setting after initial pilot testing and follow-up
3 discussions between the research team and the organisation. The excluded items were: "*gave*
4 *or loaned you over £20*"; "*comforted you by showing you some physical affection*"; and
5 "*provided you with a place to stay*". The SISSB demonstrated good internal consistency ($\alpha =$
6 $.84$) in previous research (Barrera & Baca, 1990) and in the current study ($\alpha = .88$).

7 **Personality.** Personality was measured using the Ten-Item Personality Inventory
8 (TIPI; Gosling et al., 2003), which contains five subscales, comprising: agreeableness;
9 conscientiousness; emotional stability; extraversion; and openness to experience. This
10 measure asked participants to indicate the extent to which each item statement reflected their
11 personality on a seven-point Likert scale, ranging from 1 (*disagree strongly*) to 7 (*agree*
12 *strongly*). Each statement consisted of two items per scale, which included pairs of
13 descriptive adjectives, such as "*extraverted, enthusiastic*" and "*anxious, easily upset*".
14 Participants were asked to rate the extent to which these descriptions matched their own
15 personality, even if they deemed that one trait applied more strongly than the other. The
16 internal consistency values (α) for the extraversion, agreeableness, conscientiousness,
17 emotional stability, and openness to experience subscales in the current study were $.65$, $.27$,
18 $.41$, $.76$, and $.39$, respectively, which are similar to those reported previously¹ (Gosling et al.,
19 2003). While four subscales fell below the generally accepted Cronbach's alpha value of $.70$
20 (e.g., George & Mallery, 2003), issues have been identified with the use of reliability tests for
21 two-item scales (e.g., Eisinga et al., 2013). Further examination of the inter-item correlations
22 (cf. Pallant, 2010) for the extraversion, agreeableness, conscientiousness, and openness to
23 experience subscales indicated that values for each variable ($.48$, $.16$, $.28$, $.24$, respectively)

¹ Given that each subscale only contains two items, Gosling et al. (2003) outlined that the TIPI emphasised content validity rather than reliability.

1 fell within the recommended range (Clark & Watson, 1995). Thus, all subscales were
2 included in subsequent analyses.

3 **Psychological wellbeing.** Psychological wellbeing was measured using the 14-item
4 Warwick-Edinburgh Mental Well-being Scale (WEMWBS; Tennant et al., 2007). The
5 WEMWBS captures both functional and affective aspects of psychological wellbeing on a
6 scale that ranges from 14 to 70, with higher scores indicating greater levels of psychological
7 wellbeing. In responding to each item, participants were asked to identify the extent to which
8 each item reflected their experiences in general (i.e., within and outside the workplace) in the
9 preceding 4-week period on a 5-point scale that ranged from 1 (*none of the time*) to 5 (*all of*
10 *the time*). Sample items include: "*I've been feeling relaxed*"; "*I've been thinking clearly*"; and
11 "*I've been dealing with problems well*". The internal consistency of the WEMWBS has been
12 previously reported as good ($\alpha = .89$; Tennent et al., 2007), with the measure demonstrating
13 excellent internal consistency in the current study ($\alpha = .92$).

14 **Procedures**

15 Ethical approval was obtained from a school ethics committee at an English
16 university. Following agreement with appropriate personnel within the police organisation,
17 all employees ($2000 \leq n \leq 3000^2$) in a regional police force were informed about the study
18 through the organisation's intranet site. Participants who were willing to take part could
19 select a link in their own time to gain access to an online questionnaire, which was accessible
20 for a four-week period. The online questionnaire solicited information about their
21 demographics and obtained measures of psychological wellbeing, perceptions of available
22 support, perceptions of received social support, and personality characteristics. Each set of
23 questions for the psychological measures was randomised to reduce the likelihood of order
24 effects. To maximise the response rate, an initial message raising awareness about the study

² The exact number of potential participants is not included to protect anonymity.

1 was sent to employees prior to the commencement of data collection. Additionally,
2 participants were sent several reminders after the launch of the online questionnaire. All
3 participants completed the questionnaire on a voluntary basis and provided consent to take
4 part in the study prior to completing the questionnaire, which took approximately 15 minutes
5 to complete. It was made clear to potential participants that this study was being conducted
6 by researchers based at a university, with agreement by the police organisation, to circumvent
7 potential concerns with judgement from management or supervisors and ensure that answers
8 for each participant reflected their actual thoughts and feelings. Participants were not
9 required to report all demographic details to protect anonymity.

10 **Data Analysis**

11 **Preliminary analyses.** Data were analysed using SPSS 22. Data were visually
12 screened for missing cases and normality. Visual screening of scatterplots for each
13 psychological measure suggested that data for all measures were not normally distributed.
14 Statistical checks of normality were undertaken by computing the kurtosis and skewness
15 scores for each variable, and then standardising each score by dividing the test score by the
16 standard error for the respective test statistic. These standardised z-scores were compared to
17 recommended values (± 3.29 , $p < .001$) for normally distributed data and revealed that data
18 for each of the psychological measures were not normally distributed. Consequently, as the
19 assumptions for running parametric tests were not satisfied, the median, interquartile range,
20 and standard deviations of these measures were calculated, and non-parametric tests were
21 employed.

22 **Main Analyses.** A Mann Whitney-U test was conducted to examine differences in
23 psychological wellbeing between operational and non-operational staff. Spearman's rank
24 order correlation was employed to examine the relationships between psychological
25 wellbeing, perceived support, received support, and each of the personality components

1 measured. Multiple logistic regression analysis was used to determine the predictive capacity
2 of perceived support, received support, and the five personality components on psychological
3 wellbeing. These predictor variables were entered simultaneously using forced multiple
4 logistic regression, as relationships have previously been found between perceived support,
5 received support, and personality with psychological wellbeing. The level of significance was
6 set at $p < .05$. Results for the logistic regression are presented as an odds ratio (OR), with
7 95% confidence intervals (CI) included reporting the regression coefficients and their
8 standard errors.

9 **Results**

10 The median, interquartile range, and 95% CI for each of the psychological variables
11 and results of the correlational analysis are presented in Table 1. No significant difference (p
12 = .06) was found in psychological wellbeing between operational ($Md = 43.00$, $M = 42.75$)
13 and non-operational staff ($Md = 45.00$, $M = 44.43$). Psychological wellbeing was
14 significantly ($p < .05$) and positively related to perceived support, received support, and all
15 five subscales of the TIPI. Moderate-to-strong associations were found between
16 psychological wellbeing and: perceived support ($r = .47$, $p < .05$); emotional stability ($r = .47$,
17 $p < .05$); received support ($r = .40$, $p < .05$); and extraversion ($r = .35$, $p < .05$). Small-to-
18 moderate positive correlations were found between psychological wellbeing and:
19 agreeableness ($r = .19$, $p < .05$) and openness to experience ($r = .19$, $p < .05$). Other
20 noteworthy findings were that significant positive associations were found between perceived
21 support and: received support ($r = .40$, $p < .05$); agreeableness ($r = .31$, $p < .05$); and
22 emotional stability ($r = .24$, $p < .05$).

23 [INSERT TABLE 1 ABOUT HERE]

24 Results of the multiple logistic regression analysis are displayed in Table 2. Four of
25 the seven predictor variables entered into the multiple logistic regression model were found

1 to be significant predictors of psychological wellbeing. Compared to participants who
2 reported lower levels of received support, participants that reported a higher degree of
3 received support displayed significantly higher odds of increased psychological wellbeing
4 (OR = 3.05, 95% CI [1.86, 5.02]). Similarly, compared to those with lower perceptions of
5 available support, participants who reported higher levels of perceived support had greater
6 odds of enhanced psychological wellbeing (OR = 1.05, 95% CI [1.02, 1.08]). Amongst the
7 personality variables, emotional stability and extraversion were found to be the only
8 significant predictors of psychological wellbeing in the sample. In comparison to participants
9 with lower levels of emotional stability, individuals with higher levels of emotional stability
10 had higher odds of heightened psychological wellbeing (OR = 1.67, 95% CI [1.40, 1.99]),
11 while participants with higher levels of extraversion were found to have greater odds of
12 reporting greater psychological wellbeing (OR = 1.45, 95% CI [1.22, 1.73]). Alternatively,
13 conscientiousness, agreeableness, and openness to experience did not significantly predict
14 psychological wellbeing.

15 [INSERT TABLE 2 ABOUT HERE]

16 Discussion

17 The purpose of the present study was to examine the relationship between
18 psychological wellbeing, perceptions of available support, received support, and personality
19 characteristics in police employees. To the best of the authors' knowledge, this is the first
20 study to investigate the relationships between psychological wellbeing, perceived support
21 from colleagues, received support from colleagues, and personality factors across operational
22 and non-operational police employees. While operational employees reported lower
23 psychological wellbeing, no significant difference was found between operational and non-
24 operational staff. The results indicated that psychological wellbeing was significantly and
25 positively correlated with perceived support and received support. These findings suggest that

1 higher perceptions of available support and received support are linked to greater
2 psychological wellbeing in police employees. Psychological wellbeing was also significantly
3 and positively associated with emotional stability, extraversion, agreeableness, openness to
4 experience, and conscientiousness, thus suggesting that higher levels of each of these
5 personality characteristics are associated with enhanced psychological wellbeing. Consistent
6 with the study hypotheses, perceived support, received support, extraversion, and emotional
7 stability were significant predictors of higher psychological wellbeing amongst the predictor
8 variables, while agreeableness, openness to experience, and conscientiousness were not
9 significant predictors of psychological wellbeing.

10 A noteworthy finding from the current study was that receiving support from
11 colleagues was the strongest predictor of psychological wellbeing. While research concerning
12 the relationship between received support and psychological wellbeing has been equivocal,
13 the findings from the current study are similar to previous research which found that
14 receiving social support was a significant and positive predictor of wellbeing in emergency
15 service employees (Shakespeare-Finch et al., 2015) and police force employees (Rodwell et
16 al., 2011). Received support is regarded as a situational factor that arises in response to
17 stressful circumstances (e.g., Barrera, 2000) and many high-risk organisations have
18 developed peer-support programmes to assist employees to counter the potentially deleterious
19 effects of stressful situations (Creamer et al., 2012). According to Cohen and Wills (1985),
20 social support can have a positive effect on wellbeing by buffering against the potential
21 negative health consequences that arise in stressful circumstances (i.e., stress-buffering
22 model), or can have a beneficial impact regardless of whether the individual is under stress
23 (i.e., main-effect model). Given that police employees across the spectrum of roles in
24 policing can be exposed to stressors (e.g., Acquadro Maran et al., 2015; Kerswell et al.,
25 2019), receiving support from colleagues could be particularly important for buffering the

1 potentially adverse impact of work-related stressors on psychological wellbeing in this
2 population.

3 While received support was the strongest predictor of psychological wellbeing among
4 the social support variables, perceptions of available support from colleagues was still a
5 significant predictor of psychological wellbeing. This finding is in line with previous research
6 that found a positive relationship between organisational support and psychological wellbeing
7 (e.g., Panaccio & Vandenberghe, 2009), and suggests that individuals who perceive more
8 support to be available from their colleagues are more likely to report higher levels of
9 psychological wellbeing. Although the OR for enhanced psychological wellbeing was
10 substantially lower for perceived support compared to received support, it should be noted
11 that both variables were significantly and positively related, and that perceived support was
12 more strongly associated with psychological wellbeing than received support in the
13 correlational analysis. Thus, although speculative, it is arguable that by controlling for
14 received support in the regression model, this could have reduced the degree of variance
15 predicted in psychological wellbeing by perceived support. Perceived support is suggested to
16 be a stronger predictor of related outcomes, such as physical and mental health, in
17 comparison to received support (Sarason et al., 1990; Uchino et al., 2012), albeit in the
18 current study both variables predicted psychological wellbeing. Therefore, researchers,
19 practitioners, and colleagues should continue to recognise the importance of increasing
20 perceptions of available support and providing actual support to enhance psychological
21 wellbeing in this population.

22 According to the current findings, emotional stability could be particularly important
23 for psychological wellbeing in police employees as the results of the multiple logistic
24 regression analysis indicated that emotional stability was the strongest predictor of
25 psychological wellbeing among the five personality traits. Thus, police employees who tend

1 to be more emotionally stable, calmer, and relaxed are more likely to report higher levels of
2 psychological wellbeing, whereas those who have increased susceptibility to fluctuations in
3 emotional stability are more likely to experience impaired psychological wellbeing. This
4 finding is consistent with previous research that found that emotional stability, or
5 neuroticism, is a stronger predictor of wellbeing than extraversion (e.g., Vittersø, 2001;
6 Vittersø & Nilsen, 2002).

7 Identifying extraversion as a significant predictor of psychological wellbeing
8 reconciles with previous studies in police officers (e.g., Hart et al., 1995) and different
9 participant groups (e.g., DeNeve & Cooper, 1998). Individuals with higher levels of
10 extraversion tend to be more sociable and are more likely to interact with people, which
11 heightens the predisposition for positive affect and wellbeing (Costa & McCrae, 1980). Given
12 the conceptual overlaps between extraversion and social support in terms of engagement in
13 social relationships, it is worth noting that the current study found that extraversion was
14 significantly and positively related to perceived support but displayed a positive, non-
15 significant relationship with received support. These findings may be expected, as perceived
16 and received support have been found to have distinct antecedents (Uchino, 2009). One
17 possible explanation for this is that due to the increased level of familiarity that extraverted
18 individuals have in social situations, it could be the case that police employees with higher
19 levels of extraversion were less likely to identify and recognise supportive behaviours
20 provided by their colleagues in the workplace.

21 **Practical Implications**

22 The results of the current study could have important implications for the
23 enhancement of psychological wellbeing in police employees by influencing empirically-
24 based psychosocial interventions. First, interventions that seek to enhance perceptions of
25 available support and received support in operational and professional service employees

1 within police organisations could be beneficial within this population. Given the diversity of
2 roles across police organisations, increasing awareness of the importance of social support
3 amongst police employees could help individuals to recognise the value of their role as
4 support providers within the organisation. This could be applied to existing support providers
5 within an employees' existing support network, such as supervisors and close colleagues, and
6 could subsequently help to make other employees more aware of the support that is available
7 from their colleagues. Second, educating police employees on the types of behaviours and
8 support that are beneficial in police work could also help to increase perceptions of available
9 support and improve awareness of support received within this population, which could
10 subsequently have a positive impact on psychological wellbeing. Third, police organisations
11 should promote a culture that encourages employees to seek support from their colleagues
12 (e.g., peers and/or line managers). Finally, assessing employees in terms of personality,
13 particularly extraversion and emotional stability, could provide a means to identifying those
14 who are more susceptible to experiencing lowered levels of psychological wellbeing. In turn,
15 these employees could be provided with tailored support that seeks to enhance their
16 psychological wellbeing.

17 **Limitations and Future Directions**

18 Although this study provided novel insights into the relationship between social
19 support, personality, and psychological wellbeing across both operational and non-
20 operational employees in a police force, a number of limitations are worthy of note. First, the
21 study adopted a cross-sectional study design, which prevents the inference of causality.
22 Second, the associations identified in this study are based on data generated from quantitative
23 measures, which offer little insight into how and why the variables were linked to or
24 increased the OR for enhanced psychological wellbeing. Third, the findings are based on the
25 perceptions of employees from a single, regional police force in England, and it is possible

1 that the findings might not be generalisable to all police organisations or other emergency
2 service personnel (e.g., fire service). Finally, the response rate should be considered in the
3 interpretation of the findings. Thus, given that less than one-fifth of possible participants
4 completed the questionnaire, it is possible that responses from the non-respondents might
5 have altered the findings.

6 In light of these limitations, a number of directions for future research are apparent.
7 First, further work in this area should seek to adopt longitudinal designs to examine the
8 relationships between social support, personality, and psychological wellbeing to enable an
9 examination of cause and effect relationships between these variables. Second, to further
10 investigate the relationships found between these variables in the current study, researchers
11 should consider using qualitative methods to explore how and why received support,
12 perceived support, and the personality variables are associated with psychological wellbeing
13 in police force employees. Furthermore, a qualitative approach could also provide a more
14 nuanced insight into the specific types of support that are most desirable and relevant for
15 increasing psychological wellbeing in police force employees. Third, further research should
16 seek to adopt a multi-site approach and investigate the relationships between social support,
17 personality, and psychological wellbeing across other emergency service contexts (e.g., fire
18 and rescue service, ambulance). In turn, this could also provide some initial insights into the
19 influence of organisational culture on findings reported in this study, as well as similarities or
20 differences between employees across different emergency service organisations. Fourth,
21 future research should also examine the potential influence of cultural factors, particularly in
22 relation to help-seeking within UK police organisations. Such research is important given that
23 police officers are often reluctant to seek help (see Bell & Eski, 2015) and that peer support
24 interventions (e.g., trauma risk management [TRiM]) are becoming more common across the
25 UK (Watson & Andrews, 2018). Finally, given that no significant difference was found in

1 psychological wellbeing between operational and non-operational staff, this suggests that
2 further research should seek to be more inclusive and consider all employees in policing.

3 **Conclusion**

4 In conclusion, the current study examined the relationship between psychological
5 wellbeing, perceived support from colleagues, received support from colleagues, and
6 personality factors. Received support from colleagues emerged as the strongest predictor of
7 heightened psychological wellbeing among the predictor variables, while higher perceptions
8 of available support from colleagues, extraversion, and emotional stability also significantly
9 increased the likelihood of greater psychological wellbeing. In turn, this study extends current
10 understanding of psychological wellbeing in police force employees by suggesting that
11 higher levels of both received and perceived social support from colleagues, as well as the
12 personality factors of extraversion and emotional stability, could be particularly important for
13 enhancing and maintaining psychological wellbeing in police employees. Given that
14 increased psychological wellbeing is associated with a range of desirable and relevant
15 individual and organisational outcomes in the workplace, and that police employees play a
16 fundamental role in society, further studies are needed to explore psychosocial correlates and
17 predictors of psychological wellbeing in this population.

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- 11

1 Table 1: Median, interquartile range, 95% confidence intervals and correlations between psychological variables

2

Variables	Median	Interquartile range	95% confidence intervals	1	2	3	4	5	6	7	8
1. Psychological wellbeing	44.00	13.00	[42.80, 44.63]	-							
2. Perceived support	69.00	13.00	[67.27, 69.57]	.47*	-						
3. Received support	1.81	0.69	[1.84, 1.96]	.40*	.40*	-					
4. Extraversion	4.50	1.50	[4.13, 4.45]	.35*	.18*	.09	-				
5. Agreeableness	4.50	1.50	[4.72, 4.96]	.19*	.31*	.18*	-.02	-			
6. Conscientiousness	6.00	1.50	[5.70, 5.91]	.21*	.06	-.06	.13*	.15*	-		
7. Emotional stability	4.50	2.50	[4.45, 4.79]	.47*	.24*	.08	.25*	.15*	.26*	-	
8. Openness to experience	5.00	2.00	[4.90, 5.14]	.19*	.17*	.09	.35*	.19*	.23*	.06	-

Note: $p < .05$

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1 Table 2: Multiple logistic regression analysis examining predictors of psychological
 2 wellbeing

Variable	B(SE)	Odds Ratio	95% CI
Included in final model			
Constant	-9.60 (1.14)		
Received support	1.12 (0.24)	3.05	[1.86, 5.02]
Emotional stability	0.52 (0.09)	1.67	[1.40, 1.99]
Extraversion	0.37 (0.09)	1.45	[1.22, 1.73]
Perceived support	0.05 (0.01)	1.05	[1.02, 1.08]

3