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Protecting healthcare professionals from exhaustion: Personal belief in a just world as a personal and a coping resource

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ABSTRACT

The present study examined for the first time the possibility that personal Belief in a Just World (BJW) is a personal resource for healthcare professionals, irrespective of the demands they face in their everyday work life, and/or a coping resource for facing demands due to the higher perceived suffering of their patients. A total of 497 healthcare professionals (physicians and nurses) voluntarily consented to answer an anonymous online survey. Self-reported measures of personal BJW, of the perception of patients' suffering, and of healthcare professionals' exhaustion were collected. We found a positive association between the perception of patients' suffering and healthcare workers' exhaustion, and a negative association between personal BJW and healthcare workers' exhaustion. Furthermore, a significant interaction between personal BJW and the perception of suffering on exhaustion showed that at lower levels of personal BJW, the higher the perception of patients' suffering the higher the exhaustion. In contrast, at higher levels of personal BJW the perception of patients' suffering was not associated with exhaustion. Our results supported the hypotheses of personal BJW operating both as a personal resource and a coping resource for healthcare professionals, underscoring the relevance of promoting workplace conditions that healthcare workers experience as just.

Healthcare professionals face excessive work demands that have severe negative consequences for their health and well-being, their career engagement and the quality of patient care (see Hodkinson et al., 2022 for a review). This state of affairs is threatening the sustainability of healthcare organisations and causing a healthcare workforce shortage (World Health Organization, 2016). Consequently, the study of factors that can protect healthcare professionals from exhaustion has been highlighted as a priority (e.g., de Lange et al., 2024).

One line of research that deeply examined the impact of protective factors on well-being at work is the Job Demands-Resources Model (Demerouti et al., 2001). This model distinguishes between job demands and job resources and constitutes an overarching model that may be applied to various occupational settings.

The acute and/or cumulative exposure to patients' suffering faced by healthcare workers (e.g., Haque & Waytz, 2012) has been identified as an emotional demand (e.g., Gleichgerrcht & Decety, 2012) that contributes to healthcare professionals' exhaustion. This suffering may be due to painful and traumatic experiences, but also to pain caused by the curing process itself. The reduction of empathy can protect from the negative impact of exposure to suffering on healthcare workers' exhaustion (Gleichgerrcht & Decety, 2012), but empathy is also essential for the quality of healthcare (e.g., Doohan & Saveman, 2015) and therefore decreasing empathy too much is not the best way to protect the well-being of healthcare workers (Gleichgerrcht & Decety, 2012). Instead, it is important to increase other resources that can protect the well-being of healthcare workers and can compensate for the detrimental effects of suffering exposure on their well-being.

Research has focused on identifying resources that might reduce the impact of job demands on well-being (e.g., Xanthopoulou et al., 2007). The Belief in a Just World (BJW; Lerner, 1980) has been shown to be a resource both for people in their daily lives and when they face adversities (Correia, Carvalho, Otto, & Nudelman, 2024), but no previous research has examined its protective role for healthcare workers. The present study aims to fill this gap.

1. Definition of resources

Resources can be defined as "anything perceived by the individual to help attain his or her goals" (Halbesleben et al., 2014, p. 6). Resources at an individual level have also been called personal resources and defined

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as aspects of the self that are generally linked to resiliency and refer to individuals' sense of their ability to control and impact upon their environment successfully (Hobfoll, 2002). Three personal resources have been typically considered by traditional occupational health psychology (Xanthopoulou et al., 2007): self-efficacy (Bandura, 1989), organisational-based self-esteem (Pierce et al., 1989), and optimism (Scheier & Carver, 1985). However, a different line of research has addressed the role of BJW as an individual resource for well-being (Dalbert, 2001). The present study is framed within this research line.

Resources may be effective in preserving health and well-being for people in their daily lives, irrespective of the demands they face, and/or mostly when people face stressful circumstances. According to Hobfoll (2002), people with resources are less likely to be exposed to stressful circumstances, and therefore they can preserve their resources and apply them toward growth and development. This is in line with the concept of personal resource (Cohen & Wills, 1985), defined as a personal disposition that has a beneficial effect on people's well-being irrespective of whether they are under stress (a main effect hypothesis).

Still, according to Hobfoll (2002), people who possess resources are more capable of solving the problems inherent in stressful circumstances, which is in line with the concept of a coping resource (Cohen & Wills, 1985). A coping resource is defined as a resource that takes effect only (or primarily) under specific *adverse* conditions and protects the well-being of people when they face stressful events (an interaction effect hypothesis).

We will next present research that has considered BJW as a resource, either a personal resource and/or a coping resource.

2. The Belief in a Just World as a resource

Since the first formulations of the psychological study of justice processes, justice perceptions have been theorised to lead to better well-being. The justice motive theory explains this relation by proposing that people are motivated to perceive events as just because it gives them confidence that no unjust event will happen to them (Lerner, 1980). This is why, according to the justice motive theory, the need to perceive events as just (BJW; Lerner, 1980) holds universally adaptive value (Bartholomaeus et al., 2023; Lerner, 1980).

The BJW has been found to be both a personal resource that promotes the well-being of people in general and a coping resource that sustains well-being in distressing conditions (e.g. Correia, Carvalho, Otto, & Nudelman, 2024).

Research has also investigated the underlying mechanisms between BJW and well-being. These have been theoretically conceived as "Belief in a Just World functions" (Dalbert, 2001): (1) the BJW compels people to act fairly themselves; (2) the BJW enables people to trust in being treated fairly by others; and (3) the BJW promotes the assimilation of injustices. These underlying mechanisms have recently been shown to take place simultaneously (Correia, Carvalho, Romão, & Val, 2024).

However, so far research has not examined if the BJW is a personal resource and/or a coping resource for healthcare professionals. The current study represents a first contribution to studying this issue. In this first step, we aimed to understand if BJW may serve as a resource that can reduce the exhaustion of these professionals and in which situations: similarly to all of them, independently of the level of demands they face, and/or especially for those that face higher demands. After this first step, it will be up to future research to examine exactly which underlying mechanisms may explain this association and if they depend on the level of emotional demands these professionals face.

3. The present study

The present study examined the possibility that BJW is a personal resource for healthcare workers protecting them from exhaustion in their everyday work life and/or a coping resource for healthcare workers who face higher emotional demands due to a higher perception of patients' suffering.

The perception of suffering was operationalised asking healthcare workers about how much COVID-19 infected people would experience negative emotions. We chose this operationalisation for two reasons. Firstly, the data were collected during the first wave of the COVID-19 pandemic, when there were still no vaccines, and most of the healthcare workforce was focused on dealing with COVID-19 patients. Secondly, the time of experience with these patients was still very short and therefore it did not drastically differ among healthcare professionals.

Moreover, we additionally controlled cognitive and affective empathy because they have previously been shown to be associated with the perception of patients' suffering (e.g., Zaki, 2020) and with well-being (see Wilkinson et al., 2017). Furthermore, we also considered the distinction between personal BJW (Dalbert, 1999) and general BJW (Dalbert et al., 1987): personal BJW reflects the belief that events in one's life are just, whereas general BJW reflects the belief that, overall, events are just. Previous research found that although they are highly correlated (Correia & Dalbert, 2007), the personal BJW is a better predictor of well-being (e.g., Correia & Dalbert, 2007), and the general BJW is a better predictor of negative attitudes toward disadvantaged persons (e.g. Bègue & Bastounis, 2003). Therefore, in the present study, we used personal BJW as our predictor and controlled for the association with general BJW. We also controlled for respondents' age and sex because female physicians have been shown to have increased odds of burnout compared to their male counterparts, and younger physicians appear to be at greater risk of burnout than older ones (e.g. West et al., 2018).

Our hypotheses (Fig. 1) were the following: Because the perception of patients' suffering is considered an emotional demand, we expected a positive association between the perception of patients' suffering and healthcare workers' exhaustion (H1); in case personal BJW operates as a personal resource, irrespective of the demands people face, we expected a negative association between personal BJW and exhaustion (H2); in case personal BJW operates as a coping resource that helps healthcare workers to sustain their well-being when they deal with stressful circumstances, we expected that at lower levels of personal BJW, the higher the perception of patients' suffering the higher the exhaustion; in contrast, at higher levels of personal BJW we expected no association between perception of patients' suffering and exhaustion (H3).

4. Method

4.1. Participants

The sample of the present study was composed of 497 healthcare professionals (229 physicians and 268 nurses, aged between 22 and 70 years old ($M = 35.69$, $SD = 10.11$). The majority was female (63.4 %). They worked in Portugal on the public sector and/or the private sector. They were from all regions of Portugal, but mostly from Lisbon (45.1 %),

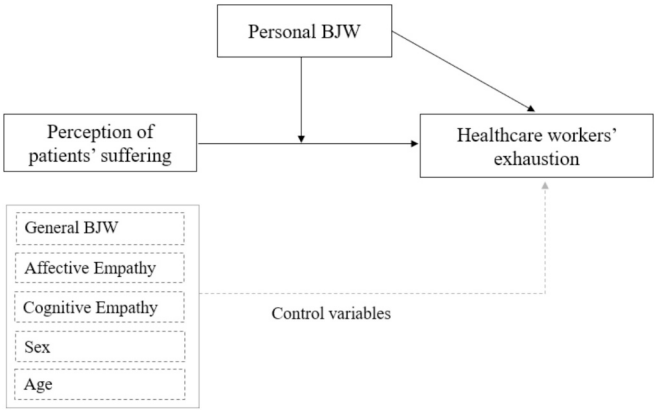

Fig. 1. The conceptual model.

which is the most populated city in the country.

4.2. Procedure

This study received Ethical approval by the Portuguese Order of Psychologists (OPP—Ordem dos Psicólogos Portugueses), in the framework of an initiative to support scientific research in health psychology and behavior change (Via Verde de Apoio OPP para a Investigação Científica em Saúde Psicológica e Mudança Comportamental). An online survey was created using Qualtrics. The data were collected during the first wave of COVID-19. Recruitment was conducted online via media platforms (Facebook and LinkedIn), where the researchers informed potential participants about the goals of the study and provided a link to the study questionnaire.

At the beginning of the survey, the participants were informed about the general purpose of the study and were given the contact details of the person responsible for the project. After providing informed consent and agreeing to participate, participants were presented with the measures. At the end, the participants were debriefed, thanked for their participation, and the contact of the person responsible for the project was again provided.

4.3. Measures

4.3.1. Exhaustion

Exhaustion was evaluated through the eight items of the dimension of exhaustion (e.g. "There are days when I feel tired before I arrive at work") of the Oldenburg Burnout Inventory (OLBI, Bakker et al., 2004). Responses were rated on a five-point scale ranging from 1 (*totally disagree*) to 5 (*totally agree*). A confirmatory factor analysis (CFA) was carried out to test the unidimensionality of the scale and the results indicated a good fit (Table 1). The scale presented very good reliability (McDonald's $\omega = 0.82$ and $\alpha = 0.81$ and, Kline, 2011).

4.3.2. The perception of patients' suffering

The perception of patients' suffering was evaluated with a measure of emotional suffering. Healthcare professionals were asked to answer the following question: "When you think about the patients infected with COVID-19 who are in the hospital (but not in intensive care units), and maintain their cognitive function, in your opinion what is the probability that these patients feel each one of the following emotions?". The emotions presented were 14 negative emotions (grief, sorrow, mourning, anguish, guilt, remorse, resentment, confusion, pain, distress, fear, panic, anger, rage) with a 5-point scale ranging from 1 (much less than the average person) to 5 (much more than the average person). A confirmatory factor analysis revealed an acceptable model fit (Table 1). The measure demonstrated very good reliability (McDonald's $\omega = 0.86$ and Cronbach's $\alpha = 0.85$).

4.3.3. Personal Belief in a Just World

The personal BJW was measured with seven items of the Personal Belief in a Just World Scale (Dalbert, 1999). A sample item includes "I am usually treated fairly". Items were answered on a seven-point scale ranging from 1 (*totally disagree*) to 7 (*totally agree*). A confirmatory factor analysis was also conducted, and the results providing a good model fit Table 1). To ensure that the empirical data aligned with a one-factor model, a confirmatory factor analysis was conducted. The CFA for the personal BJW scale yielded a good model fit with (see Table 1) and the new composite variable proved to be a reliable measure with McDonald's $\omega = 0.87$ and Cronbach's $\alpha = 0.87$.

4.4. Control variables

The general BJW was measured with six items of the General Belief in a Just World Scale (Dalbert et al., 1987, e.g., "I think that, by and large, people get what they deserve", $\alpha = 0.69$). Empathy was measured using the seven-item shorter version (Salas-Wright et al., 2012) of the Basic Empathy Scale (BES) (Jolliffe & Farrington, 2006), with three items for the affective dimension (e.g., "After being with a friend who is sad about something, I usually feel sad", $\alpha = 0.78$) and four items for the cognitive dimension (e.g., "I can often understand how people are feeling even before they tell me", $\alpha = 0.75$).

4.5. Measurement model and common method variance

A confirmatory factor analysis was conducted to test the measurement model, considering the three study variables: perception of patients' suffering, personal BJW, and healthcare workers' exhaustion. Table 1 shows that the model exhibited a good fit (Hu & Bentler, 1999). All factor loadings were significant ($p < .001$) and the standardized loadings ranged from 0.32 to 0.75. To determine whether the data exhibited common method variance (CMV) given their self-reported nature, the recommendations of Podsakoff et al. (2003, 2013) were followed. Firstly, a confirmatory factor analysis of Harman's single factor model was carried out. The results obtained from a model in which all items were loaded onto a single factor did not achieve good-fit indices (Table 1). The measurement model showed a significant reduction in χ^2 ($\Delta\chi^2$ (2) = 929.52, $p < .001$). Thus, this result suggested that a single-factor model yielded a worse fit. A more sensitive common bias method has also been implemented, which involves using a common latent factor (CLF). This method is based on assigning all items to both their respective theoretical constructs and to the CLF. The fit statistics of the models with and without the CLF were compared (Table 1). The model without the CLF factor showed a significant reduction in χ^2 ($\Delta\chi^2$ (8) = 75.12, $p < .001$). Therefore, common method variance most likely did not affect the results.

4.6. Data analysis

A descriptive analysis (means, standard deviations) was performed, and Pearson's correlations were calculated to assess the associations among all the variables considered in the models (control and study variables). To evaluate the main effects proposed in Hypothesis 1, a multiple linear regression analysis was conducted. The interaction effect described in Hypothesis 2 was tested using the PROCESS v.4.2 SPSS macro (Hayes, 2022), with both the predictor and moderator mean-

Table 1
Fit indices of the measurement model and common method variance.

		χ^2 (*df*)	χ^2 / *df*	CFI	TLI	RMSEA	SRMR
Measurement Model	Exhaustion	42.05 (14) ***	3.00	0.97	0.95	0.06	0.04
	Perception of patients' suffering	193.80 (57) ***	3.40	0.95	0.93	0.07	0.06
	Personal BJW	33.81 (14) **	2.42	0.99	0.98	0.05	0.02
	Three-factor model	572.52 (344) ***	1.66	0.96	0.95	0.04	0.05
CMV	Harman's single-factor	1501.96 (346) ***	4.34	0.79	0.75	0.08	0.14
	Latent method factor	647.63 (336) ***	1.93	0.94	0.93	0.04	0.05

Notes. χ^2 – chi-square; *df* – degrees of freedom; χ^2/df – normed chi-square; CFI – Comparative Fit Index; TLI – Tucker–Lewis Index; RMSEA – Root Mean Square Error of Approximation. CMV – Common method variance.
** $p < .01$. *** $p < .001$.

centered prior to analysis. To examine the interaction effect outlined in Hypothesis 3, a simple slope test was conducted (Aiken & West, 1991).

5. Results

Descriptive statistics (mean and standard deviation) and bivariate correlations of all studied variables are presented in Table 2. Healthcare workers' exhaustion was positively and significantly correlated with the perception of patients' suffering and with affective empathy; and was negatively and significantly correlated with personal BJW and general BJW. Personal BJW was positively and significantly correlated with general BJW. The perception of patients' suffering was also positively and significantly correlated with affective empathy and cognitive empathy.

5.1. Hypotheses testing

Table 3 presents the results for the test of main effects (H1 and H2) and interaction effect (H3). After accounting for general BJW, affective empathy, cognitive empathy and the demographic characteristics sex and age, the results showed that the perception of patients' suffering had a significant positive main effect on exhaustion ($B = 0.15$, $t = 2.48$, $p = .013$, CI 95 % [0.03 0.27]), thus supporting H1. Personal BJW had a significant negative main effect on exhaustion ($B = -0.33$, $t = -6.07$, $p < .001$, CI 95 % [−0.43, −22]) supporting H2.

We also found a significant interaction between personal BJW and the perception of patients' suffering (B = − 0.19, $t = -2.04$, $p = .042$, CI 95 % [−0.37, −0.01]), indicating that the relationship between the perception of patients' suffering and exhaustion was moderated by personal BJW. To interpret the moderating effect of personal BJW, the simple slopes were plotted considering low personal BJW (1SD below the mean) and high personal BJW (1SD above the mean) (Fig. 2). The simple slope of the perception of patients' suffering on exhaustion was significant only at lower levels of personal BJW (Simple slope = 0.27, $t = 3.20$, $p = .001$, CI 95 % [0.11, 0.44]), but not at higher levels of personal BJW where the perception of patients' suffering did not associate with exhaustion (Simple slope = 0.05, $t = 0.67$, $p = .524$, CI 95 % [−0.10, 0.20]). This means that at lower levels of personal BJW, the higher the perception of patients' suffering the higher the exhaustion; by contrast at higher levels of personal BJW, perception of patients' suffering was not associated with exhaustion. This result is in line with H3 that predicted personal BJW to be a coping resource. Overall, our results support personal BJW operating both as a personal resource (H2) and a coping resource (H3).

6. Discussion

Given the importance of protecting the well-being of healthcare workers (e.g., World Health Organization, 2016), in the present study, we examined the possibility that BJW acts as a resource for these

Table 3
Regression results for moderation.

	Exhaustion			
	Coeff.	SE	*p*	95 % CI
Main effects				
Perception of patients' suffering	0.15	0.06	0.013	0.03, 0.27
Personal BJW	−0.33	0.05	<0.001	−0.43, −0.22
Control variables				
General BJW	−0.06	0.06	0.307	−0.17, 0.05
Affective empathy	0.11	0.03	0.001	0.04, 0.17
Cognitive empathy	0.01	0.07	0.833	−0.12, 0.15
Sex	−0.07	0.06	0.217	−0.17, 0.04
Age	−0.01	0.00	<0.001	−0.02, −0.01
Interaction effect				
Perception of patients' suffering	0.16	0.06	0.008	0.04, 0.28
Personal BJW	−0.32	0.05	<0.001	−0.42, −0.21
Perception of patients' suffering * Personal BJW	−0.19	0.09	0.042	−0.37, −0.01
Control variables				
General BJW	−0.05	0.06	0.378	−0.16, 0.06
Affective empathy	0.11	0.03	0.001	0.04, 0.17
Cognitive empathy	0.02	0.07	0.823	−0.12, 0.15
Sex	−0.07	0.06	0.231	−0.17, 0.04
Age	−0.01	0.00	<0.001	−0.02, −0.01

Note. $N = 497$. Unstandardized results are reported. CI – Confidence interval.

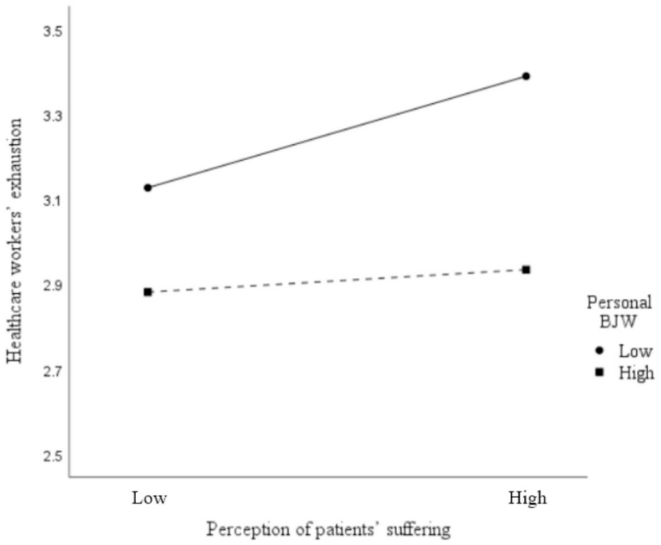

Fig. 2. The moderating effect of personal BJW on the relationship between the perception of patients' suffering and healthcare workers' exhaustion.

Table 2
Descriptive statistics, bivariate correlations, and reliabilities.

	M	*SD*	1	2	3	4	5	6	7
1. Exhaustion [a]	3.09	0.63	(0.81)						
2. Perception of Patients' Suffering [a]	3.78	0.44	0.16***	(0.85)					
3. Personal BJW [a]	3.12	0.58	−0.32***	−0.06	(0.89)				
4. General BJW [a]	2.63	0.54	−0.20***	−0.04	0.55***	(0.69)			
5. Affective Empathy [a]	2.96	0.78	0.15***	0.14**	0.02	−0.07	(0.78)		
6. Cognitive Empathy [a]	3.99	0.39	0.04	0.15***	0.00	−0.05	0.04	(0.75)	
7. Sex [b]	0.37	–	−0.13**	−0.08*	0.12**	−0.05	−0.07	−0.10*	
8. Age	35.69	10.11	−0.16***	−0.06	−0.13**	−0.06	−0.03	−0.01	0.14***

Note. $N = 497$. Cronbach's alpha for the scales is in parenthesis.
* $p < .05$. ** $p < .01$. *** $p < .001$.
[a] The minimum and maximum values are 1 and 5 (respectively) for all these variables.
[b] 0 = female, 1 = male. The proportion of males is reported.

professionals. We explored if this protective effect applies to all professionals, regardless of their perceptions of patients' suffering (indicating personal BJW as a personal resource), and/or if it occurs for healthcare professionals facing higher emotional demands due to their patients' suffering (indicating personal BJW as a coping resource).

As predicted (H1), we found a positive association between the perception of patients' suffering and healthcare workers' exhaustion which aligns with conceptualising working with patients in suffering as an emotional demand (e.g., Gleichgerrcht & Decety, 2012).

Personal BJW was found to be negatively associated with exhaustion confirming the importance of personal BJW as a personal resource for everyday work life, irrespective of the intensity of the demands faced (H2), consistent with many previous findings across various populations (see Correia, Carvalho, Otto, & Nudelman, 2024, for a review). This is the first study to show personal BJW as a personal resource for healthcare workers.

Moreover, we found that personal BJW is a coping resource for healthcare workers facing higher emotional demands caused by a higher perception of the patients' suffering (H3). Specifically, we found that the perception of patients' suffering was positively and significantly associated with exhaustion only for healthcare professionals with lower levels of personal BJW; this association was not significant for healthcare workers with higher levels of personal BJW. This supports personal BJW as a coping resource for healthcare workers, protecting them from exhaustion due to the perception of their patients' suffering. This is a very important finding as it offers a better understanding of the multiplicative impact of demands and resources (Bakker et al., 2005). Indeed, we found that exhaustion results from a combination of high demands caused by the perception of emotional suffering and low resources due to a lower personal BJW. Although the size of the interaction was small, it is important from a theoretical perspective (Bakker et al., 2005).

It is also important to state that these results were found when controlling for other variables correlated with well-being and the perception of patients' suffering, namely general BJW and empathy (cognitive and affective).

6.1. Implications

Although BJW is a personal disposition considered relatively stable over time (e.g., Dalbert, 2001), research has demonstrated that personal BJW can also reflect the objective justice people experience in their environments (Bartholomaeus et al., 2023; Otto et al., 2009; Thomas, 2022). Therefore, preserving objective justice in the workplace environment of healthcare workers should be a priority, given that facing injustice may decrease their personal BJW and thus deplete them of an important personal and coping resource.

Moreover, although personal BJW is an individual resource, the justice conditions that might boost it may be situated at all levels of the organisation (see Nielsen et al., 2017 for a review). Concerning the group-level workplace resources, we can consider social support and good interpersonal relationships between employees. This may be achieved, for instance, through an inclusive work environment where all employees feel valued and respected. Training on diversity and inclusion for all employees may be beneficial in achieving this goal. At the leader-level workplace resources, we may consider the relevance of open and honest communication channels between management and employees, including fair and accessible procedures for resolving conflicts. Leaders should be encouraged to model inclusive behaviors and support initiatives that promote justice in the workplace. Finally, the organisational-level resources, refers to the way work is organised, designed, and managed. Examples of objective justice at this level are unbiased recruitment processes, transparent salary structures, and objective and fair criteria for evaluating employee performance.

6.2. Limitations

We must, however, acknowledge some limitations in our study. Firstly, we employed a cross-sectional design, which requires caution when inferring causal relationships between variables in the model. Secondly, the measure of patients' suffering used was specifically related to the perceived suffering of COVID-19 patients, which may not be generalised to other forms of perceived suffering. Thirdly, because we could not obtain a probabilistic sample, drawing inferences to other populations is not permissible. Therefore, the study should be replicated with additional samples.

6.3. Future studies

One important avenue for future research would be to examine how different underlying mechanisms may explain the protective relationship between personal BJW and exhaustion. According to Dalbert (2001), these mechanisms include: (1) acting in a fair way; (2) trusting in being treated fairly by others; and (3) assimilating injustices (see Dalbert, 2001, for a review). All these mechanisms seem to serve as resources, as they are functional in achieving work goals, may reduce job demands and the costs associated with them, and stimulate personal growth and development (Demerouti et al., 2001).

This can be applied to healthcare workers in several ways. For example, healthcare professionals acting fairly and following all rules are likely to achieve work goals effectively. In terms of trusting in being treated fairly by others, this could lead to greater cooperation within work teams, thus stimulating growth and development. Regarding assimilating injustices, this would make professionals more prone to devalue undesired circumstances and outcomes, reducing the costs associated with job demands.

Future studies should also examine whether these processes occur similarly or differently when healthcare professionals face lower and higher emotional demands. For example, we may speculate that for healthcare professionals facing higher emotional demands due to their perceptions of patients' suffering, trusting that their colleagues would support them in these difficult moments could be very helpful in sustaining their well-being.

Notwithstanding, these are only a few possibilities for the operationalisation of BJW functions. Other possibilities should be explored by future research.

7. Conclusion

This study is a first contribution to the understanding the protective role of personal BJW for the exhaustion of healthcare professionals, both in their everyday work life and when they face high emotional demands caused by a perception of high patient suffering. Although it is up to future research to determine the exact underlying mechanisms that explain the association between personal BJW and well-being, and if they differ according to the intensity of demands faced by healthcare professionals, the present study highlights the relevance of promoting workplace conditions that healthcare workers experience as just, so that their BJW can be reinforced and serve as a resource.

It is our hope that this knowledge can be integrated into occupational health interventions (de Lange et al., 2024), contributing to increase healthcare workers' well-being and, consequently, improving the functioning of the healthcare system and the quality of patient care.

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CRediT authorship contribution statement

Isabel Correia: Writing – review & editing, Writing – original draft, Resources, Project administration, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization. **Helena Carvalho:** Writing – review & editing, Formal analysis.

Declaration of competing interest

None.

Data availability

Data will be made available on request.

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