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The Protective Role of Belief in a Just World on the Well-being of Police Officers: A Parallel Multiple Mediation of Voice Behaviour, Vertical Trust, and Work-Family Conflict

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Conflict of Interest

The authors report there are no competing interests to declare.

Data Availability Statement

The datasets presented in this article are not publicly available because the participants of this study did not give permission for their data to be shared publicly. However, the datasets can be available under request directed to Isabel.Correia@iscte-iul.pt

Abstract

The present study examined the possibility of Belief in a Just World (BJW) acting as a personal resource for police officers, simultaneously protecting their well-being through voice behaviour, vertical trust, and work-family conflict. The sample comprised 573 police officers who voluntarily consented to answer an anonymous online survey. Self-reported measures of personal BJW, voice behaviour, vertical trust, work-family conflict, and well-being were collected. The results of a parallel multiple mediator model (controlling for quantitative demands) showed that all three mediators were significant. Therefore, we found support for BJW acting as a personal resource by simultaneously protecting police officers' well-being through boosting both voice behaviour and vertical trust, and reducing work-family conflict. Work-family conflict was found to have the largest effect size in the mediation mechanism between BJW and police officers' well-being. The implications of these results for future research and intervention in police organisations are discussed.

Keywords: well-being, belief in a just world, police officers, voice behaviour, work-family conflict, vertical trust, parallel multiple mediation model

The Protective Role of Belief in a Just World on the Well-being of Police Officers: A Parallel Multiple Mediation of Voice Behaviour, Vertical Trust, and Work-Family Conflict

Well-being in the context of the workplace has been highlighted as an important priority of organisations (e.g., WHO, 2019). Police officers, in particular, constitute a professional group whose reduced levels of well-being have been the object of much concern, not only from the academic community (e.g., Taris et al., 2010) but also from police organisations (e.g., European Federation of Police Unions, <https://www.eupol.org/>). To address this global threat, research has focused on identifying resources that might reduce the impact of job demands on well-being (Bakker et al., 2005; Xanthopoulou et al., 2007).

The Belief in a Just World (BJW, Lerner 1980) has been identified as an important personal resource (Dalbert, 2001) that promotes the well-being of people in general (e.g., Correia et al., 2023) and of workers in particular (e.g., Otto & Schmidt, 2007), even when controlling for other well-being predictors. The underlying mechanisms between BJW and well-being have been theoretically conceived as “Belief in a Just World functions” (Dalbert, 2001) and are the following: (1) BJW compels people to act fairly themselves (Hafer, 2000); (2) BJW enables people to trust in being treated fairly by others (Zuckerman & Gerbasi, 1977), and to invest in long-term goals (Dette et al., 2004; Otto & Dalbert, 2005); and (3) BJW promotes the assimilation of injustices (see Dalbert, 2001, for a review). These functions can be operationalised with different indicators.

Notwithstanding the theoretical advances, there is an enormous gap in research examining potential mechanisms underlying the association between BJW and well-being. This study intends to be a contribution to advance this line of research by testing underlying mechanisms closely related to the functions of BJW that are of crucial importance in organisations: voice behaviour (e.g., Van Dyne & LePine, 1998), vertical trust (e.g., Tyler &

Degoye, 1996), and work-family conflict (e.g., Greenhaus & Beutell, 1985). Moreover, to the best of our knowledge, this study is the first to use a parallel multiple mediator model to examine how several mediators function as simultaneous underlying processes in the relationship between BJW and well-being. This analysis allows for the study of the contribution of each mediator (Preacher & Hayes, 2008) thereby elucidating how much each path explains the relationship between the BJW and the well-being of police officers.

The importance of well-being in Police Officers

The acknowledgment of the relevance of police officers' well-being has been highlighted due to the severe risk factors they face: they work with low human and material resources, they have heavy bureaucratic duties, and they may face negative attitudes from the populations (Burke & Mikkelsen, 2006). Furthermore, they deal with criminals and violence (e.g., Gomes & Afonso, 2016). This exposure to ongoing occupational stressors has been shown to severely affect the well-being of police officers in many countries (Queirós et al., 2020, for a review).

This decrease in well-being has consequences not only for the police officers but also for the organisation. For individuals, it leads to poor mental health (Violanti et al., 2017) and a higher risk of suicide (e.g., Violanti et al., 2019). For organisations, it negatively affects performance (Bertilsson et al., 2020), increases counterproductive work behaviors (Smoktunowicz et al., 2015), and may result in inappropriate interactions with citizens, such as the use of excessive force (Neely & Cleveland, 2011). All of these factors have probably contributed to the crises of recruitment and retention of police officers (Wilson et al., 2010).

In Portugal, where the present study has been conducted, there have been more deaths of police officers due to suicide than in the course of their duty¹. This state of affairs, coupled

¹ <https://www.jn.pt/2181204150/ha-mais-policias-a-morrer-por-suicidio-do-que-em-funcoes/>

with challenging working conditions and low salaries, has originated public demonstrations by police officers in the streets, claiming better job conditions².

Theoretical Approaches to the Study of Justice Perceptions: The Case of Police Officers

Justice perceptions have been theorised within two relatively independent lines of research: a content-oriented approach and a motivational approach (Dalbert, 2001). The content-oriented approach focuses mostly on what is seen as fair or unfair and includes the study of distributive justice (Adams, 1965) and procedural justice (Thibaut & Walker, 1975). The motivational approach, represented by the just world theory (Lerner, 1980), aims to explain why people are concerned with justice and how it guides their attitudes and actions.

In the specific case of studies related to police officers, most of the literature on justice perceptions has been developed within the content-oriented approach, predominantly within the procedural justice framework. Procedural justice includes an interpersonal treatment dimension and a decision-making dimension (Tyler & Blader, 2003). The interpersonal treatment dimension refers to the expectation of dignified and respectful treatment by authorities, including caring and benevolent treatment. The decision-making dimension refers to the expectation that authorities will make fair and neutral decisions, which also implies the opportunity to give inputs during the decision-making process, receive an explanation of why a specific decision was made, and the possibility to appeal a decision.

Several studies have found that by treating citizens in a procedurally fair manner, police officers increased the likelihood that citizens accepted their directives and considered them as legitimate authorities (see Tyler, 2011, for a review; see Bottoms & Tankebe, 2013 for a discussion).

In the present research, we stand on the motivational approach to study the underlying processes in the relationship between BJW and the well-being of police officers.

² <https://www.publico.pt/2024/02/15/sociedade/noticia/psp-gnr-voltam-protestos-vigilias-aeroportos-2080383>

The Just World theory and the Belief in a Just World functions

Since the first formulations of the psychological study of justice processes, justice perceptions have been theorised to lead to better well-being. The just world theory explains this relationship by proposing that people are motivated to perceive events as just because it gives people confidence that no unjust event will happen to them (Lerner, 1980). According to the just world theory, the need to perceive events as just (BJW; Lerner, 1980) holds universally adaptive value (Bartholomaeus, 2023; Lerner, 1980). Consequently, BJW is considered a personal resource (Dalbert, 2001), meaning it is a personal disposition that positively impacts people's well-being regardless of whether they are under stress (Cohen & Wills, 1985).

Dalbert (2001) identified several possible underlying mechanisms between BJW and well-being. The first one is related to the fact that in a just world, a positive future is conceived as a reward for the individual's behaviour and character. Therefore, it is expected that the more individuals believe in a just world, the more compelled they feel to strive for justice themselves (Dalbert, 2001, Lerner, 1980). Research has found support for these predictions: higher just world believers are more likely to help people in need (Bierhoff et al., 1991), have a stronger obligation for reciprocity (Edlund et al., 2007), have stronger social responsibility as a trait (Bierhoff, 1994), tend to attend their goals through just means (Hafer & Bègue, 2005), show less rule-breaking behaviour (Otto & Dalbert, 2005), less delinquent intentions (Sutton & Winnard, 2007), less bullying behaviour (Correia & Dalbert, 2007), and less cheating and delinquent behaviour (Donat, et al., 2014; Münscher et al., 2020).

As a second function, BJW provides more trust in others (Furnham, 1995) as well as in the justice of one's fate (Otto et al., 2009), which gives individuals the confidence to invest in long-term goals (Otto & Dalbert, 2005). Belief in a just world has also been found to be

positively associated with trust in institutions (e.g., Correia & Vala, 2004) and organisations (Cheng et al., 2023).

As a third function, people are motivated to defend their BJW when they face unjust situations happening to themselves or other people (e.g., Dalbert, 2001). If people believe unfairness can be resolved, the BJW motivates them to act in a way that eliminates injustice and reestablishes justice. However, if people perceive that it is not possible to reestablish justice, BJW motivates them to assimilate this experience into their BJW by decreasing the perception of injustice. This can be achieved by downplaying the unfairness, which can manifest in various ways, such as blaming the victim or denying the perception of the suffering caused by the situation (see Dalbert, 2001, for a review).

So far, studies have only addressed the relationship between BJW and each one of its underlying functions independently, neglecting the possibility of testing and studying the underlying role of the three different functions of BJW acting simultaneously. In the present study, we will test a multiple mediator model with the three different functions of BJW acting as parallel mediators. This will allow us to determine and compare the extent of each mediator's contribution.

In the current study, the three above-mentioned BJW functions were operationalised with indicators that have long been conceived as crucial factors in organisations: the strive for acting fairly was operationalised through voice behaviour (Hirschman, 1970); the trust function was operationalised through vertical trust (e.g., Mayer et al., 1995), with a specific focus on trust in the Commander; and the assimilation of injustices was operationalised through a reduced work-family conflict (Hall et al., 2010). All these BJW functions have already been shown to be associated with well-being.

The mediating role of voice behaviour between BJW and well-being

Employee voice can be defined as the employee's speaking up about ideas, concerns, information, or opinions about work-related issues, so that inefficiencies are rectified, or even to improve organisational functioning (Van Dyne & LePine, 1998). According to Hirschman (1970), voice is the most beneficial strategy that individuals can use when facing work-related challenges. When employees do not voice, for instance, do not express concerns regarding organisational practices that may cause harm to the organisation, it can have highly negative consequences both for the employees and the organisation (Liang et al., 2012).

Personal BJW has been found to be a predictor of employee voice behaviour (Cheng et al., 2020), and voice behaviour has already been found to be associated with well-being (Xu et al., 2021), but no study has tested the mediation between BJW and well-being through voice behaviour. In this study, we expected voice behaviour to mediate between the BJW and the well-being of police officers.

The mediating role of vertical trust between BJW and well-being

According to Mayer et al. (1995), trust is the willingness of a trustor to be vulnerable to the actions of a trustee based on the positive expectation that the trustee will perform a particular action. Vertical trust (also named trust in leaders), is a vital component of effective working relationships (e.g., Tyler & Degoye, 1996). Indeed, Colquitt et al. (2007) found moderately strong relationships between vertical trust and the three facets of job performance: better task performance, more citizenship behaviours, and fewer counterproductive behaviours. Furthermore, it has been shown that vertical trust at the workplace is associated with better well-being of employees (Liu et al., 2010).

Cheng et al. (2023) recently showed a positive association between BJW and organisational trust but, as far as we know, no study examined the specific association between BJW and vertical trust. In this study, we used an indicator of vertical trust which was

operationalised as trust in a Superior, in this particular case “the Commander”. We expected vertical trust to mediate between the BJW and the well-being of police officers.

The mediating role of reduced work-family conflict between BJW and well-being

Work-family conflict may be considered a threat to justice in organisational contexts because work-family conflict refers to “a form of interrole conflict in which the role pressures from work and family domains are mutually incompatible in some respect” (Greenhaus & Beutell, 1985, p. 77). Police work is often associated with high demands and high levels of stress that very often affect their personal lives very negatively (Queirós et al., 2020, for a review). Indeed, a negative association between work-family conflict and well-being has been repeatedly found (e.g., Hall et al., 2010).

While we are not aware of any study that has examined the correlation between BJW and work-family conflict, we assumed that BJW, by leading individuals to downplay injustices and harm, may contribute to a reduced work-family conflict, particularly among those with a higher BJW. In the current study, we expected the work-family conflict to mediate between the BJW and the well-being of police officers.

The simultaneous mediation of Voice Behaviour, Vertical Trust, and Work-Family Conflict between BJW and well-being

Furthermore, we aimed to investigate the relative contributions of the BJW functions (voice behaviour, vertical trust, and work-family conflict) as multiple processes taking place concurrently. By simultaneously including the three BJW functions as mediators into a multiple mediator model, we can determine whether these mediators make simultaneous significant contributions, as well as the extent of each mediator’s contribution (Preacher & Hayes, 2008). This enables us to identify to what extent each path helps explain the relationship between the BJW and the well-being of police officers, conditional on the presence of the other mediator in the model.

The present study

The present study examined the possibility that BJW acts as a personal resource for police officers, protecting well-being through voice behaviour, vertical trust, and reduced work-family conflict. Considering that police officers have very often high quantitative demands (Queirós et al., 2020, for a review) and that other studies have found that quantitative demands negatively affect well-being, even when justice perceptions are considered (Correia & Almeida, 2020), the impact of quantitative demands was controlled in the current study. Based on existing literature and evidence we defined the following research hypotheses (schematised in Figure 1):

- H1. There is a positive association between BJW and well-being.
- H2. Voice behaviour mediates the relationship between BJW and well-being.
- H3. Vertical trust mediates the relationship between BJW and well-being.
- H4. Work-family conflict mediates the relationship between BJW and well-being.
- H5. The association between BJW and well-being will be simultaneously mediated by the three BJW functions.

 Insert Figure 1 about here

After the first BJW scales (Rubin & Peplau, 1975), distinctions were made between the General BJW (GBJW, Dalbert et al., 1987) and the Personal BJW (PBJW, Dalbert, 1999). The Personal BJW reflects the belief that, overall, events in one's life are just, while the General BJW reflects the belief that, overall, events are just. Because the Personal compared to the General BJW is a better predictor of well-being (e.g., Correia & Dalbert, 2007), in the present study we used a measure of Personal BJW (Dalbert, 1999).

Method

Participants

The present study was conducted in Portugal with 573 police officers of the Portuguese Republican National Guard (Guarda Nacional Republicana), a police force that works all over Portugal (Continental and Islands). The police officers of this security force have military and police training and are organised in a special core of troops with the mission of maintaining public order and the security of people and goods (<https://www.gnr.pt/missao.aspx>).

The age of the participants varied between 20 and 65 years old ($M = 40.03$, $SD = 7.95$), and 90.2% were male. The average years of professional service in the Portuguese Republican National Guard were about 17 ($SD = 8.69$). Most of them were “Guards” (86.4%) and had 10 to 12 years of education (75.6%). The majority of them were married or lived in a consensual union (72.6%) and had children (75.4%). They worked around 42 hours a week ($SD = 7.45$). All regions in the country were represented.

Procedure

An online survey was created using Qualtrics® (Qualtrics, Inc.; Provo, UT, USA) and the weblink was disseminated by one of the Trade Unions of the National Republican Guard in Portugal (APG/GNR – Associação dos Profissionais da Guarda), through their official webpages and social networks, and also to GNR professionals that are not members of that union.

The study was carried out in accordance with the recommendations of the Ethics Guidelines of the Scientific Commission of the Research Center where the Study was conducted and with the Declaration of Helsinki. Participants followed a link to the questionnaire and were provided information about the general purpose of the study, that their participation would be anonymous and voluntary, and that they could withdraw from the study by closing the web browser. They were also given the contact details of the research

team. Participants consented by signaling an option that indicated this consent and by clicking on a “proceed to study” button and, only then, they were presented with the questionnaire. At the end, the participants were thanked for their participation, they were debriefed, and the research team’s contact information was again provided.

Measures

The variables analysed in this study were part of a larger data set collected during the Covid-19 pandemic.

Belief in a Just World

The justice perceptions were measured with the Personal Belief in a Just World Scale (Dalbert, 1999). The scale comprises seven items designed to capture the belief that, overall, events in one’s life are just (e.g., “I am usually treated fairly”) with a 5-point scale (1 = *Totally disagree* to 5 = *Totally agree*). Since the scale was reliable ($\alpha = .89$) a composite variable was defined, in which higher scores indicated higher personal BJW.

Voice Behaviour

To measure voice behaviour, the scale of Van Dyne and LePine (1998), which is composed of six items (e.g., “Develops and makes recommendations concerning issues that affect this work group”) was used. All items were coded on a 5-point scale (1 = *Completely disagree* to 5 = *Completely agree*). A very good internal consistency ($\alpha = .86$, Kline, 2011) was obtained. Higher scores on this scale indicated higher voice behaviour.

Vertical trust

Vertical trust was measured by three items (e.g., “Do you trust the information that comes from your Commander?”) of the medium-length version of the Copenhagen Psychosocial Questionnaire – (COPSOQ-II; Kristensen et al., 2005). The total measure has a very good internal reliability ($\alpha = .81$, Kline, 2011). All items were measured on a 5-point scale (1 = *Never* to 5 = *Always*). One of the items was recoded so that higher scores on this

scale indicated higher levels of vertical trust, in this specific case, operationalised as trust in the Commander.

Work-family conflict

Work-family conflict was measured with the three items (e.g., “Do you feel that your work drains so much of your energy that it has a negative effect on your private life?”, of the medium-length version of the Copenhagen Psychosocial Questionnaire – (COPSOQ-II; Kristensen et al., 2005). All items were coded by a 5-point scale (1 = *Not at all* to 5 = *Extremely*). Reliability was guaranteed ($\alpha = .89$), and a new variable was calculated that ranged from lower to higher work-family conflict levels.

Well-Being

Well-being was measured with nine items (e.g., “How often have you been physically exhausted?”) of the medium length version of the Copenhagen Psychosocial Questionnaire – (COPSOQ-II; Kristensen et al., 2005). The items accessed the following topics: self-rated/perceived health (one item); sleeping troubles (two items); burnout (two items); stress (two items); and depressive symptoms (two items). All items were coded on a 5-point scale (1 = *Never* to 5 = *Always*). All nine items comprised one measure of well-being ($\alpha = .93$). The items were reverse-coded so that higher scores on this scale indicated higher levels of well-being.

Control variable

Quantitative demands were assessed with a combined measure of the three items of quantitative demands (e.g., “How often do you not have time to complete all your work tasks?”) and with one item of work pace (“Do you have to work very fast?”), of the medium-length version of the Copenhagen Psychosocial Questionnaire – (COPSOQ-II; Kristensen et al., 2005) The combined measure had a very good internal consistency ($\alpha = .81$, Kline, 2011).

All items were answered on a 5-point scale (1 = *Never* to 5 = *Always*). Higher scores on the scale indicated higher levels of quantitative demands.

Data analysis

A descriptive analysis of police officers was performed using descriptive measures (percentages, mean, and standard deviation). The Person's correlation was calculated to analyse the associations between the study variables. The parallel mediation model underlying the research hypotheses was assessed using the PROCESS macro (version 4.1, Hayes, 2022). The bootstrapping method was used to check the significance of the *specific and total indirect effects* by constructing the 95% confidence interval for 5,000 bootstrap samples. To obtain measures of the size of the mediation effect, the proportion of the total effect that is mediated by each mediator was calculated, following the suggestion of Mackinnon (2008).

Results

Descriptive statistics (mean and standard deviation) and bivariate correlations of all studied variables are presented in Table 1. The correlations between the BJW predictor, the three mediators, and the well-being outcome were all significant and positive, except for the association between BJW and work-family conflict which was significant but negative ($p < .001$).

Insert Table 1 about here

Table 2 shows that after controlling for quantitative demands, BJW was positively and significantly associated with well-being (*total effect* = 0.447, $t = 9.771$, $p < .001$), and Hypothesis 1 was supported. Regarding the parallel mediation analyses, the pathways corresponding to 1) BJW → voice behaviour → well-being (*specific indirect effect* = 0.034, 95% CI = 0.014 to 0.057), 2) BJW → vertical trust → well-being (*specific indirect effect* =

0.048, 95% CI = 0.023 to 0.078), and 3) BJW → work-family conflict → well-being (*specific indirect effect* = 0.101, 95% CI = 0.049 to 0.158) were significant, since the confidence intervals for the three indirect effects did not include zero. With significant *specific indirect effects*, evidence was found to support the parallel mediation mechanism, meaning that voice behaviour, vertical trust, and work-family conflict mediate the relationship between BJW and well-being. Thus, Hypotheses 2, 3, and 4 were supported. Namely, the positive relationship between BJW and well-being was mediated by a boost in voice behaviour, a boost in vertical trust, and a reduction in work-family conflict. In comparison, the mediator work-family conflict was the one with the largest effect size (Table 2). Additionally, the *total indirect effect* was also significant (*total indirect effect* = 0.183, 95% CI = 0.118 to 0.250). The obtained results provided support for Hypothesis 5.

 Insert Table 2 about here

Discussion

Given the importance of increasing the well-being of police officers (e.g., Queirós et al. 2020, for a review), in the current study we examined, for the first time, the association between BJW and well-being by using a parallel mediation mechanism of the three BJW functions. The BJW functions were operationalised with indicators that are crucial factors in police organisations: the strive for acting fairly was operationalised through voice behaviour (Hirschman, 1970); the trust function was operationalised through vertical trust (e.g., Mayer et al., 1995), with a specific focus on trust in the Commander; and the assimilation of injustices was operationalised through a reduced work-family conflict (Hall et al., 2010).

As predicted, we found support for a positive association between BJW and well-being (H1). This result is in line with previous empirical evidence (e.g., Correia et al., 2023) that shows the relevance of justice perceptions for well-being.

With regard to our innovative approach of testing, for the first time, the mediation model with all the three BJW functions simultaneously into a parallel multiple mediators analysis, we found support for: voice behaviour mediating the relationship between BJW and well-being, showing that BJW is a protective factor for the well-being of police officers by boosting voice behaviour (H2); vertical trust mediating the relationship between BJW and well-being, showing that BJW is a protective factor for the well-being of police officers by boosting vertical trust (H3); and work-family conflict mediating the relationship between BJW and well-being, showing that BJW is a protective factor for the well-being of police officers by reducing work-family conflict (H4). In sum, by obtaining support for H2, H3, and H4, we also obtained support for the association between BJW and well-being to be mediated by the three BJW functions simultaneously considered (H5). Therefore, our study shows that BJW is a protective factor for the well-being of police officers, by simultaneously boosting voice behaviour and vertical trust, and reducing work-family conflict (H5).

The mediation effect size of the work-family conflict was the largest, which indicates that work-family conflict was the path that made a stronger contribution to the relationship between police officers' BJW and well-being. Future research should advance the understanding of the conditions that allow these paths to have a stronger or weaker contribution in explaining the relationship between BJW and the well-being of police officers. The fact that police organisations are highly hierarchical may impose conformity and the following of orders and, therefore, constrain the opportunities for voice behaviour and vertical trust. In organisations, or in other professional groups, where voice behaviour is encouraged, perhaps the path between BJW and well-being through voice behaviour might be stronger.

It is also important to emphasise that the current results were found after controlling quantitative demands. Although quantitative demands were significantly associated with most of the variables included in the model (except for voice behaviour), the significant mediations found cannot be attributed to the association of the variables considered with quantitative demands.

The present research also highlights the relevance of expanding the study of the relation between BJW and well-being to other organisational constructs that might contribute to building a more comprehensive understanding of the organisational contexts in which police officers work.

Limitations

We must, however, acknowledge some limitations in our study. Firstly, we employed a cross-sectional design, which poses some caution to infer a causal relationship between variables in the model. As originally shown by Correia et al. (2009) and replicated by Schmitt et al. (2023), BJW and well-being have bidirectional causal effects, therefore it is not only BJW that can affect well-being, but well-being can also have an impact on BJW. In the future, longitudinal and experimental research could be conducted to test the direction of the causality of variables in our study. Secondly, research data were collected through participants' self-report, which might be subjective and lead to self-reported bias. Further study might benefit from collecting data from various informants. Thirdly, given the characteristics of the context in which the questionnaire was applied and the target population (police officers), it was not possible to define a probabilistic sample. As the survey was circulated by one trade Union that had a very active role in public protests and claiming better work conditions, we assume that most of the sample was constituted by police officers from that same trade union and, particularly, by those who were less satisfied with their working conditions. While our findings may not allow for broad generalizations to other samples of

police officers, let alone to other professional groups, we believe they may offer a basis for further research on police officers' well-being involving different police forces and professional groups in various countries.

Theoretical and Practical Implications for Police Officers Organisations

Despite several limitations, this study adds considerable knowledge to previous literature by shedding light on three simultaneous mechanisms underlying the association between BJW and police officers' well-being: voice behaviour, vertical trust, and work-family conflict. This is by itself an important theoretical finding because it is the first time that the three functions of BJW are tested as simultaneous underlying mechanisms of the relationship between BJW and well-being. Future studies should try to replicate this analysis in other professional groups and also with other proxies of the BJW functions. Moreover, this research provides a comprehensive framework for the relations between a set of variables in the police settings, that are not usually studied together: BJW, voice behaviour, vertical trust, work-family conflict, and well-being.

From a practical standpoint, the fact that we found that justice perceptions can affect the well-being of police officers through its impact on other organisational variables that are paramount for good organisational functioning, has several implications: we can expect that a decrease in justice conditions will be accompanied by a decrease in voice behaviour, a decrease in vertical trust, and an increase in work-family conflict, all of which will have a negative impact on well-being. Indeed, although BJW is a personal disposition considered to be relatively stable over time (e.g., Dalbert, 2001), recent research has demonstrated that BJW can also reflect the objective justice people face in the environments in which they live (Bartholomeus, 2023; Thomas, 2022). This means that facing injustice in daily life may decrease BJW and consequently lead to the undesirable consequences mentioned before. Therefore, objective justice conditions in which police officers work should be addressed

carefully, both in the distributive and procedural dimensions. As far as the distributive dimension is concerned, police officers should be paid fairly according to the work they do, and also comparatively in terms of other professions in that society (Adams, 1965).

As far as the procedural dimension is concerned, both the interpersonal treatment dimension and the decision-making dimension should be carefully addressed (Trinkner et al., 2016). Police officers should be treated with respect and dignity by both their supervisors and their colleagues. Furthermore, the decisions that are taken about them should be perceived as fair and neutral, which includes the opportunity to give inputs during the decision-making process, of receiving explanations about why a specific decision has been made, and of appeal a decision (Leventhal, 1980).

Based on our findings, we can also recommend that, if for some unavoidable reason, a decrease in justice conditions takes place, the police organisation should promote compensatory actions directly focusing on voice behaviour, vertical trust, and work-family conflict, so that a decrease in well-being is prevented. Considering that voice behaviour, vertical trust, and work-family conflict are relatively proximal and potentially malleable factors, they present opportunities for intervention. Namely, police organisations should implement safe and effective participation processes for police officers within the organisation (Smith et al., 2022); a fair and respectful leadership (Trinkner et al., 2016; Tyler et al., 2015); and reinforce family-friendly work policies, such as having policies such as sick leave, unpaid or personal leave, or flexible work schedules (Granhölm Valmari et al., 2023; Youngcourt, & Huffman, 2005).

We are aware that although the simultaneous underlying processes in our sample occurred concurrently, the specific nature of this sample might prevent a generalisation of the operationalisation of these BJW functions to other police officers' institutions. We suggest that in each police officer institution, specific measures or policies aimed at ensuring these

functions might be addressed and implemented by the top management, ideally in collaboration with all the levels of the organisation.

We hope that the knowledge that has been produced in this research can be integrated into the training of leaders and in occupational health interventions (de Lange et al., 2024), so that it contributes to increasing the well-being of police officers, to a better functioning of the police organisations, and even to decreasing the crises of recruitment and retention that seriously affect the police forces.

References

- Adams, J. S. (1965). Inequity in social exchange. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 2, pp.267-299). Academic Press.
- Bakker, A. B., Demerouti, E., & Euwema, M. C. (2005). Job resources buffer the impact of job demands on burnout. *Journal of Occupational Health Psychology*, 10, 170–180.
<https://doi.org/10.1037/1076-8998.10.2.170>
- Bartholomaeus, J., Ucar, G. K., Donat, M., Nartova-Bochaver, S., & Thomas, K. (2023). Cross-cultural generalisability of the belief in a just world: Factor analytic and psychometric evidence from six countries. *Journal of Research in Personality*, 102, 104317. <https://doi.org/10.1016/j.jrp.2022.104317>
- Bertilsson, J., Niehorster, D., Fredriksson, P., Dahl, M., Granér, S., Fredriksson, O., Mårtensson, J.M., Magnusson, M., Fransson, P.A. & Nyström, M. (2020). Towards systematic and objective evaluation of police officer performance in stressful situations. *Police Practice and Research*, 5, 1–15.
<https://doi.org/10.1080/15614263.2019.1666006>
- Bierhoff, H.W. (1994). Verantwortung und altruistische Persönlichkeit [Responsibility and altruistic personality]. *Zeitschrift für Sozialpsychologie*, 25, 217–226.
- Bierhoff, H.W., Klein, R., & Kramp, P. (1991). Evidence for the altruistic personality from data on accident research. *Journal of Personality*, 59, 263–280.
<https://doi.org/10.1111/j.1467-6494.1991.tb00776.x>
- Bottoms, A., & Tankebe, J. (2012). Beyond Procedural Justice: A Dialogic Approach to Legitimacy in Criminal Justice. *The Journal of Criminal Law and Criminology*. 102(1), 119–170. <http://www.jstor.org/stable/23145787>

- Burke, R. J., & Mikkelsen, A. (2006). Burnout among Norwegian police officers: Potential antecedents and consequences. *International Journal of Stress Management*, 13(1), 64-83. <https://doi.org/10.1037/1072-5245.13.1.64>
- Cheng, Y., Nudelman, G., Otto, K., & Ma, J. (2020). Belief in a Just World and Employee Voice Behavior: The Mediating Roles of Perceived Efficacy and Risk. *The Journal of Psychology*, 154(2), 129-143. <https://doi.org/10.1080/00223980.2019.1670126>
- Cheng, Y., Nudelman, G., Ma, J., & Otto, K. (2023). Belief in a just world and organisational loyalty: Trust as an underlying mechanism. *International Journal of Psychology*: <https://doi.org/10.1002/ijop.12948>
- Colquitt, J. A., Scott, B. A., & LePine, J. A. (2007). Trust, trustworthiness, and trust propensity: A meta-analytic test of their unique relationships with risk taking and job performance. *Journal of Applied Psychology*, 92(4), 909–927. <https://doi.org/10.1037/0021-9010.92.4.909>
- Correia, I., & Almeida, A. E. (2020). Organizational justice, professional identification, empathy, and meaningful work during COVID-19 pandemic: Are they burnout protectors in physicians and nurses? *Frontiers in Psychology*, 11. <https://doi.org/10.3389/fpsyg.2020.566139>
- Correia, I. & Dalbert, C. (2007). Belief in a just world, justice concerns, and well-being at Portuguese schools. *European Journal of Psychology of Education*, 22(4), 421-437. <https://doi.org/10.1007/BF03173464>
- Correia, I., & Vala, J. (2004). Belief in a just world, subjective well-being, and trust of young adults. In C. Dalbert and H. Sallay (Eds.), *The justice motive in adolescence and young adulthood: Origins and consequences* (pp. 85-100). London: Routledge.
- Correia, I., Batista, M.T. & Lima, M.L. (2009). Does the belief in a just world bring happiness? Causal relationships among belief in a just world, life satisfaction, and

- mood. *Australian Journal of Psychology*, 61, 220-227.
<https://doi.org/10.1080/00049530802579515>
- Correia, I., Carvalho, H., Otto, K., & Nudelman, G. (2023). Justice perceptions and well-being: Belief in a just world is a personal resource and a coping resource. *British Journal of Psychology*, 00, 1–21. <https://doi.org/10.1111/bjop.12689>
- Dalbert, C., Montada, L., & Schmitt, M. (1987). Glaube an eine gerechte Welt als Motiv: Validierungskorrelate zweier Skalen [Belief in a just world as a motive: Validity correlates of two scales]. *Psychologische Beiträge*, 29, 596–615.
- Dalbert, C. (1999). The world is more just for me than generally: about the personal belief in a just world scale validity. *Social Justice Research*, 12(2), 79-98.
<https://doi.org/10.1023/A:1022091609047>
- Dalbert, C. (2001). *The justice motive as a personal resource: Dealing with challenges and critical life events*. New York: Plenum.
- de Lange, A. H., Teoh, K., Fleuren, B., Christensen, M., Medisauskaite, A., Løvseth, L. T., ... Correia, I. (2024). Opportunities and challenges in designing and evaluating complex multilevel, multi-stakeholder occupational health interventions in practice. *Work & Stress*, 1–21. <https://doi.org/10.1080/02678373.2024.2332169>
- Dette, D. E., Stöber, J., & Dalbert, C. (2004). Belief in a just world and adolescents' vocational and social goals. In C. Dalbert & H. Sallay (Eds.), *The justice motive in adolescence and young adulthood: Origins and consequences* (pp. 231–247). London: Routledge.
- Donat, M., Dalbert, C., & Kamble, S. V. (2014). Adolescents' cheating and delinquent behavior from a justice-psychological perspective: The role of teacher justice. *European Journal of Psychology of Education*, 29(4), 635–651.
<https://doi.org/10.1007/s10212-014-0218-5>

- Edlund, J.E., Sagarin, B.J., & Johnson, B.S. (2007). Reciprocity and the belief in a just world. *Personality and Individual Differences*, 43, 589–596.
<https://doi.org/10.1016/j.paid.2007.01.007>
- Furnham, A. (1995). The just world, charitable giving, and attitudes to disability. *Personality and Individual Differences*, 19, 577–583.
[https://doi.org/10.1016/0191-8869\(95\)00090-S](https://doi.org/10.1016/0191-8869(95)00090-S)
- Gomes, A. R., & Afonso, J. M. P. (2016). Occupational stress and coping among Portuguese military police officers. *Avances en Psicología Latinoamericana*, 34(1), 47-65.
<https://doi.org/10.12804/apl34.1.2016.04>
- Granholm Valmari, E., Nygren, U., Ghazinour, M., & Gilenstam, K. (2023). How police officers juggle work, a life partner, and kids. *Frontiers in psychology*, 14, 1178314.
<https://doi.org/10.3389/fpsyg.2023.1178314>
- Greenhaus, J. H., & Beutell, N. J. (1985). Sources of conflict between work and family roles. *Academy of Management Review*, 10, 76–88. <https://doi.org/10.2307/258214>
- Hafer, C. L., & Bègue, L. (2005). Experimental research on just-world theory: problems, developments, and future challenges. *Psychological Bulletin*, 131(1), 128–167.
<https://doi.org/10.1037/0033-2909.131.1.128>
- Hafer, C. L. (2000). Investment in long-term goals and commitment to just means drive the need to believe in a just world. *Personality and Social Psychology Bulletin*, 26, 1059–1073. <https://doi.org/10.1177/01461672002611004>
- Hall, G. B., Dollard, M. F., Tuckey, M. R., Winefield, A. H., & Thompson, B. M. (2010). Job demands, work-family conflict, and emotional exhaustion in police officers: A longitudinal test of competing theories. *Journal of Occupational and Organizational Psychology*, 83(1), 237-250. <https://doi.org/10.1348/096317908X401723>

- Hirschman, A. O. (1970). *Exit, voice, and loyalty: Responses to decline in firms, organizations, and states*. Cambridge, MA: Harvard University Press.
- Kline, R. B., 2011. *Principles and practice of structural equation modeling*. 3rd ed. New York: Guilford Press.
- Kristensen, T, Borritz, M., Villadsen, E., & Christensen, K.B. (2005). The Copenhagen Burnout Inventory: A new tool for the assessment of burnout. *Work & Stress*, 19(3), 192-207. <https://doi.org/10.1080/0267837050029772>
- LePine, J. A., & Van Dyne, L. (1998). Predicting voice behavior in work groups. *Journal of Applied Psychology*, 83(6), 853–868. <https://doi.org/10.1037/0021-9010.83.6.853>
- Lerner, M. J. (1980). *The belief in a just world: A fundamental delusion*. New York: Plenum
- Leventhal, G. S. (1980). What should be done with equity theory? New approaches to the study of fairness in social relationships. In K. Gergen, M. Greenberg, & R. Willis (Eds.), *Social exchange: Advances in theory and research* (pp. 27-55). Plenum Press.
- Liang, J., Farh, C. I., & Farh, J.-L. (2012). Psychological antecedents of promotive and prohibitive voice: A two-wave examination. *Academy of Management Journal*, 55(1), 71-92. <https://doi.org/10.5465/amj.2010.0176>
- Liu, J., Siu, O. L., & Shi, K. (2010). Transformational leadership and employee well-being: The mediating role of trust in the leader and self-efficacy. *Applied Psychology*, 59(3), 454–479. <https://doi.org/10.1111/j.1464-0597.2009.00407.x>
- Mayer, R.C., Davis, J.H. & Schoorman, F.D. (1995). An integrative model of organisational trust. *Academy of Management Review*, 20 (3), 709-734. <https://doi.org/10.2307/258792>
- MacKinnon, D. P. (2008). *Introduction to statistical mediation analysis*. New York, NY: Erlbaum.

- Münscher, S., Donat, M. & Kiral Ucar, G. (2020). Students' Personal Belief in a Just World, Well-Being, and Academic Cheating: A Cross-National Study. *Social Justice Research*, 33, 428–453. <https://doi.org/10.1007/s11211-020-00356-7>
- Neely, P., & Cleveland, C. S. (2011). The impact of job-related stressors on incidents of excessive force by police officers. *American Journal of Health Sciences*, 3, 63–74. <https://doi.org/10.19030/ajhs.v3i1.6755>
- Otto, K., & Dalbert, C. (2005). Belief in a just world and its functions for young prisoners. *Journal of Research in Personality*, 39, 559–573. <https://doi.org/10.1016/j.jrp.2005.01.004>
- Otto, K., & Schmidt, S. (2007). Dealing with stress in the workplace: Compensatory effects of belief in a just world. *European Psychologist*, 12(4), 272–282. <https://doi.org/10.1027/1016-9040.12.4.272>
- Otto, K., Glaser, D., & Dalbert, C. (2009). Mental health, occupational trust, and quality of working life: Does belief in a just world matter? *Journal of Applied Social Psychology*, 39(6), 1288-1315. <https://doi.org/10.1111/j.1559-1816.2009.00482.x>
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40, 879–891. <https://doi.org/10.3758/brm.40.3.879>
- Queirós, C., Passos, F., Bártolo, A., Marques, A. J., Silva, C. F., & Pereira, A. (2020). Burnout and stress measurement in police officers: Literature review and a study with the operational police stress questionnaire. *Frontiers in Psychology*, 11. <https://doi.org/10.3389/fpsyg.2020.00587>
- Rubin, Z., & Peplau, L. A. (1975). Who believes in a just world? *Journal of Social Issues*, 31, 65–89. <https://doi.org/10.1111/j.1540-4560.1975.tb00997.x>

- Schmitt, M., Heck, L. & Maes, J. (2023). Experimental and Longitudinal Investigations of the Causal Relationship Between Belief in a Just World and Subjective Well-Being. *Social Justice Research*, 36, 432–455. <https://doi.org/10.1007/s11211-023-00427-5>
- Smith, C.J., Han, Y., Dupré, K.E. & Sears, G.J. (2022). Perceived organizational support and its interaction with voice on police officers' organizational cynicism, stress and emotional exhaustion, *Policing: An International Journal*, 45 (2), 200-217. <https://doi.org/10.1108/PIJPSM-07-2021-0093>
- Smoktunowicz, E., Baka, L., Cieslak, R., Nichols, C. F., Benight, C. C., & Luszczynska, A. (2015). Explaining counterproductive work behaviors among police officers: the indirect effects of job demands are mediated by job burnout and moderated by job control and social support. *Human Performance*, 28, 332–350. <https://doi.org/10.1080/08959285.2015.1021045>
- Sutton, R.M., & Winnard, E.J. (2007). Looking ahead through lenses of justice: The relevance of just-world beliefs to intentions and confidence in the future. *British Journal of Social Psychology*, 46, 649–666. <https://doi.org/10.1348/014466606X166220>
- Taris T. W., Kompier M. A., Geurts S. A., Houtman I. L., Van Den Heuvel F. F. (2010). Professional efficacy, exhaustion, and work characteristics among police officers: A longitudinal test of the learning-related predictions of the demand—control model. *Journal of Occupational and Organizational Psychology*, 83, 455–474. <https://doi.org/10.1348/096317909X424583>
- Thibaut, J., & Walker, L. (1975). *Procedural justice: A psychological analysis*. Erlbaum.
- Thomas, K. (2022). A dark lens or a dark world? Conceptualizing Justice Capital. *International Journal of Psychology*, 57(2), 190-198. <https://doi.org/10.1002/ijop.12799>

- Tyler, T. R. (2011). Trust and legitimacy: Policing in the USA and Europe. *European Journal of Criminology*, 8, 254–266. <http://dx.doi.org/10.1177/1477370811411462>
- Tyler, T. R., & Blader, S. L. (2003). The group engagement model: Procedural justice, social identity, and cooperative behavior. *Personality and Social Psychology Review*, 7, 349–361. http://dx.doi.org/10.1207/S15327957PSPR0704_07
- Tyler, T. R., & Degoe, P. (1996). Trust in organizational authorities: The influence of motive attributions on willingness to accept decisions. In R. M. Kramer & T. R. Tyler (Eds.), *Trust in organizations: Frontiers of theory and research* (pp. 331–356). Sage Publications, Inc. <https://doi.org/10.4135/9781452243610.n16>
- Trinkner, R., Tyler, T. R., & Goff, P. A. (2016). Justice From Within: The Relations Between a Procedurally Just Organizational Climate and Police Organizational Efficiency, Endorsement of Democratic Policing, And Officer Well-Being. *Psychology, Public Policy, and Law*, 22(2), 158-172. <https://doi.org/10.1037/law0000085>
- Tyler, T. R., Goff, P. A., & MacCoun, R. J. (2015). The Impact of psychological science on policing in the United States: Procedural justice, legitimacy, and effective law enforcement. *Psychological Science in the Public Interest*, 16(3), 75-109. <https://doi.org/10.1177/1529100615617791>
- Van Dyne, L., & LePine, J. A. (1998). Helping and voice extra-role behaviors: Evidence of construct and predictive validity. *Academy of Management Journal*, 41(1), 108-111 <http://dx.doi.org/10.2307/256902>
- Violanti, J. M., Charles, L. E., McCanlies, E., Hartley, T. A., Baughman, P., Andrew, M. E., et al. (2017). Police stressors and health: a state-of-the-art review. *Policing*, 40, 642–656. <https://doi.org/10.1108/PIJPSM-06-2016-0097>

- Violanti, J. M., Owens, S. L., McCanlies, E., Fekedulegn, D., and Andrew, M. E. (2019). Law enforcement suicide: a review. *Policing*, 42, 141–164. doi: 10.1108/pijpsm-05-2017-0061
- Wilson, J. M., Dalton, E., Scheer, C., & Grammich, C. A. (2010). *Police recruitment and retention for the new millennium*. Santa Monica, CA: RAND Corporation, 10.
- World Health Organization. (2019). *Making the investment case for mental health: a WHO/UNDP methodological guidance note*. World Health Organization. <https://iris.who.int/handle/10665/325116>.
- Xanthopoulou, D., Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2007). The role of personal resources in the job demands-resources model. *International Journal of Stress Management*, 14(2), 121–141. <https://doi.org/10.1037/1072-5245.14.2.121>
- Xu, J., Xie, B., Yang, Y., Li, L. (2021). Voice More and Be Happier: How Employee Voice Influences Psychological Well-Being in the Workplace. *International Journal of Mental Health Promotion*, 23(1), 41–3. <https://doi.org/10.32604/IJMHP.2021.013518>
- Youngcourt, S. S., & Huffman, A. H. (2005). Family-friendly policies in the police: Implications for work-family conflict. *Applied Psychology in Criminal Justice*, 1(2), 138–162.

Table 1. *Descriptive statistics, bivariate correlations, and reliabilities*

	<i>Md</i>	<i>M</i>	<i>SD</i>	1	2	3	4	5	6
1. Quantitative demands	3.00	3.03	0.73	(.93)					
2. Belief in a Just World	3.00	2.94	0.63	-.19**	(.89)				
3. Voice Behaviour	4.00	3.78	0.59	.01	.19**	(.86)			
4. Vertical trust	3.67	3.43	0.82	-.29**	.28**	.08*	(.81)		
5. Work-family conflict	3.00	3.09	1.05	.57**	-.25**	.04	-.32**	(.89)	
6. Well-Being	3.00	3.02	0.83	-.46**	.42**	.16**	.41**	-.66**	(.93)

Note. N =573. Cronbach's alpha for the scales is in parenthesis. The minimum and maximum values are 1 and 5 (respectively) for all variables.

* $p < 0.05$. ** $p < 0.001$.

Table 2. Regression results for the multiple mediation model

			Well-Being		
	<i>B</i>	<i>SE</i>	95% Bootstrap CI		
			Lower	Upper	
<i>Total effect</i>					
Quantitative demands ^a	-0.451 **	0.040	-0.530	-0.368	
Belief in a Just World	0.447 **	0.046	0.346	0.551	
<i>Direct effect</i>					
Quantitative demands ^a	-0.095 *	0.039	-0.175	-0.013	
Belief in a Just World	0.264 **	0.039	0.177	0.354	
<i>Indirect effect</i>					<i>Effect size</i>
<i>Specific indirect effects</i>					
1) BJW → Voice behaviour → WB	0.034	0.011 ^b	0.014	0.057	0.075
2) BJW → vertical trust → WB	0.048	0.014 ^b	0.023	0.078	0.108
3) BJW → WFC → WB	0.101	0.028 ^b	0.049	0.158	0.227
<i>Total indirect effect</i>					
Total (M ₁ + M ₂ + M ₃)	0.183 ^b	0.033 ^b	0.118	0.250	

Note. N = 573. Unstandardized regression coefficients are reported. Bootstrap sample size = 5,000. SE – Standard error. CI – Confident interval. M – Mediator. WB – Well-being. WFC – Work-family conflict

^a Quantitative demands was introduced as a control variable

^b Bootstrap SE is reported.

* $p < 0.05$. ** $p < 0.001$.

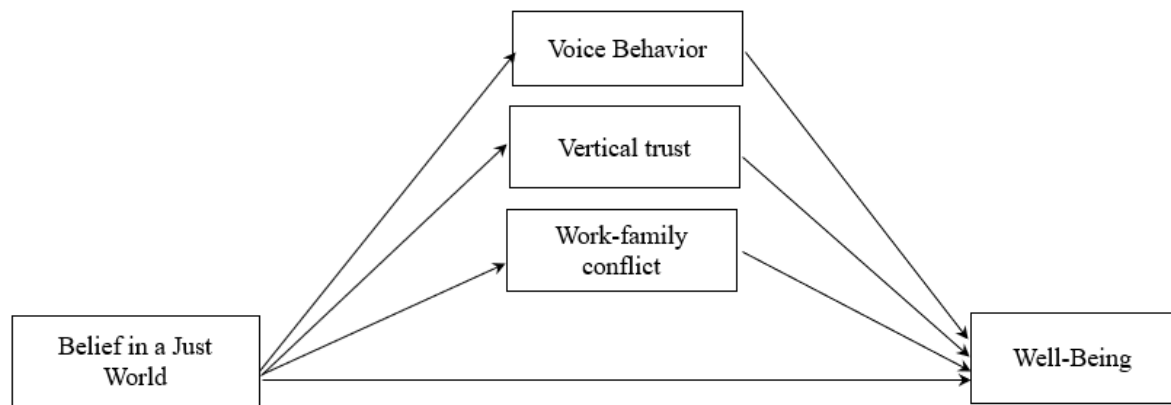


Figure 1. The conceptual model