

Broken promises in policing: understanding leadership, procedural justice and psychological health through the lens of psychological contract breach

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Published

2024

Journal Title

Policing: An International Journal

Version

Accepted Manuscript (AM)

DOI

[10.1108/pijpsm-05-2024-0082](https://doi.org/10.1108/pijpsm-05-2024-0082)

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Funder(s)

ARC

Grant identifier(s)

LP200200834

Griffith Research Online

<https://research-repository.griffith.edu.au>

Drew, J.M. & Chevroulet, C. (2024). Broken promises in policing: Understanding leadership, procedural justice and psychological health through the lens of psychological contract breach. *Policing: An International Journal*. <https://doi.org/10.1108/PIJPSM-05-2024-0082>

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Grant Funding: Grant funding for this project was obtained via an Australian Research Council Grant (Linkage): “*An early warning system for police workplace health and performance*” (LP200200834).

Acknowledgement: The author/s wish to acknowledge the support and assistance from an Australian policing agency in undertaking this research. The views expressed in this publication are not necessarily those of the Australian Policing Agency and any errors of omission or commission are the responsibility of the author/s. The authors thank the officers who participated in the study and also, acknowledge and thank the Police Unions who assisted in the distribution and promotion of the statewide survey.

Abstract

Purpose

The purpose of this research is to empirically test the role of psychological contract breach in explaining the relationship between leadership style and procedural justice, burnout and psychological distress. This study provides important insights for police agencies who seek to positively impact, through the actions of their leaders, on both performance and psychological health of their officers. Drawing from the study findings, key recommendations for police leadership development programs are made.

Design/methodology/approach

The current study with a large sample of Australian police ($N=1763$), explores the relationship between leader-member exchange (LMX) leadership style and two sets of outcomes. The first is procedural justice, an important job performance outcome related to police practice. The second outcome includes two measures of psychological health, specifically burnout and psychological distress. Psychological contract breach (PCB) is investigated in the current research as a potential mediator in the relationship between leadership and (a) job performance and (b) psychological health.

Findings

Using mediated regression analyses, high LMX leadership is associated with lower PCB, higher procedural justice and reduced psychological health impairment amongst staff. The relationship between LMX and procedural justice was fully mediated by PCB, meaning that PCB explains the relationship between LMX and procedural justice. Partial mediation was found for both psychological health outcomes. As such, leadership style has a direct relationship with psychological health, and is partly explained by PCB.

Originality/value

Very little research has considered the role of PCB in explaining how leadership style is related to job performance and psychological health outcomes in policing. To our knowledge, this is the first study that has empirically examined whether leadership style makes it more likely that a police officer will perceive PCB. And further, whether this breach is associated with reduced job performance (i.e. less procedural justice) and poorer psychological health (i.e. increased burnout and psychological distress).

Keywords: police; leadership; procedural justice; psychological contract breach;
psychological distress; burnout

Introduction

Decades of research have reported that the behaviour of leaders impact on those who they lead (Montano et al., 2017; Mumtaz & Rowley, 2020; Pizzolitto et al., 2023; Quade et al., 2020). In the policing context, the importance of leaders in managing the operational environment in which police enact their duties has been studied. Often, this has focused on balancing command-and-control leadership with more staff-inclusive or consultative approaches (Owen, 2023). In recent times, police scholars and practitioners have empirically examined how leaders influence their staff's delivery of police services and psychological health (Acquadro Maran et al., 2022; Donner & Olson, 2020; Eterno et al., 2021; Peacock et al., 2023; Sorengaard & Langvik, 2022).

This research explores the relationship between leadership style, as defined by leader-member exchange (LMX) theory, and two sets of outcomes. LMX is a relationship-based, dyadic understanding of workplace interactions between staff and their direct supervisor (Erdogan & Bauer, 2015). When employees report high LMX they perceive that their leader is providing them with adequate information, resources, autonomy and support (Gotz et al., 2020; Yuan et al., 2023). These relational components, defined by the quality of leader-staff relationships, positively influence employee performance and job attitudes (Montano et al., 2017; Mumtaz & Rowley, 2020).

The outcomes studied in the current research are job performance and psychological health. Job performance is conceptualised as procedural justice (PJ). PJ embodies a police approach whereby police treat members of the public with respect and dignity and make fair and unbiased decisions in the course of their duties (Tyler, 2017). Those enacting PJ give greater voice to individuals with whom they are interacting (Tyler, 2006). PJ has become an increasingly important performance outcome that is sought by many police agencies (Chan et

al., 2023). The other outcome studied is psychological health. Psychological health is considered using measures of burnout and psychological distress. With alarmingly high and increasing rates of burnout and mental health diagnoses amongst police cohorts, efforts to improve wellbeing is now an important objective for most police agencies (Drew & Martin, 2023; Drew et al., 2024; Syed et al., 2020).

Psychological contract breach (PCB) is investigated in the current research as a potential mediator in the relationship between leadership and (a) performance and (b) psychological health. PCB refers to the perception of employees that the organization has failed to adequately meet the expected obligations and promises of the employment relationship (Rousseau, 1989; 1995). The role of PCB in understanding the relationship between a range of organizational experiences has been found across diverse employee cohorts (Coyle-Shapiro et al., 2019; Zhao et al., 2007). It is argued that leaders have a pivotal role in the development and maintenance of psychological contracts and leaders are likely to influence PCB (Rousseau, 1995). In turn, PCB potentially explains the process through which leaders influence work and health outcomes of those who they lead.

It is proposed that the impacts of PCB between a leader and their staff is particularly relevant in policing. Policing in an occupation that is often referred to as a 'calling' rather than simply 'a job'. Individuals are said to be joining the police family (Charman & Tyson, 2023).

Policing has been characterized as one that fosters the formation of a strong personal identity. Many officers develop a personal identity that is inextricably tied to their employment as a police officer. This identity formation may be developed based on employment in a specific police agency and/or more broadly, as a result of becoming a member of the police profession (Charman, 2017). Given the influence of employment within the police profession on the personal identity of many who serve, it is argued that PCB is likely to be critical factor that significantly impacts on work performance and psychological health. Despite the apparent

relevance of PCB to policing, it is has received little research attention and particularly, what role police leaders might play in influencing or managing PCB (Duran et al., 2019).

The current study involves a survey of a large sample of Australian police (N=1763). It seeks to better understand how leadership style is related to job (procedural justice) and psychological health (burnout and psychological distress). Further, the role of PCB in understanding these relationships is considered. This study makes empirical and practical contributions. Previous police research has not studied LMX in respect to PJ. Limited research with police has examined the relationship between LMX style and psychological health and very few studies of PCB have been undertaken. This research has important implications for leadership development program design, particularly programs that seek to improve performance and psychological health through the actions of police leaders.

Leadership and Procedural Justice

Leadership can impact performance, at individual employee and organizational levels (Avolio et al., 2009; Quade et al., 2020; Thrasher et al., 2020). In policing, the role of leadership and performance was of intense interest in the mid-1990's. At the time the CompStat performance management system was introduced in the New York Police Department (NYPD). This performance system, that was subsequently adapted and used by many police agencies across the world, was an effort to better leverage the role of leaders in achieving key police performance metrics (Eterno et al., 2021; Eterno & Silverman, 2012). The role of leaders in influencing individual and job performance continues to be of interest in contemporary police agencies.

It has been empirically established that leaders and their leadership style, whether it be in policing or elsewhere, can have enormous impact on a diverse range of job performance outcomes (Markham et al., 2010; Martin et al., 2015; Thrasher et al., 2020). Specifically

relevant to this study, leaders who display characteristics associated with high LMX can positively impact on staff performance (Breevaart et al., 2015; McCarthy et al., 2016).

The current research is focused on an important metric in policing, procedural justice (PJ). Across the world, PJ is now arguably the predominant paradigm of police practice (Chan et al., 2023). It focuses on building trust between police and their communities (Schaap & Saarikkomaki, 2022). It is perhaps the ‘reimagined’ approach to community policing which gained momentum in the 1980s (Oliver & Bartgis, 1998; Police Executive Research Forum (PERF), 2014; Schaap & Saarikkomaki, 2022). PJ involves four key principles, neutrality, trustworthiness, voice and respect (Murphy & Tyler, 2017). Through the enactment of these principles, police exercise their authority in a just and fair manner by the quality of ‘treatment’ and ‘decision-making processes’ (Mazerolle et al., 2013a). Police using PJ principles can positively influence public perceptions of the legitimacy and authority police hold to dictate and regulate behaviour (Chan et al., 2023; Sunshine & Tyler, 2003). When legitimacy exists, the duty or obligation of the public to obey police directives is enhanced (Reisig et al., 2023). It has been proposed that increasing legitimacy of police through the enactment of PJ is one of the most cost-effective approaches to encouraging both voluntary and willing compliance and increasing the obligation of community members to engage in law abiding behaviours (Chan et al., 2023; Mazerolle et al., 2013b; Murphy, 2020; Sunshine & Tyler, 2003).

Previous research has examined supervisor behaviour and PJ (Donner & Olson, 2020; Eterno et al., 2021; Peacock et al., 2023). An emerging body of police research has examined the relationship between organizational justice and PJ however the findings remain mixed (Borchardt et al., 2024). This work similarly draws on the premise that the way in which officers are treated inside the organization will be reflected in their attitudes and behaviours out on the street (Peacock et al., 2023; Van Craen & Skogan, 2017).

To our knowledge no research has investigated the relationship between LMX leadership and PJ. Drawing on research examining supervisor behaviours (including organizational justice) and PJ, a positive relationship between LMX leadership and PJ makes intuitive sense.

Officers who receive adequate information, resources and support from their leaders will be more likely to reciprocate through meeting or exceeding performance expectations (Mumtaz & Rowley, 2020; Yuan et al., 2023). PJ is often actively encouraged and valued by leadership and police agencies as a performance expectation and/or metric. As such, the quality of leader-staff relationships, as captured by LMX leadership style, will increase the likelihood of PJ behaviours being enacted by officers who report to them.

H1. LMX is positively related to performance outcomes (i.e. PJ).

Leadership and Psychological Health

Policing is recognised as a high-risk occupation (Drew & Martin, 2023; Syed et al., 2020).

Due to rigorous psychological screening processes used by many agencies, individuals entering policing are likely to be some of the most psychologically healthy in our population (Drew et al., 2023). However, studies of serving police reveal alarmingly high rates of burnout, post-traumatic stress disorder (PTSD), depression, anxiety and generalised distress (Carleton et al., 2020; Drew et al., 2023).

It is important to recognise the impacts of police work, specifically their exposure to potentially psychological traumatising events (PPTE). However, it is increasingly acknowledged that psychological harms often result from experiences within the organizational system itself (Carleton et al., 2020; Drew et al., 2024). Psychological health is affected by organizational (i.e. stress from organizational procedures, policies and systems such as (un)supportive leadership, lack of resources and training and favouritism) and operational factors (i.e. stress associated with the demands and nature of policing such as

work-life balance, shiftwork and anti-police sentiment) (Drew et al., 2024; McCreary & Thompson, 2006). Given this, it is argued that leaders play a significant role in employee wellbeing (Drew et al., 2023). Leaders are responsible for, and have the ability to, influence many of these workplace factors (Drew et al., 2023; Acquadro Maran et al., 2022). According to models of occupational stress such as the job demands-resources (JD-R) model, leaders are also able to buffer negative impacts of job demands that cause stress, burnout and reduced wellbeing (Sorengaard & Langvik, 2022).

The relationship between leadership and employee wellbeing is included in various leadership theories and has been empirically studied (Montano et al., 2023). However, some argue that research on leadership and psychological health is narrow, underdeveloped and lacks adequate inclusion of mediation pathways (Inceoglu et al., 2018; Martin et al., 2023). This perhaps is not surprising given that leadership theories, including the LMX theory, were originally developed to predict performance (Gregersen et al., 2014) rather than employee wellbeing (Inceoglu et al., 2018; Montano et al., 2023).

Drawing on the available research, significant relationships between leadership behaviours and psychological outcomes has been found in employee populations outside of policing (Acquadro Maran et al., 2022; Russell, 2014; Santa Maria et al., 201; Sorengaard & Langvik, 2022). LMX, when compared with other leadership styles, typically demonstrates a strong association with employee wellbeing, particularly burnout (Harms et al., 2017; Molines et al., 2020; Montano et al., 2023). However, it should be noted that studies of LMX and wellbeing often conceptualise psychological outcomes as positive job attitudes, such as job satisfaction (Inceoglu et al., 2018), rather than psychological health (Martin et al., 2023). As such, while it is generally concluded that leadership and employee wellbeing are related (Gregersen et al., 2016; Han & Sears, 2023; Montano et al., 2023; Sonnentag & Pundt, 2016), there is more to be learned.

Despite the interest that wellbeing and psychological health has attracted in policing over the last several years, there are surprisingly few studies examining the role of leadership style (Santa Maria et al., 2021). Little research undertaken with police cohorts has included validated measures of leadership and in turn, their relationship with wellbeing. One study conducted by Molines et al. (2020) with French police, examined how LMX mediates the relationship between transformational leadership and emotional exhaustion. LMX was found to have a significant negative relationship with exhaustion. Brunetto et al.'s (2014) study of Australian police established a relationship between LMX and wellbeing, with wellbeing conceptualized as job satisfaction and goal attainment.

Most police research has taken a broad view of leadership and wellbeing. Previous research generally focuses on generic supervisor support (Acquadro Maran et al., 2022). This research consistently reports positive relationships between lack of supervisor support and burnout (Sørengaard & Langvik, 2022), psychological distress (Gupta et al., 2023; Purba & Demou, 2019) and anxiety and depression symptomology (Gupta et al., 2023; Santa Maria et al., 2018). The current research explores the relationship between LMX style and burnout and psychological distress. Given that the association between specific conceptualizations of leadership style and wellbeing has received relatively little attention in policing this study makes a significant contribution.

H2. LMX is positively related to psychological health outcomes (i.e. burnout and psychological distress).

The Role of PCB as Mediator in Leadership-Outcome Relationships

While studying relationships between leadership and (a) performance and (b) psychological health are important, it is proposed that a more nuanced understanding of these relationships

is needed. Greater insight is required, not only into what leadership style should be developed in police leaders but also, the reason for its effect.

Psychological contracts are the unspoken agreement that employees perceive that they have made with their employer (Coyle-Shapiro et al., 2019; Rousseau, 1989; 1995). PCB occurs when there is a non-fulfilment of promises, obligations and expectations between the employee and organization (Rousseau, 1989; 1995; Zhao et al., 2007). PCB is a cognitive assessment. An employee makes an evaluation of the status of the social exchange between perceived promises made by or expected from the organization, and their perception of what has actually been met by the organization (Coyle-Shapiro et al., 2019; Zhao et al., 2007). As discussed earlier, it is proposed that PCB is particularly relevant to policing given the comparatively strong personal, agency and professional identity formation of police.

Supporting this, others have concluded that PCB is particularly relevant in organizations or occupations that have a strong public service ethos, such as police (Drew & Chevroulet, 2024; Sensky, 2008).

Employees view their direct supervisors as agents of the organization (Gotz et al., 2020; Wangrow et al., 2021). As such, leadership behaviours of direct supervisors are often perceived by staff as quasi-indicators of organizational action and support (Gotz et al., 2020; Kossek et al., 2011). It has been argued that employees take cues, such as respect and reciprocity enacted by supervisors, and generalise them to the organization (Gotz et al., 2020). Further, direct supervisor behaviours are likely, at least in part, to be used by staff to determine whether the organization has violated the psychological contract they believe has been made (Wangrow et al., 2021). Leaders can alter PCB perceptions as the most proximal organizational representative. Leaders actively manage or resolve breaches based on interactions with their staff (Hill et al., 2016). While more research is needed with police cohorts, previous studies with other occupations indicates the pivotal role of leaders in both

the development and maintenance of psychological contracts (Rousseau, 1995; Tosunoglu & Ekmekci, 2016).

H3. LMX is positively related to PCB.

In studies of employee cohorts, including some with police, PCB has been associated with better performance (Topa et al., 2022), reduced psychological distress, burnout, emotional exhaustion and other negative psychological outcomes (Costa & Neves, 2017; Coyle-Shapiro et al., 2019; Garcia et al., 2007; Jiang et al., 2017). While fewer studies have examined PCB as mediator of these relationship, emerging evidence does suggest that leaders, through their influence on psychological contracts, impact work-related staff outcomes (Wangrow et al., 2021).

In this study, PCB is proposed as an important intermediary variable in the relationship between leadership style and both, performance and psychological health. Direct supervisors are key in the fulfilment, violation and renegotiation of contracts over time (Zhong et al., 2023). Contracts are dynamic rather than static, with supervisors being ‘contract facilitators’ (Clarke & Scurry, 2020). High quality LMX relationships are likely to result in more effective management of met or unmet expectations relevant to PCB. It is hypothesised that when supervisors are perceived to be high on LMX, officers who report to them will be more likely to endorse PJ and experience less burnout and psychological distress. This will be due, at least in part, to less PCB (see Figures 1 and 2).

H4. The relationship between LMX and performance (i.e. PJ) is mediated by PCB.

H5. The relationship between LMX and psychological health (i.e. burnout and psychological distress) outcomes is mediated by PCB.

Current Study

While LMX is one of the most studied leadership theories, few studies have been undertaken in policing (Doyle & Roche, 2023). The concept of reciprocity of leader-staff relationships is discussed in scholarly police literature but LMX is not often studied or measured directly (Doyle & Roche, 2023). To our knowledge, this is the first study to empirically examine whether leadership style makes it more likely that police will experience PCB and given that breach, will report reduced performance (i.e. less PJ) and poorer psychological health (i.e. increased burnout and psychological distress). This research has important implications for the design of police leadership development programs. The findings will provide insight into how to more effectively develop police leaders who can make a positive impact on work-related and psychological health of those who they lead.

Figure 1

Hypothesised relationships Between LMX, Psychological Contract Breach, and Performance

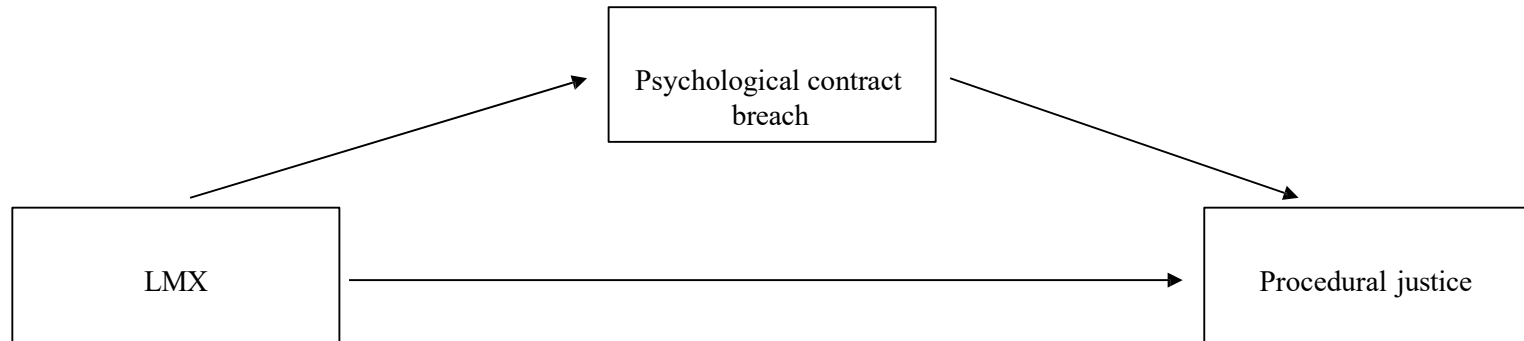
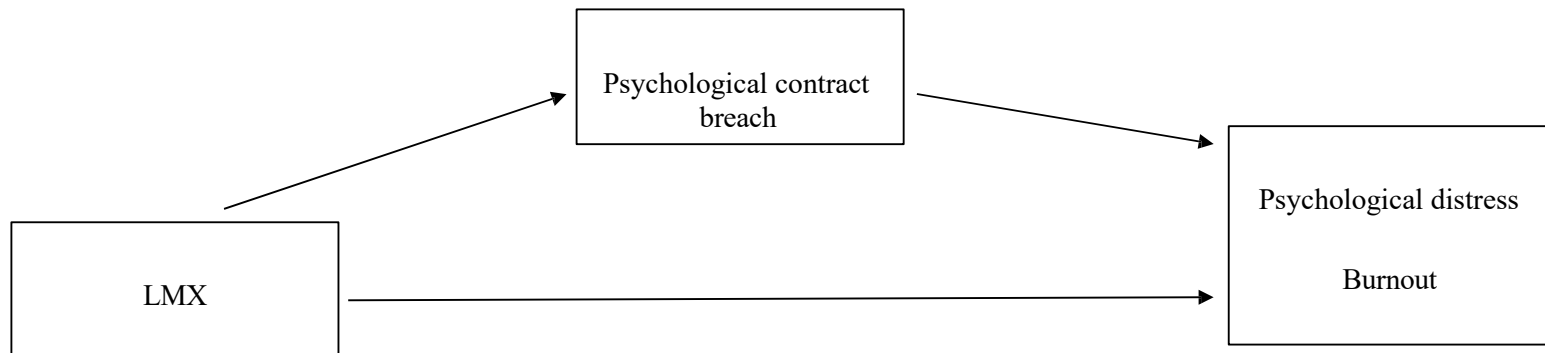


Figure 2

Hypothesised relationships Between LMX, Psychological Contract Breach, and Psychological Outcomes



Methods

Data and Procedure

The sample for this study included 1763 sworn police personnel who responded to a statewide police agency survey. The survey was administered in a single, large, state-based Australian police organization. It was conducted as part of an Australian Research Council (ARC) Linkage Grant (LP200200834) focused on developing an early warning system for police workplace health and performance. The survey was initially distributed via email by the Commissioner of Police. The email contained a link to an online survey hosted on an external (University) platform. Further emails were sent by the Presidents of the Police Unions who service the police organization. Ethics approval for the research was obtained from Griffith University Human Resource Ethics Committee (2021/793) and the police agency provided approval through their internal Research Committee.

A sample of 1763 sworn police constitutes a response rate of 14.4% of all sworn personnel employed by the agency. The sample included 1217 (71.3%) men and 491 (28.7%) women police. The mean age of the sample was 44.74 years (SD = 8.66) with an age range between 21 and 59. A range of demographics are provided in Table 1. The largest group of respondents held the rank of senior constable ($N = 811$; 46.5%), followed by sergeants ($N = 452$; 25.9%). Most respondents, almost 78%, had worked for the police agency for over 10 years. The largest single group held 21+ years of service (40.4%).

Table 1
Gender, Rank and Years of Service in Police Agency – Number and Percentage of Police Officers

	Number of police officers	Percentage of police officers
<i>Gender</i>		
Male	1217	71.3
Female	491	28.7
<i>Rank</i>		
Constable	173	9.9
Senior constable	811	46.5
Sergeant	452	25.9
Senior Sergeant	212	12.2
Inspector and above	96	5.5
<i>Years of service</i>		
Less than 5 years	161	9.1
5 to 10 years	274	15.5
11 to 15 years	302	17.1
16 to 20 years	313	17.8
21+ years	713	40.4

Measures

This study included four main variables of interest. These were leadership style, PCB, PJ, psychological distress and burnout.

Predictor variable. Leadership style was measured using a scale developed by Graen and Uhl-Bien (1995). The scale includes 7 items (LMX-7) that captures perceptions of respondents about the leadership behaviours of their supervisor. Respondents rated each item using a 5-point Likert scale. Depending on the question, responses ranged from 'rarely' (1) through to 'very often' (5); 'not a bit' (1) through to 'a great deal' (5); 'no chance' (1) through to 'very high chance' (5); or, 'not at all' (1) through to 'fully' (5). Higher scores on the scale indicated greater perception of high leader-member exchange between the participant and their direct supervisor ($M = 3.549$; $SD = 1.126$; $\alpha = 0.954$).

Outcome variables.

Procedural justice. PJ was measured using a five-item scale developed by Silver et al. (2017). The scale was designed to capture four major components of procedural justice, these include dignity and respect, neutrality, trustworthy motives, and participation. All items were rated using a 7-point Likert scale with responses ranging from 1 (not important at all) to 7 (extremely important). Responses to items were summed into a total score, higher scores indicated greater procedural justice ($M = 5.808$; $SD = 0.775$; $\alpha = 0.824$).

Burnout. The eight-item exhaustion sub-scale of the Oldenburg Burnout Inventory (OLBI) was used in this study. The scale measures feelings of exhaustion related to the experience of chronic work-related stressors (Demerouti, et al., 2003). Each item was rated using a 7-point Likert scale ranging from 1 (very strongly disagree) to 7 (very strongly agree). All items were summed to calculate a total scale score with higher scores indicating greater burnout ($M = 4.482$; $SD = 0.892$; $\alpha = 0.864$).

Psychological distress. This outcome was measured using the ten item Kessler Psychological Distress (K10) scale (Kessler., et al., 2002). Each of the ten items were rated by participants using a 5-point Likert response scale. Responses ranged from 1 (none of the time) to 5 (all of the time). All items were summed to create a single scale total, with higher scores on the scale indicating greater psychological distress ($M = 1.938$; $SD = 0.801$; $\alpha = 0.929$).

Mediation Variable. Psychological contract breach (PCB) was measured using the 5 item scale developed by Robinson and Morrison (2000). The scale measures ‘an overall evaluation of how well one’s contract has been fulfilled by one’s employer’ (Robinson & Morrison, 2000, p. 534). Respondents rated each item using a 7-point Likert scale. A rating of 1 indicated ‘very strongly disagree’ and a rating of 7 indicated ‘very strongly agree’. Three of the five items were reverse scored prior to summing items to calculate a total scale score. Higher scores on the scale indicated greater PCB ($M = 4.214$; $SD = 1.197$; $\alpha = 0.890$)

Covariates. Several covariates were included in the analyses to control for potential demographic differences. They were included in each mediation analysis. Specifically, gender (female=0; male=1), rank (1=constable; 2=senior constable; 3=sergeant; 4=senior sergeant; 5=inspector or above), and years worked in the police organization (1=less than five years, 2=5 to 10 years; 3=11 to 15 years; 4=16 to 20 years; 5=21+ years) were included. Table 2 provides the descriptive statistics for all variables and bivariate correlations of the scales and covariates.

Analytic strategy

The current research aimed to determine whether PCB mediates the relationship between LMX and the three outcome variables: PJ, psychological distress and burnout. Therefore,

three mediation models were tested. Gender, rank and years of service within the police agency were included as covariates in each mediation analysis.

For each mediation model, path c' is the direct effect of LMX on the outcome variable, when controlling for PCB. Path b is the effect of PCB on the outcome variable, when controlling for LMX. The effect of LMX on PCB is denoted as path a . Therefore, the indirect effect of LMX on the outcome variable (via the mediating effect of PCB) is calculated as path $a * b$. A significant indirect effect indicates that mediation has occurred. Finally, path c is the total effect of LMX on the outcome, which is the sum of the direct and indirect effects.

Each mediation model was tested in SPSS v29.0 using Hayes' (2022) PROCESS Macro. Specifically, PROCESS model 4 was used to test the direct and indirect effects in the model simultaneously. Model 4 tests indirect effects by generating percentile bootstrap confidence intervals. In the present study, 5000 bootstrap samples were used to generate a 95% confidence interval for the indirect effect. If the interval does not contain the value 0, this indicates that the indirect effect is statistically significant at the 0.05 level.

Table 2*Descriptive Statistics and Bivariate Correlations for all Scales and Covariates*

	Number of items	α	$M(SD)$	1	2	3	4	5	6	7	8
1. Gender	1	-	--	1							
2. Rank	1	-	--	0.084**	1						
3. Years of service	1	-	3.648 (1.377)	0.095**	0.697**	1					
4. LMX	7	0.954	3.549 (1.126)	0.046	-0.072**	-0.003	1				
5. Psychological contract breach	5	0.890	4.214 (1.197)	0.060*	0.025	-0.081**	-0.337**	1			
6. Procedural justice	5	0.824	5.808 (0.775)	-0.095**	0.052*	0.116**	0.074**	-0.124**	1		
7. Psychological distress	10	0.929	1.937 (0.801)	0.056*	0.052*	-0.021	-0.277**	0.451**	-0.099**	1	
8. Burnout	8	0.864	4.482 (0.892)	0.012	-0.046	-0.107	-0.259**	0.489**	-0.154**	0.642**	1

Note. * Correlation is significant at the 0.05 level (2-tailed); ** Correlation is significant at the 0.01 level (2-tailed).

Results

Results of the three mediation models tested are provided below. Analyses are presented for each of the three outcome variables which included PJ, burnout and psychological distress.

Mediation Analysis Testing the Relationships Between LMX, PCB and Procedural Justice

Hayes' (2022) PROCESS Macro (model 4) was used to test whether PCB mediates the relationship between LMX and procedural justice. Assumption tests were conducted and revealed the presence of 15 outliers, defined as datapoints with standardised residuals greater than 3. These outliers were excluded from the analysis. There were no influential or leverage points, and the assumptions of linearity and normality were met. Furthermore, there was no evidence of multicollinearity, as all tolerance values were greater than 0.1 (Hair et al., 2014) and correlations between the predictors were all less than 0.7 (see Table 2 for all bivariate correlations).

A visual inspection of the studentized residuals plotted against unstandardized predicted values revealed that the assumption of homoscedasticity was violated. To account for this, a heteroscedasticity consistent standard error (HCSE) estimator was used when running the mediation analysis. Specifically, HC3 (Davidson and MacKinnon, 1993) was selected as it performs well in situations where there are no high leverage points (Hayes and Cai, 2007).

Direct Effects. The full results of the mediation analysis are reported in Table 3 and represented graphically in Figure 3. The analysis revealed a significant total effect of LMX on procedural justice (path c), such that with each unit increase in LMX, procedural justice was predicted to increase by 0.038 units, $p = 0.039$. However, when LMX and PCB were entered in the model simultaneously, the effect of LMX on procedural justice (path c') failed to reach significance ($b = 0.023$, $p = 0.230$), suggesting mediation. When controlling for LMX, the effect of PCB on procedural justice (path b) was significant, such that with each

unit increase in PCB, procedural justice was predicted to decrease by 0.043 units, $p = 0.018$.

When PCB was regressed on LMX (path a), a significant relationship emerged such that higher levels of LMX predicted lower PCB ($b = -0.353, p < 0.001$).

Indirect Effect. An examination of the indirect effect revealed that LMX significantly predicts procedural justice via the mediating effect of PCB (path a * b), $b = 0.015, SE = 0.007, 95\% CI: [0.003, 0.029]$. In combination, the results of the mediation analysis revealed that PCB fully mediates the relationship between LMX and procedural justice. In other words, the relationship between LMX and procedural justice can be fully explained by the level of PCB experienced by the officers.

Mediation Analysis Testing the Relationships Between LMX, PCB and Psychological Distress

A mediation analysis was conducted to determine whether the relationship between LMX and psychological distress is mediated by PCB. Assumption testing revealed minor deviations from normality. However, this was not considered to be a counterindication for the mediation analysis, as linear regression is robust to non-normality, particularly when sample sizes are large (Lumley et al., 2002). Twenty-nine outliers were identified and excluded from the analysis. The assumption of homogeneity of variance was also violated. As a result, the HCSE estimator HC3 (Davidson and MacKinnon, 1993) was used when conducting the analysis. All other assumptions of the analysis were met.

Direct Effects. Table 4 shows the results of the mediation analysis conducted on LMX, PCB and psychological distress. The relationship between these variables is also visually represented in Figure 4.

When controlling for PCB, the direct effect of LMX on psychological distress (path c') was statistically significant such that with every unit increase in LMX, distress was predicted to decrease by 0.095 units, $p < 0.001$. Similarly, PCB significantly predicted psychological

distress when controlling for LMX (path b), $b = 0.231, p < 0.001$. Path a was also statistically significant, as with each unit increase in LMX, PCB was predicted to decrease by 0.359 units, $p < 0.001$. Finally, the total effect of LMX on psychological distress (path c) was significant, such that higher levels of LMX predicted lower distress, $b = -0.178, p < 0.001$.

Indirect Effect. A bootstrap confidence interval was generated to test the significance of the indirect effect of LMX on psychological distress via PCB. This effect was statistically significant, $b = -0.083, SE = 0.008, 95\% CI: [-0.100, -0.067]$, indicating that the relationship between LMX and psychological distress is partially mediated by PCB.

Mediation Analysis Testing the Relationships Between LMX, PCB and Burnout

The final mediation analysis aimed to determine whether PCB can help to explain the relationship between LMX and burnout. Assumption testing revealed 17 outliers, which were excluded from the analysis. All other assumptions were met.

Direct Effects. The full results of the regression analysis are displayed numerically in Table 5, and graphically in Figure 5. The total effect of LMX on burnout (path c) was statistically significant, such that higher levels of LMX were associated with lower burnout, $b = -0.210, p < 0.001$. When PCB was added to the model, the direct effect of LMX on burnout (path c') remained significant, $b = -0.085, p < 0.001$. Additionally, when controlling for the effect of LMX, PCB significantly predicted burnout (path b), $b = 0.343, p < .001$. Finally, when PCB was regressed on LMX (path a), a significant relationship emerged such that with each unit increase in LMX, PCB was predicted to decrease by 0.363, $p < .001$.

Indirect Effect. The indirect effect of LMX on burnout via PCB is denoted as path a * b. This effect was statistically significant, $b = -0.125, SE = 0.011, 95\% CI: [-0.147, -0.104]$. In combination, the results of the mediation analysis suggest that the relationship between LMX and burnout is partially mediated by PCB.

Table 3*Results of Mediation Analysis Examining Relationships Between LMX, PCB and Procedural Justice*

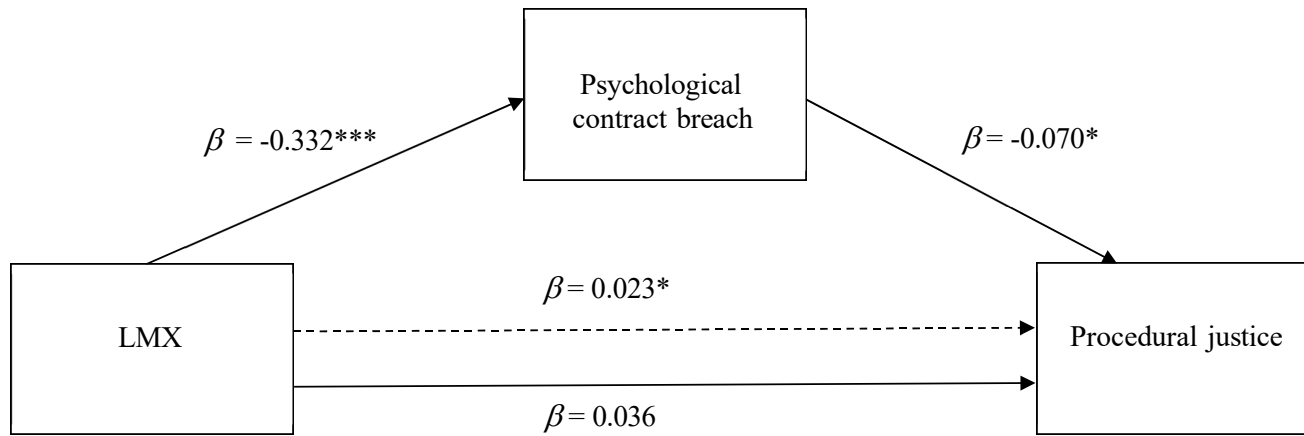
<i>Direct effects</i>	<i>R</i>	<i>R</i> ²	<i>F</i>	<i>p</i>	<i>b</i>	<i>β</i>	<i>t</i>	<i>p</i>	LLCI	ULCI
Procedural justice	0.188	0.035	10.533	***						
LMX (path c')					0.023	0.036	1.201		-0.015	0.062
PCB (path b)					-0.043	-0.070	-2.373	*	-0.078	-0.007
Gender					-0.155	-0.097	-3.909	**	-0.233	-0.077
Rank					0.111	0.154	4.129	***	0.058	0.164
Years of service					-0.018	-0.034	-0.880		-0.057	0.022
PCB	0.366	0.134	54.018	***						
LMX (path a)					-0.353	-0.332	-12.909	***	-0.407	-0.299
Gender					0.257	0.099	4.218	***	0.137	0.376
Rank					-0.119	-0.169	-4.985	***	-0.278	-0.121
Years of service					0.094	0.109	3.237	**	0.037	0.150
Procedural justice	0.176	0.031	11.970	***						
LMX (path c)					0.038	0.059	2.067	*	0.002	0.075

Gender			-0.166	-0.104	-4.170	***	-0.245	-0.088
Rank			0.120	0.166	4.503	***	0.068	0.172
Years of service			-0.041	-0.022	-1.085		-0.061	0.018
<i>Indirect effect</i>	<i>b</i>	β	Bootstrapped SE	Bootstrapped LLCI	Bootstrapped ULCI			
LMX – PCB – Procedural justice (a * b)	0.015	0.023	0.007	0.003	0.029			

Note. LMX = Leader member exchange; PCB = Psychological contract breach; Bootstrap sample size = 5000; Heteroscedasticity consistent standard error estimator HC3 was used; SE = Standard error with respect to *b*; LLCI = Low limit confidence interval with respect to *b*; ULCI = Upper limit confidence interval with respect to *b*; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Figure 3

Path Diagram Showing the Mediating Effect of Psychological Contract Breach on the Relationship Between LMX and Procedural Justice



Note. * Correlation is significant at the 0.05 level; *** Correlation is significant at the 0.001 level.

Table 4*Results of Mediation Analysis Examining Relationships Between LMX, PCB and Psychological Distress*

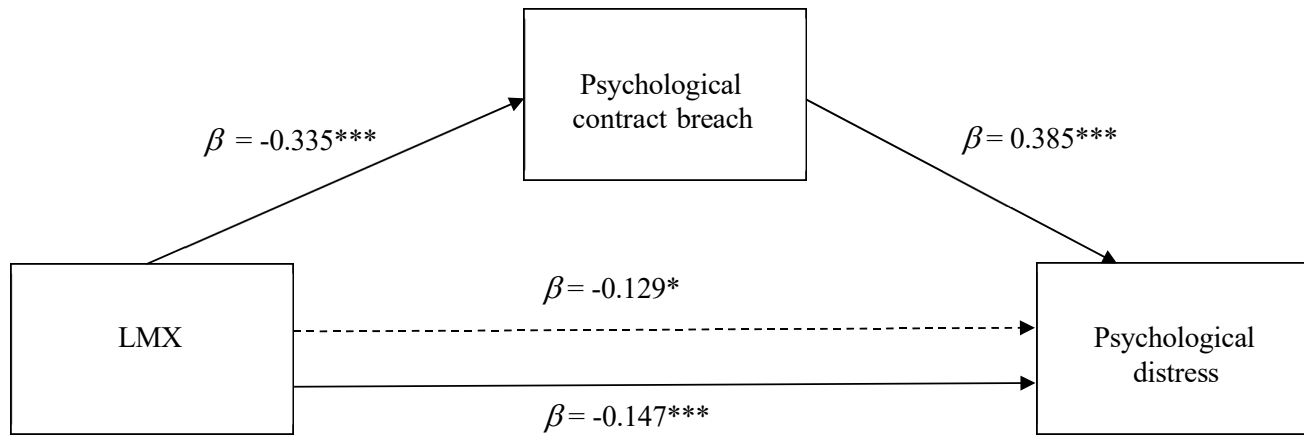
<i>Direct effects</i>	<i>R</i>	<i>R</i> ²	<i>F</i>	<i>p</i>	<i>b</i>	<i>β</i>	<i>t</i>	<i>p</i>	LLCI	ULCI
Psychological distress	0.459	0.211	78.581	***						
LMX (path c')					-0.095	-0.147	-5.657	***	-0.128	-0.062
PCB (path b)					0.231	0.385	15.216	***	0.201	0.261
Gender					0.015	0.010	0.437		-0.052	0.081
Rank					-0.003	-0.004	-0.129		-0.046	0.041
Years of service					0.018	0.036	1.131		-0.014	0.050
PCB	0.364	0.132	55.914	***						
LMX (path a)					-0.359	-0.335	-13.378	***	-0.411	-0.306
Gender					0.214	0.082	3.588	***	0.097	0.330
Rank					-0.193	-0.165	-4.884	***	-0.270	-0.115
Years of service					0.081	0.095	2.844	**	0.025	0.137
Psychological distress	0.286	0.082	30.041	***						
LMX (path c)					-0.178	-0.276	-10.489	***	-0.211	-0.144

Gender			0.064	0.041	1.751		-0.008	0.136
Rank			-0.047	-0.067	-2.039	*	-0.093	-0.002
Years of service			0.037	0.072	2.158	*	0.003	0.071
<i>Indirect effect</i>	<i>b</i>	β	Bootstrapped SE	Bootstrapped LLCI	Bootstrapped ULCI			
LMX – PCB – Psychological distress (a * b)	-0.083	-0.129	0.008	-0.100	-0.067			

Note. LMX = Leader member exchange; PCB = Psychological contract breach; Bootstrap sample size = 5000; Heteroscedasticity consistent standard error estimator HC3 was used; SE = Standard error with respect to *b*; LLCI = Low limit confidence interval with respect to *b*; ULCI = Upper limit confidence interval with respect to *b*; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Figure 4

Path Diagram Showing the Mediating Effect of Psychological Contract Breach on the Relationship Between LMX and Psychological Distress



Note. * Correlation is significant at the 0.05 level; *** Correlation is significant at the 0.001 level.

Table 5*Results of Mediation Analysis Examining Relationships Between LMX, PCB and Burnout*

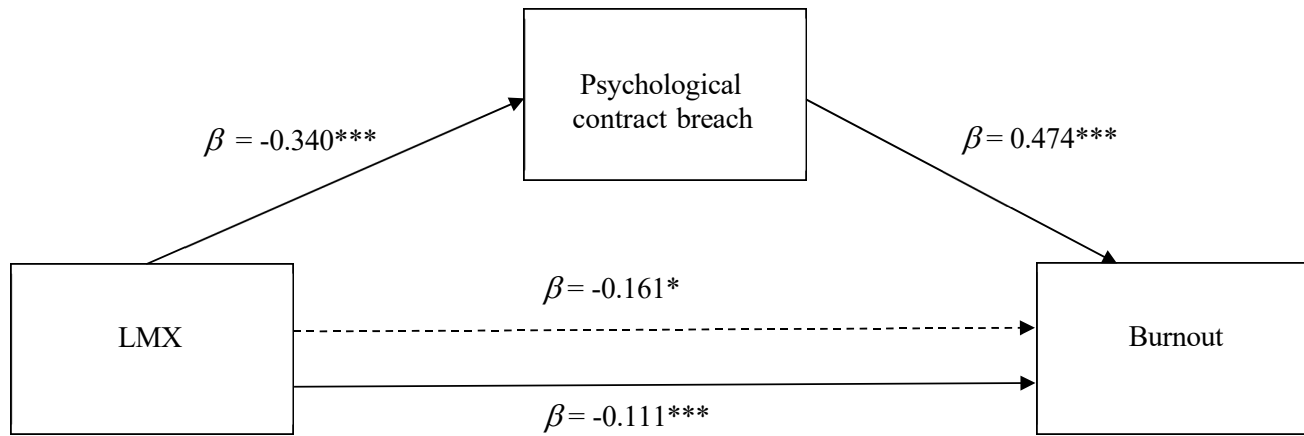
<i>Direct effects</i>	<i>R</i>	<i>R</i> ²	<i>F</i>	<i>p</i>	<i>b</i>	<i>β</i>	<i>t</i>	<i>p</i>	LLCI	ULCI
Burnout	0.531	0.282	124.706	***						
LMX (path c')					-0.085	-0.111	-4.855	***	-0.120	-0.051
PCB (path b)					0.343	0.474	20.701	***	0.311	0.376
Gender					-0.021	-0.011	-0.513		-0.101	0.059
Rank					-0.041	-0.048	-1.607		-0.091	0.009
Years of service					-0.024	-0.038	-1.288		-0.060	0.013
PCB	0.372	0.138	63.603	***						
LMX (path a)					-0.363	-0.340	-14.513	***	-0.412	-0.314
Gender					0.239	0.091	3.868	***	0.118	0.360
Rank					-0.195	-0.165	-5.088	***	-0.270	-0.120
Years of service					0.081	0.094	2.889	**	0.026	0.136
Burnout	0.297	0.088	38.408	***						
LMX (path c)					-0.210	-0.272	-11.280	***	-0.246	-0.173

Gender			0.061	0.032	1.326		-0.029	0.151
Rank			-0.108	-0.126	-3.784	***	-0.163	-0.052
Years of service			0.004	0.006	0.187		-0.037	0.045
<i>Indirect effect</i>	<i>b</i>	β	Bootstrapped SE	Bootstrapped LLCI	Bootstrapped ULCI			
LMX – PCB – Burnout (a * b)	-0.125	-0.161	0.011	-0.147	-0.104			

Note. LMX = Leader member exchange; PCB = Psychological contract breach; Bootstrap sample size = 5000; SE = Standard error with respect to *b*; LLCI = Low limit confidence interval with respect to *b*; ULCI = Upper limit confidence interval with respect to *b*; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Figure 5

Path Diagram Showing the Mediating Effect of Psychological Contract Breach on the Relationship Between LMX and Burnout



Note. * Correlation is significant at the 0.05 level; *** Correlation is significant at the 0.001 level.

Figure by authors.

Discussion

The current study sought to better understand how leadership style is related to job performance (procedural justice) and psychological health (burnout and psychological distress). Further, the role of PCB in explaining these relationships was examined. To the best of our knowledge the relationship between LMX and PJ had not been previously studied in the police context and only limited research has examined the relationship between LMX and psychological health. Few studies have included PCB in research with police cohorts and no studies had examined PCB as a potential mediator between LMX and either PJ or psychological health.

Findings of the current study were consistent with research demonstrating leadership is associated with both performance and psychological health (Avolio et al., 2009; Montano et al., 2023; Quade et al., 2020; Thrasher et al., 2020). As hypothesised, the study finds leaders who were perceived by staff to be high on LMX were more likely to endorse PJ principles, be less burnt out and less psychologically distressed. The research demonstrates that the quality of relationship between a leader and their staff is critical in achieving these outcomes.

Drawing from LMX theory, and based on the concept of reciprocity, it is likely that the findings are reflective of staff being more motivated to meet or exceed performance expectations (Mumtaz & Rowley, 2020; Yuan et al., 2023). PJ is often actively encouraged and valued by leadership and police agencies as a performance expectation and/or metric (Chan et al., 2023). As such, officers endorse PJ principles because it is what is wanted, expected and/or asked for by their leaders (Mumtaz & Rowley, 2020; Yuan et al., 2023).

The current study provides important insights into the process through which leadership behaviours result in differential PJ outcomes, with PCB fully mediating this relationship. This finding supports previous research in non-police populations. Leaders are influential in the

development and maintenance of psychological contracts (Rousseau, 1995; Tosunoglu & Ekmekci, 2016). This study indicates the essential and pivotal role of leader-staff relationships in altering and resolving breaches. It is through the active management of psychological contracts that leaders impact on staff performance, in this case PJ. The current study is consistent with previous research on constructs such as organizational justice (Peacock et al., 2023; Van Craen & Skogan, 2017). The experience or treatment of officers 'inside' their agency is reflected in their attitudes and behaviours "on the street".

The study findings support the hypothesis that in police cohorts LMX leadership style and psychological health (measured in this study as burnout and psychological distress) are positively related. This research is consistent with previous research on supervisor support (Acquadro Maran et al., 2022; Santa Maria et al., 2018; Sorengaard & Langvik, 2022). The research demonstrates that a supportive relationship developed between supervisors and their staff, as specifically defined by LMX theory, is associated with psychological health. Officers who receive adequate information, resources and support from their leaders are likely to be more psychologically healthy as a result. Based on this research, increasing positive LMX leadership style of police leaders can make a significant contribution to combating the alarmingly high rates of psychological ill-health of police. Police leaders through the type of relationships and interactions they develop with their staff, can reduce perceived PCB and in turn, decrease rates of burnout and psychological distress in their staff.

Implications for Practice

The current study has important practical implications for police agencies who seek to influence performance and psychological health through leadership action. Specifically, the study provides guidance for police leadership development programs. This research indicates

that developing leaders who are perceived by their staff as being high on LMX characteristics will positively influence PJ and psychological health.

Most importantly for PJ, but also relevant for burnout and psychological distress, is the need to develop leaders who are high in LMX. This will reduce perceptions of PCBs amongst staff which can lead to these negative outcomes. It may be useful for leadership development programs to explicitly include in its curriculum the role of leaders in the management of psychological contracts and their role in actively negotiating and influencing them through leadership actions.

Agencies should consider auditing the prevalence of LMX leadership within their organization. Understanding organizational leadership profiles will provide a foundation on which to assess the relative cost-benefit of designing and implementing LMX focused programs. Agencies could determine how much improvement they might be able to achieve in job performance and psychological health if their proportion of high LMX leaders was increased. It is worth noting that previous research comparing police across Australia, the USA and Malta found that Australian police leaders reported the lowest LMX scores (Brunetto et al., 2020). Given the current study was conducted in an Australian police agency, there may be some urgency and need for this agency to adopt recommendations to more heavily invest in leadership programs designed around LMX practices.

Limitations and Recommendations for Future Research

While the current study makes an important contribution to the literature, there are several limitations to the research that should be considered. The study involved a large sample of police, however they were all employed in a single police agency in Australia. The generalisability of findings should be tested in geographically diverse police organizations and across agencies. Further, other measures of job performance should be included in future

research. This would allow an assessment of whether the strength of relationships between leadership style and different types of job performance vary. This research employed a cross-sectional design. A longitudinal design, given that the associations between leadership, PCB and outcomes potentially evolve over time, would provide further insights into the process of how and why PCB explain these relationships. Based on the practical implications drawn from this research, research that involves an evaluation of police leadership development programs that are designed to enhance LMX leadership would be useful. Surveys conducted pre and post leadership program delivery would provide evidence as to the benefits to performance and psychological health that might be achieved through enhancing LMX leadership practices.

Conclusions

The current study provides important insights, in the police context, of the relationships between leadership style and job performance (procedural justice) and psychological health (burnout and psychological distress). The study provides, for the first time with police, empirical evidence that supports the importance of understanding the role of PCB in explaining how leadership influences these outcomes. This research has important practical implications for the design of police leadership development programs. Police organizations who seek to improve performance and psychological health of their officers can use these study findings to provide targeted support and development of specific leadership action that is most likely to produce positive outcomes. Quality relationships developed between police leaders and their staff, built on trust, reciprocity, and loyalty are essential in achieving better performance and building a cohort of police who are psychologically healthy.

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