Justice Perceptions and Well-Being: Belief in a Just World is a Personal Resource and a Coping Resource

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Author Contributions

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Abstract

Although the perception of justice is a core need of all individuals, the adaptive value of belief in a just world (BJW)—in everyday life and when facing severe distress — has been typically investigated in separate studies.

In this paper we tested, in only one study, the possibility that BJW can be a personal resource and a coping resource. We analysed data from the European Social Survey comprised of random representative samples of 27 European countries (N= 24,776 participants). We considered distressing circumstances both at an individual level (health impairment and financial difficulty) and at a macroeconomic contextual level (GDP).

The results showed that for people both facing and not facing financial or health related distress, BJW was positively associated with well-being, supporting BJW as a personal resource. Furthermore, we found that the decrease of well-being of people facing distress, both at an individual level and at a contextual level, compared to people not facing distress, was lower for individuals with higher BJW than for individuals with lower BJW, supporting BJW as a coping resource.

Keywords: well-being; justice; resources; distress; cross-level interaction; coping

Justice Perceptions and Well-Being: Belief in a Just World is a Personal Resource and a Coping Resource

Well-being has been increasingly acknowledged as important by international institutions (OECD, 2021). Justice perceptions have shown to be consistently associated with well-being (see Hafer et al., 2020). This is not surprising given that the perception of justice is a core need of all individuals, whether people face distress or not (Lerner, 1980). As Justice Motive Theory asserts "People want to and have to believe they live in a just world so that they can go about their daily lives with a sense of trust, hope, and confidence in their future'' (Lerner, 1980, p. 14). Nevertheless, the adaptive value of belief in a just world (BJW) for people when facing distress or not (what Dalbert, 2001 referred as, respectively, non-victims and victims), remains to be empirically integrated. Furthermore, so far, the adaptive value of BJW for people facing distress has only been tested when distress takes place at an individual level and not when it takes place at a macroeconomic contextual level. The present study aims to fill these gaps in the literature.

To achieve these goals, we analysed data from the European Social Survey (European Social Survey Round 9 Data, 2018) composed by random representative samples of 27 European countries. The distressing factors at an individual level were health impairment and financial difficulty, and at a macroeconomic contextual level we considered Gross Domestic Product per capita (GDP). Additionally, we controlled for several variables that have been previously found to be associated with well-being.

Belief in a just world: A personal resource and/or a coping resource?

Justice motive theory (Lerner, 1980) states that individuals are motivated to perceive the world as a just place where people get what they deserve, which means "good things" are perceived to happen to "good people" and "bad things" are perceived to happen to "bad people". This perception of justice gives people confidence that no unjust events will happen

to them. Lerner (1980) considered the adaptive value of BJW to be universal. Consequently, all people develop this belief in childhood—through processes of cognitive maturation, societal and cultural values, and experience (Rubin & Peplau, 1975)—and maintain it in adulthood, although it may vary across individuals and situations (Lerner, 1980).

Rubin and Peplau (1973, 1975) built the first scale to measure this belief. The score obtained on this scale is intended to be an indicator of a motivation for justice, that is, the more a person believes that the world is fair, the greater his or her effort to achieve his or her goals by fair means (Dalbert, 2001). The BJW is considered a relatively stable dimension over time, and it was found related to other major personality traits, namely neuroticism, and positively associated with extraversion, agreeableness, and conscientiousness (Nudelman, 2013, Nudelman & Otto, 2021). Moreover, BJW influences the way people face everyday life as well as adversities. Indeed, BJW allows people to perceive events as challenges rather than threats, which protects them from the stress associated with unpredictable and/or unfair events (Tomaka & Blascovich, 1994) and provides them with perceived control (Goodwin & Williams, 2023).

Furthermore, when people with higher BJW are victims of unfair events, they tend to interpret those events as, at least in part, caused by their own behavior. This behavioral attribution is functional since it gives meaning to the critical event, mitigates feelings of injustice and reduces negative emotions, contributing to the maintenance of well-being and of the BJW (e.g., Hafer & Correy, 1999; Hafer & Olson, 1989).

A distinction is usually made between the belief in a personal just world and the belief in a general just world (Dalbert, 1999). The personal BJW reflects the belief that, overall, events in one's own life are just, whereas the general BJW reflects the belief that, basically, the world is a just place. However, the general BJW and personal BJW are highly correlated and load on a latent factor of BJW (Hafer et al., 2020; Nudelman, 2013). This finding allowed

us to focus on general BJW in the present study, given that personal BJW was not included in the European Social Survey.

The measurement of individual differences with BJW scales made it possible to empirically study the association between people's endorsement of BJW and well-being indicators. In these studies, the possibility that BJW operates for people either facing distress or not has been discussed in terms of BJW being a personal resource or a coping resource, respectively (Dalbert, 2007).

A *personal resource* can be defined as a personal disposition that has a beneficial effect on people's well-being irrespective of whether persons are under stress (Cohen & Wills, 1985). The stronger the resource, the better the well-being of people (main effect hypothesis, Cohen & Wills, 1985). A *coping resource*, in contrast, is usually seen as a resource that takes effect only (or primarily) under specific *adverse* conditions (moderator hypothesis) and protects the well-being of people when they face stressful events (Cohen & Wills, 1985).

Although it is theoretically possible that BJW is functioning as both a personal resource for the well-being of people not facing distress and a coping resource for the well-being of people facing distress, these two possibilities have been typically investigated separately, tested in studies conducted mostly either with people not facing distress or with people facing distress (Dalbert, 2007).

We will next refer to some of these studies, starting with the ones conducted in people not facing distress, that mostly found positive associations with different measures of well-being across ages, countries, and sample types. For example, BJW was related with life satisfaction among children in Portugal (Correia & Dalbert, 2007), well-being among university students in Russia (Nartova-Bochaver et al., 2019), as well as a random sample of adults sampled online using MTurk (Hafer et al., 2020). Similarly, stronger BJW was

associated with lower depressive symptoms among teenagers in India (Kamble & Dalbert, 2012). Recently, Nudelman et al. (2021), found the BJW to be able to protect well-being when confronted with the threat of the Covid-19 pandemic. Therefore, past findings provide evidence for a main effect of BJW on well-being, supporting its function as a personal resource.

Other studies have examined the role of BJW as a moderator between stressors and indicators related to better coping and mental health among people facing distressing circumstances. For example, for teachers that were victims of violence, the higher their BJW, the less frequently they experienced negative affect (Dzuka & Dalbert, 2007), turnover intentions following workplace bullying were lower for employees with a stronger BJW (Öcel & Aydın, 2012), people with stronger BJW demonstrated lower emotional distress following interpersonal transgressions in close relationships (Nudelman & Nadler, 2017), and increased BJW led to decreased aggressive reactions following a frustrating agent whose intentions were ambiguous (Bègue & Muller, 2006). Moreover, people with a stronger BJW displayed a less pronounced association between negative life events and self-injury (Gu et al., 2021), the link between perceived discrimination and depression was lower for individuals with a stronger BJW (Sadiq & Bashir, 2015), and mood was less affected by an occupational threat among those with stronger BJW (Nudelman et al., 2016). Even in extreme adversities such as losing family members and friends in an earthquake, high BJW participants did not report more anxiety than the participants that had not lost family members or friends, whereas low BJW participants reported more anxiety than the participants that had not lost family members or friends (Xie at al., 2011). Consequently, BJW appears to be a coping resource that enables better coping with diverse types of life stressors.

We put forward here that the possibility that BJW operates both as a personal resource and a coping resource would be better tested in studies that include participants that are not

facing distress and participants that are facing distress. In such a study, it would be possible to test both the personal resource prediction (main effect hypothesis) and the coping resource prediction (moderator hypothesis).

The personal resource prediction would be supported if participants endorsing higher BJW will have higher well-being than participants endorsing lower BJW. The coping resource prediction would be supported if the decrease of well-being of participants facing distress compared to participants not facing distress will be lower for individuals with higher BJW than for individuals with lower BJW.

In sum, by exploring the two possible adaptive roles of BJW – the personal resource and the coping resource in a single study – the present research aims to further broaden our knowledge on the role of BJW in mental health and well-being. Theoretically, this would demonstrate that BJW promotes well-being irrespective of whether people are under stress, and in the case of people facing distress, a strong BJW prevents well-being from decreasing as much as it does for people with weaker BJW.

The Present Research – A multilevel approach

We used the survey data from the 9th wave of the European Social Survey (European Social Survey Round 9 Data, 2018). This survey (European Social Survey, 2018) collects random representative samples from 27 European countries[1] about different social, economic, and political issues. Furthermore, the above survey also includes information about individual variables such as socio-demographic (gender, age, years of education) and ideological variables (religiousness, political ideology, national identification) that are not of direct theoretical interest for us but might also affect well-being.

[1] The countries were: Austria, Belgium, Bulgaria, Switzerland, Cyprus, Czechia, Germany, Estonia, Spain, Finland, France, United Kingdom, Croatia, Hungary, Ireland, Italy, Lithuania, Latvia, Montenegro, Netherlands, Norway, Poland, Portugal, Serbia, Sweden, Slovenia, Slovakia.

In the present research, well-being was represented by subjective well-being. Subjective well-being refers to an overall evaluation of people's lives, and has been conceptualised as having two components (e.g., Diener, et al, 1999): a cognitive component, referring to a global evaluation by the person of his or her life (life satisfaction); and an affective component, which includes moods and emotions, representing ''people's on-line evaluations of the events that occur in their lives'' (Diener et al., 1999, p. 277). Research has shown that the two components are generally well associated (e.g., Dalbert, et al., 2001).

As far as distressing situations are concerned, at an individual level, we considered health impairment and financial difficulty, which is in line with research that previously showed that health (Taylor et al., 1984) and income (Lucas & Schimmack, 2009) are associated with well-being. At a contextual individual level, we considered victimization also on a group level (countries, in this research), by assuming that a lower national economic income (Stiglitz et al., 2018) and higher income inequality (Picket & Wilkinson, 2015) constitute a risk on the country level – negatively impacting well-being. BJW and victimization were measured at the individual level. National economic income and income inequality were measured at the country level. Considering the hierarchical structure of the data – individuals nested in countries – and given that it was necessary to examine relationships between variables measured at different levels (individual level and country level) a multilevel analysis was considered (Hox, 2002; Snijders, 1999).

Based on previous empirical evidence (Lee et al., 2020), income inequality was measured with Gini and national income was measured with GDP per capita. We measured national income with GDP per capita as this is the predominant applied indicator for a country's economic growth. Furthermore, in a comprehensive study conducted recently across 60 countries, life satisfaction was positively correlated with GDP but not with Gini (Lee et al.,

2020). Therefore, we tested the cross-level interactions only for GDP, and we considered Gini as a control variable.

Theoretically, the impact of victimization on well-being both at an individual and at a contextual level might be explained by conservation of resources (COR) theory (Hobfoll, 1989) that states that people strive to protect those things in their life they centrally value, i.e., their resources (Hobfoll, 1998). Stress, and consequently a decrease in well-being, is seen as a response to any set of circumstances which threaten or actually deplete resources. COR theory further differentiates between resource-poor and resource-rich environments (Holmgreen et al., 2017), which in our case will be reflected in a country's lower vs. higher GDP. When resources are insufficient to begin with, loss spirals might emerge. For example, a consequence of a country's lower GDP (resource-poor environment) is a weaker social security net in case of illness or unemployment. Being in distress regarding financial difficulty or health impairment in such a country would initiate a loss spiral and thus be more detrimental to one's well-being.

Therefore, we predict that all health or financial distressing conditions will have a negative impact on well-being. Specifically, people that suffer from financial difficulty will have lower well-being than people that do not suffer from financial difficulty (main effect of financial difficulty on well-being); people that suffer from health impairment will have lower well-being than people that do not suffer from health impairment (main effect of health impairment on well-being); and people from countries with lower national income will have lower well-being than people from countries with higher income (main effect of GDP on well-being).

When it comes to the protective impact of BJW on well-being, we expect BJW to be a personal resource as well as a coping resource and therefore we formulate the following hypotheses: people (in distressing conditions as well as not in distressing conditions) with

higher BJW will have higher well-being than people with lower BJW (main effect hypothesis of BJW on well-being); moreover, the decrease of well-being of people facing distress compared to people not in distress will be lower for individuals with higher BJW than for individuals with lower BJW (interaction effect between distressing conditions and BJW on well-being). Furthermore, people facing distress with higher BJW that face the cumulative impacts of distressing conditions at an individual level plus living in a poorer country will show higher well-being than people facing distress with lower BJW[2].

We controlled respondents' gender, age, and education because they are related to indicators of well-being (respectively, Nolen et al., 1999; López Ulloa et al., 2013; Witter et al., 1984). We further controlled for religiousness and political ideology of the participants because religiousness of participants is positively associated with well-being (Corazzini et al., 2012), and the religiousness of participants is associated with right-wing political ideology (Correia et al., 2018). National identification is also related with well-being (Khan et al., 2020), and was thus controlled for.

Method

Participants

The sample was composed by 38,396 participants (M_{age} = 48.40 years, *SD* = 18.89, *Min* = 15, *Max* = 90; 51.2% female), interviewed in 27 European countries ($N_{average}$ = 1744, Min_{Cyprus} = 781, Max_{Italy} = 2,745). Data was collected between August 2018 and May 2019; and is publicly available at the ESS website – European Research Infrastructure (European Social Survey Round 9 Data, 2018).

Measures

[2] To simplify the text, we called the comparison group "people not facing distress" to express they are not in any financial or health-related distress. However, we do not know if they might be facing some other distressing conditions.

Individual level

All measures at the individual level used in this study were taken from the Questionnaire of the European Social Survey Round 9 (European Social Survey, 2018).

Belief in a just world. The ESS Round 9 includes a 3-item measure of BJW taken from the General Belief in a Just World scale (Dalbert et al., 1987). This measure has already been used in previous research (Correia et al., 2018; Garcia-Sanchez et al., 2022) where it showed associations with other variables that are in line with the theoretical predictions of the Just World Theory. Moreover, this three-item scale has also shown to have appropriate psychometric properties (Garcia-Sanchez et al., 2022[3]). The items were: "I think that, by and large, people get what they deserve"; "I am confident that justice always prevails over injustice"; "I am convinced that, in the long run, people will be compensated for injustices", and they were measured in a 5-point Likert scale from 1 (*a strongly agree*) to 5 (*strongly disagree*). Items were reverse coded and computed as a mean score, so that higher values meant more BJW endorsement, with an acceptable consistency ($\alpha = .72$).

Financial difficulty. We measured financial difficulty using a question from European Social Survey (ESS, 2018): "Which of the descriptions on this card comes closest to how you feel about your household's income nowadays" with four categories: living comfortably on present income, coping on present income, difficult on present income, very difficult on present income. A dummy variable was created in which 0 = non-financial difficulty (living comfortably on present income and coping on present income) and 1 = financial difficulty (difficult on present income and very difficult on present income).

Health impairment. We measured health impairment with two questions: 1) "Are you hampered in your daily activities in any way by any longstanding illness, or disability,

[3] As stated in Garcia-Sanchez et al. (2022), the items showed adequate internal consistency ($\alpha_{Chronbach} = 0.75$; $.55 \leq r_{item\text{-}total} \leq .74$), and a multilevel confirmatory factor analyses provided an excellent model fit.

infirmity or mental health problem? IF YES, is that a lot or to some extent?" with three possible answers: "*yes*", "*yes to some extent*", "*no*"; and 2) "How is your health in general?" measured on a 5- point scale 1 (*very good*) to 5 (*very bad*). As the two variables were categorical and had a different number of categories, a multiple correspondence analysis (MCA) was performed to submit the two variables to a quantification process, thus enabling the construction of a new composite variable. Using an optimal scaling procedure, the MCA algorithm assigns optimal quantification to the categories of each variable, and then calculate a score for each participant composed by the two (transformed) variables (Gifi, 1996; Greenacre, 2007; Greenacre & Blasius, 2006). After this optimal quantification process, an acceptable reliability of .76 was obtained. Higher scores correspond to more health impairment.

Well-being. Well-being was measured with two items "Taking all things together, how happy would you say you are?" and "All things considered, how satisfied are you with your life as a whole nowadays?" (Coudin & Lima, 2011). The two items were measured by an 11-point scale ranging from 0 (*extremely unhappy* and *extremely dissatisfied*, respectively) to 10 (*extremely happy* and *extremely satisfied*, respectively). The internal consistency was measured by the Spearman-Brown coefficient (only two items) and a very good reliability was obtained (S_B = .81, Kline, 2011).

Country level

Gross domestic product (GDP). Data referring to GDP was taken from The World Bank development indicators (World Bank, 2021). According to the information on the site: "This indicator provides per capita values for gross domestic product (GDP) expressed in current international dollars converted by purchasing power parity (PPP) conversion factor. GDP is the sum of gross value added by all resident producers in the country plus any product taxes and minus any subsidies not included in the value of the products. Conversion factor is a

spatial price deflator and currency converter that controls for price level differences between countries. Total population is a mid-year population based on the de facto definition of population, which counts all residents regardless of legal status or citizenship". Logarithmic transformation was used to analyse GDP (Lee et al., 2020).

Control variables

We controlled for the following variables in our analyses that are not of direct theoretical interest for us but have been previously shown to be associated with well-being.

At the individual level, participants were asked for their age (year of birth), and sex was coded by the interviewer as male or female. For years of education, participants were asked "About how many years of education have you completed, whether full-time or part-time? Please report these in full-time equivalents and include compulsory years of schooling." For political ideology, a single item asked individuals to place themselves on a scale ranging from 0 (*left*) to 10 (*right*). To measure participants' religiousness, people were asked to rank themselves, regardless of their particular religion, by saying how religious they would say they were, by using an 11-point scale ranging from 0 (*not at all religious*) to 10 (*very religious*). To measure national identification, people were asked how emotionally attached they felt to their country on a scale ranging from 0 (*not at all emotionally attached*) to 10 (*very emotionally attached*).

At the country-level, we controlled Gini. Data referring to Gini coefficient was taken from EUROSTAT (2020), which computes data for all European countries based on the European Statistics on Income and Living Conditions (EU SILC). Gini is a measure of income distribution that ranges from perfect equality (0) to perfect inequality (100). Although Gini is not significantly correlated with life satisfaction (Lee et al., 2020), it has an impact on several indicators of health (Picket & Wilkinson, 2015).

Data Analysis

Using ESS data to produce more accurate estimates requires weighting the data. As a multilevel analysis was the main goal, the weighting used combine the design weight with population size weights was applied (ESS Round 9: European Social Survey, 2021). A listwise deletion was implemented to manage the missing values. The final weighted sample was N = 38, 396, which corresponds to 91.6% of the weighted sample N=41,930.

The descriptive statistics and correlations among all the variables considered in the models (control and study variables) were calculated. To assess the research hypotheses, a multilevel modelling method was conducted, as the data involved individuals nested in countries, thus, a hierarchical structure. As the control variables included level 1 and level 2 variables, a linear mixed-effects model was used to test the two-way interactions and the three-way interactions (cross-level interaction). The predictor variables and the moderator variables were centred before computing the interaction terms and centred scores were entered in each model. To test the interaction effects, simple intercepts and simple slopes and their significances, as well as to calculate values to plot two-way and three-way interactions, the estimations were calculated in ordinary least squares (OLS) regression (Bauer et al., 2005; Preacher et al., 2006). Multilevel modelling analysis was performed using SPSS version 28 software and interaction effects were plotted with R software (R Core Team, 2021).

Results

Descriptive statistics (mean, standard deviation, and proportions), and bivariate correlations of all control and study variables are presented in Table 1. The description of the countries according to the study variables is presented in Table 5 (Appendix).

To assess the suitability of multi-level analysis, the intra-class correlation (ICC) was calculated. The null model was estimating and about 12% of the variability of the well-being

was explained by the country, with a significant *F-ratio* (F (26) = 255.41, $p < .001$), thus empirically justifying proceeding with the hierarchical analysis.

Hypotheses testing

All the results were estimated after controlling for the individual level variables of sex, age, years of full-time education completed, political ideology, emotional attachment to one's country, religiousness, health impairment and financial difficulty, and the country level variables Gini and gross domestic product (GDP). As shown in Table 2, BJW has a significant positive main effect on well-being ($B = 0.20$, $t = 18.84$, $p < .001$, part $R^2 = .01$), supporting BJW as a personal resource.

Concerning BJW as a coping resource, Table 3 showed that the interaction effect between financial difficulty and BJW on well-being was significant ($B = 0.24$, $t = 9.01$, $p < .001$, with a R^2 change = .003). The interaction effect between health impairment and BJW on well-being (Table 4) was also significant ($B = 0.04$, $t = 3.89$, $p < .001$, R^2 change = .002).

To interpret the moderating effect of BJW, the simple slopes were plotted considering low BJW (1SD below the mean) and high BJW (1SD above the mean). Figure 1 for financial difficulty shows that both higher BJW participants facing financial difficulty and higher BJW participants not facing financial difficulty, had higher well-being than lower BJW participants that are either facing financial difficulty or not. Concerning the interaction effect, the negative relationship between financial difficulty and well-being was stronger with lower BJW (simple slope = -1.01, $t = -42.53$, $p < .001$), than with higher BJW (simple slope = -0.76, $t = -20.32$, $p < .001$). Figure 2 illustrates the moderator effect of BJW on the relationship between health impairment and well-being at two levels of BJW: low (1 *SD* below the mean) and high (1 *SD* above the mean). The decrease of well-being of participants facing health impairment, compared to participants not facing health impairment was higher for individuals with lower BJW (simple slope = -0.45, $t = -47.10$, $p < .001$), than for individuals with higher BJW

(simple slope = -0.41, t = -27.19, p < .001). The obtained results support the hypothesis of BJW as a coping resource.

In addition to the individual level of distressing conditions, a contextual level of distressing conditions was also included in the model. Hence, a cross-level interaction with GDP was also tested. Considering the two types of individual distressing conditions, the three-way interaction with financial difficulty was non-significant (B = 0.11, t = 0.80, p = .423, Table 3), and was significant with health impairment (B = 0.26, t = 4.24, p < .001, Table 4).

The conditional effects for health impairment showed significant results (Table 4). The slope of the pair higher BJW/higher GDP was significantly different from the others. The lowest decrease of well-being for participants facing health impairment compared to participants not facing health impairment occurred again with higher BJW in countries with higher GDP (simple slope = -0.34, t = -18.38, p < .001) (Table 4 and Figure 3).

Discussion

With this paper we contribute to the literature by simultaneously examining the possibilities that BJW acts as a personal resource in conditions of no distress and as a coping resource that sustains well-being of people facing various distressing circumstances (financial difficulty and health impairment). In addition, inspired by ideas from COR theory (Hobfoll, 1989, 1998), we extend and enrich the BJW and well-being literature by adding a macroeconomic perspective to our study. More precisely, we extend this analysis to a multilevel approach in which living in a poorer country (as measured by GDP) is considered as a contextual factor that may represent an additional condition of distress.

To start with, all distressing conditions considered showed to be associated with a lower well-being, as predicted, allowing us to test for the impact of BJW. These results replicate previous findings concerning the impact of health impairment on well-being (Taylor,

et al., 1984), of financial difficulty at an individual level (Lucas & Schimmack, 2009), and of lower national income at a contextual level, indicated by a lower GDP (e.g., Lee et al., 2020). Furthermore, distressing conditions at an individual level (both in case of health impairment and financial difficulty) were more associated with lower well-being when combined with distressing conditions at a contextual level. This shows the importance of considering studying the joint impact of distressing conditions at an individual and at a contextual level.

Our findings supported a model in which BJW acts as a personal resource in no distressing conditions as well as a coping resource that sustains well-being in distressing conditions. In fact, BJW was associated with higher well-being equally for people facing financial difficulties or health impairments as well as those neither facing financial difficulties nor or health impairments, demonstrating that it is a personal resource. Furthermore, the decrease of well-being of people facing financial difficulties or health impairment at an individual level compared to those that were not in such distressing conditions was higher for individuals with lower BJW than for individuals with higher BJW, supporting BJW as a coping resource.

Additionally, distressing conditions at a contextual level, gauged by living in a country with lower GDP, affected the impact of BJW as a coping resource for individuals facing higher health impairment as a distressing condition at an individual level. This was revealed by a three-way interaction between BJW, distressing conditions at an individual level, and distressing conditions at a contextual level. The results showed that the lowest decrease of well-being for people facing higher health impairment compared to people with lower health impairment occurred for individuals with higher BJW from countries with higher GDP. These results are in line with what has been proposed by COR theory (Hobfoll, 1989, 1998), namely that in resource-poor in contrast to resource-rich environments, loss spirals are more likely

consuming further resources and require higher resource investment that damage well-being in the long run.

In practical terms, our findings suggest BJW is a coping resource for people in a disadvantaged situation because of health problems only if those people live in wealth countries. Such countries might offer more support in dealing with the health problem than less wealthy countries. This might include health insurance options, sickness benefits, access to doctors and hospitals, early withdrawal from the labor market due to illness, disability pensions, etc. Therefore, we found that contextual factors have an impact on the possible buffering effect of BJW when people face distress at the individual level.

The previous findings could alternatively be understood from a social comparison perspective (Festinger, 1954). Social comparisons are also relevant in the context of well-being. Objective standards are usually lacking in the evaluation of one's own private situation, which increases the likelihood of social comparisons between citizens in one's social environment or country (Festinger, 1954). The identification-contrast model developed by Buunk and Ybema (1997) proposes that individuals tend to identify upwards and contrast downwards when making social comparisons. It may be speculated that, irrespective of the level of individual distress and burdens, an individual's standing above or below the societal average should be related to well-being. At least for a strain indicator, Halbesleben and Buckley (2006) have supported this by demonstrating that downward social comparisons reduce the likelihood of burnout whereas upward comparisons increase it. Similarly, in our study individuals from richer countries may have more upward comparisons, and thus suffer more when facing adversities but might also gain more from their BJW to sustain their well-being.

However, the interaction between BJW, financial difficulty and GDP was not significant. Despite financial distress at an individual level and at a contextual level decreased

well-being, the coping role of BJW to sustain well-being was only restricted to distressing conditions at an individual level and do not vary according to the distressing conditions at the contextual level when measured by GDP per capita. This should not discourage future research of testing the possible role of BJW as a coping resource using other contextual indicators of distressing conditions.

In sum, our results shows that distressing conditions are not associated with a lower well-being equally for everyone: for people with higher BJW, that association is weaker.

Our study contributes to the literature by stressing the need to incorporate BJW's effect on well-being during ordinary life and during distress, i.e., BJW can act as a personal resource and as a coping resource. We suggest that in daily life, BJW provides a "stable, orderly, and safe place" (Lerner & Miller, 1978), acting as a reassuring element. However, none of these exist when one is victimized, in which case, we suggest that BJW acts as a coping resource that helps with assimilating the injustice (Dalbert, 2001) by increasing perceived immanent or ultimate justice. This is consistent with the formulation of the justice motive theory, which considered BJW to be particularly important for maintaining well-being when facing injustice for other people or for the self (Lerner, 1980). Better assimilation of injustice ultimately leads to higher levels of well-being.

Two other processes have also been referred by Lerner (1980): BJW compels people to act fairly themselves; BJW enables people to trust that others will treat them fairly. Future research should investigate if and to what extent these functions operate differently in people facing distressing conditions and people not facing distressing conditions to promote well-being. As we argued above, it might be particularly important for people facing distressing circumstances to assimilate injustices, since they need to perform everyday activities in which being fair and trusting others might be crucial. Similarly, being fair and trusting others might

be adaptive also for people not facing distressing circumstances, and it might also be important for them to assimilate distressing conditions that occur to others.

In addition, it is still open to further investigations to explore if the BJW dimensions have specific impact on different well-being dimensions, or if BJW similarly protects well-being of people facing other types of distressing circumstances, either at an individual level (e.g., sexual victimization) or at a contextual level (e.g., living in a country at war).

Although in this research we were not interested in between country differences, future research might address and compare the relationship between BJW and well-being in different countries and how it may differ depending on country level variables.

Strengths and Limitations

Our study has some strengths that reinforce its contribution. The first one is related with the strong social relevance of the distressing circumstances considered for the well-being of individuals. This relevance is validated by the existence of social institutions, such as national health systems and social security systems, whose purpose is precisely to prevent and assist the populations that face health impairments or financial difficulties. The second one is related with the sampling process and the sample size. The 27 European countries samples were random representative samples. Therefore, the current sample size was much larger and more representative than the convenience samples mostly used, ensuring greater confidence in the study findings. The third one concerns the control of several and important variables that are related with well-being and the fact that the relevant effects were found over and above the main effects of the covariates.

However, our study also has some limitations. A first limitation is that the study is correlational, which limits the nature of the conclusions that can be drawn about causality. Moreover, we know that BJW and well-being have bidirectional causal effects (Correia et al., 2009), therefore, it is not only BJW that can affect well-being, but well-being can also impact

on BJW. Furthermore, in contrast to the objectively assessed country-level data, the variables measured at the individual level are based on self-reported data which might lead to possible overestimation of the associations between them, due to shared method variance. It needs to be noted, however, that both BJW and well-being are best studied through self-examination.

As a second limitation, one might criticise that we only considered the typical WEIRD (Western, educated, industrialized, and rich democracies) populations (see, Henrich, Heine & Norenzayan, 2010) questioning the universal representativeness of our findings. Specifically, the samples only included European countries, that, although historically and culturally diverse, are nonetheless among the richest in the world and have political regimes that are perceived as democracies.

A third limitation relates to the fact that variables were assessed with few items, some of them with only one item. A particularly important case is the one of the BJW measurement. Although previous research has already showed that the 3 items taken from the General BJW scale that we used have appropriate psychometric properties (Garcia-Sanchez et al., 2022), and the associations found with other variables being in line with the theoretical predictions of the Just World Theory (Correia et al., 2018; Garcia-Sanchez et al., 2022), it would have been better to have used the full general BJW scale. Unfortunately, this was not possible because the remaining 3 items of the General BJW scale (Dalbert et al., 1987) were not included in the ESS Round 9.

Linked to the latter is the limitation related to the type of BJW measure. We used a measure of general BJW because personal BJW was not considered in the ESS9. Indeed, combined measures of General BJW (Dalbert et al., 1987) and Personal BJW (Dalbert, 1999) have been proven to be better predictors of well-being than only separate measures of these constructs (Hafer et al., 2020). Moreover, general BJW and personal BJW load on a latent BJW factor (Hafer et al., 2020). Therefore, we believe that if we had used a combined

measure of general BJW and personal BJW measures our results could even be more robust. Notwithstanding this limitation, even with applying "only" the facet of general BJW the results robustly indicate how important justice beliefs are.

A fifth limitation is related with the use of GDP per capita as a contextual level indicator of national income. Although it is the most widely used macroeconomic indicator, which has been used as an indicator of societal well-being, it also has several shortcomings (for a review, see Fasolo et al., 2013). Consequently, future research should complement its use with other indicators of national income (e.g., the United Nations Human Development Index; for a review, see Fasolo et al., 2013).

Finally, it is worth noting that the effect sizes in our study are small. Nevertheless, researchers are increasingly recognising that effect sizes that are considered small by arbitrary standards (e.g., Cohen, 2016) are the norm in the Social Sciences (Götz et al., 2022), where complex psychological phenomena are multiply determined. Furthermore, these small effects can have a large impact when they accumulate over time (Götz et al., 2022).

In sum, despite all previously mentioned limitations, we believe the ESS provided a unique opportunity to examine our hypotheses with representative samples, across almost three dozen of countries, and allows to incorporate country level data.

Concluding remarks

Scholars and theories have suggested that BJW is directly and positively related to well-being, while others proposed that it has a moderation effect on adverse life situations that upholds mental health. Our research addressed both perspectives in the literature with a new approach: simultaneously testing all possibilities and examining both individual and contextual types of distressing circumstances in a very large sample. Our findings indicate that BJW is indeed both a personal resource and a coping resource consistently supporting individuals' well-being. These findings call for continuous efforts to identify justice-related

mechanisms that affect justice-related perceptions and beliefs, since while distressing circumstances might, sometimes, be unavoidable, the negative mental consequences that often follow might be attenuated by a belief that the world is a just place.

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Table 1

Descriptive statistics, and correlations of the variables

Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10	11
Individual-level variables													
1. Sex [1)]	0.51	-											
2. Age	48.40	18.89	0.04										
3. Years full-time education completed	13.08	4.25	-0.02	-0.22*									
4. Political ideology [2)]	4.91	2.10	-0.04	0.06	-0.08								
5. Emotionally attached [2)]	7.65	2.24	0.02	0.21*	-0.06	0.14*							
6. Religiousness [2)]	4.47	3.17	0.15*	0.18*	0.16*	0.16*	0.23*						
7. Health impairment [3)]	-0.01	1.00	0.03	0.32*	-0.19*	-0.03	-0.01	0.08					
8. Financial difficulty [1)]	0.19	-	0.03	0.03	-0.20*	-0.01	-0.04	0.08	0.21*				
9. BJW [4)]	2.93	0.83	-0.04	-0.04	-0.08	0.10	0.08	0.12*	-0.07	-0.09			
10. Subjective well-being [2)]	7.36	1.79	0.00	-0.08	0.13*	0.05	0.17*	0.01	-0.32*	-0.34*	0.15*		
Country-level variables													
11. Gini	30.57	3.14	0.00	0.02	-0.02	-0.06	-0.06	-0.01	-0.01	0.05	0.02	-0.04	
12. GDP (ln)	10.75	0.23	-0.01	0.00	0.11	-0.07	-0.06	-0.12*	0.01	-0.15*	0.03	0.16*	-0.24*

Note. N (individual level) = 38,396. N (country level) = 27. BJW – Belief in a just world. GDP (ln) – Gross domestic product analysed by natural logarithm.

[1)] Dummy variables. It is reporting the proportion of female, and the proportion of financial difficulties (respectively).

[2)] The scale of the variable ranges from 0 to 10.

[3)] It is a standardized variable.

[4)] The scale of the variable ranges from 1 to 5.

* $p < 0.001$.

Table 2

Multilevel model to estimate fixed effects to predict well-being by the main effect of BJW

	B	*SE*	*T*	*p*	95% CI	
					LL	UL
Intercept	6.32	0.56	11.39	< .001	5.17	7.48
Level 1 control variables						
Sex	0.05	0.02	2.89	.004	0.02	0.08
Age	-0.01	0.00	-1.79	.239	-0.02	0.00
Years of full-time education completed	0.01	0.00	6.21	< .001	0.01	0.02
Political ideology	0.02	0.00	4.88	< .001	0.01	0.03
Emotionally attached	0.12	0.00	30.33	< .001	0.12	0.13
Religiousness	0.02	0.00	5.103	< .001	0.01	0.02
Health impairment	-0.45	0.01	-48.57	< .001	-0.47	-0.44
Financial difficulty	-1.02	0.02	-43.45	< .001	-1.07	-0.97
Level 1 predictor						
BJW	0.20	0.01	18.84	< .001	0.18	0.22
Level 2 control variables						
Gini	-0.01	0.02	-0.17	.865	-0.04	0.04
GDP (ln)	0.86	0.24	3.65	.002	0.37	1.35
Variance components						
Level 1 variance	2.26	0.02	126.86 [a]	< .001	2.23	2.30
Level 2 variance	0.11	0.04	2.84 [a]	.005	0.06	0.22
Pseudo-R square Marginal	0.20					
Pseudo-R square Conditional	0.24					

Note. N (Level 1 – individual level) = 38,396. N (Level 2 – country level) = 27. BJW – Belief in a just world. GDP (ln) – Gross domestic product analysed by natural logarithm. CI – Confidence interval. LL – Lower Limit. UL – Upper Limit.

[a] Wald test.

Table 3

Multilevel model to estimate the fixed effects of financial difficulty on well-being, with BJW and GDP as moderators

	B	*SE*	*t*	*p*	95% CI	
					LL	UL
Intercept	6.41	.58	11.13	<.001	5.21	7.61
Level 1 control variables						
Sex	0.05	0.02	2.72	.006	0.01	0.08
Age	-0.00	0.00	-1.63	.103	-0.00	0.00
Years of full-time education completed	0.01	0.00	6.13	<.001	0.01	0.02
Political ideology	0.02	0.00	5.11	<.001	0.01	0.03
Emotionally attached	0.12	0.00	30.43	<.001	0.12	0.13
Religiousness	0.02	0.00	5.04	<.001	0.01	0.02
Health impairment	-0.45	0.01	-48.12	<.001	-0.47	-0.43
Level 2 control variable						
Gini	-0.01	0.02	-0.33	.745	-0.05	0.03
Level 1 predictor variable						
Financial difficulty	-1.01	0.03	-42.55	<.001	-1.05	-0.96
Level 1 moderator variable						
BJW	0.16	0.01	13.03	<.001	0.13	0.18
Level 2 moderator variable						
GDP (ln)	0.98	0.25	3.96	.001	0.46	1.49
Level 1 and Level-2 interaction effects						
Financial difficulty * BJW	0.24	0.03	9.01	<.001	0.19	0.29
Financial difficulty * GDP (ln)	-0.64	0.12	-5.24	<.001	-0.87	-0.40
BJW * GDP (ln)	0.04	0.06	0.73	.468	-0.08	0.16
Financial difficulty * BJW * GDP (ln)	0.11	0.14	0.80	.423	-0.16	0.38
Variance components						
Level 1 variance	2.26	0.02	126.86 [a]	< .001	2.21	2.29
Level 2 variance	0.12	0.04	2.85 [a]	.004	0.06	0.24
Pseudo-R square Marginal	0.21					
Pseudo-R square Conditional	0.24					

Note. N (Level 1 – individual level) = 38,396. N (Level 2 – country level) = 27. BJW – Belief in a just world. GDP (ln) – Gross domestic product analysed by natural logarithm. CI – Confidence interval. LL – Lower Limit. UL – Upper Limit.

[a] Wald test

Table 4

Multilevel model to estimate the fixed effects of health impairment on well-being, with BJW and GDP as moderators

	B	*SE*	*t*	*p*	95% CI	
					LL	UL
Intercept	6.34	0.56	11.38	<.001	5.18	7.50
Level 1 control variables						
Sex	0.05	0.02	2.89	.004	0.02	0.08
Age	-0.00	0.00	-1.20	.230	-0.00	0.00
Years of full-time education completed	0.01	0.00	6.18	<.001	0.01	0.02
Political ideology	0.02	0.00	5.04	<.001	0.01	0.03
Emotionally attached	0.12	0.00	30.22	<.001	0.12	0.13
Religiousness	0.02	0.00	5.23	<.001	0.01	0.02
Financial difficulty	-1.01	0.02	-43.19	<.001	-1.06	-0.97
Level 2 control variable						
Gini	-0.0	0.02	-0.21	.840	-0.04	0.04
Level 1 predictor variable						
Health impairment	-0.45	0.01	-47.01	<.001	-0.47	-0.44
Level 1 moderator variable						
BJW	0.20	0.01	18.27	<.001	0.18	0.22
Level 2 moderator variable						
GDP (ln)	0.91	0.24	3.83	.001	0.42	1.40
Level 1 and Level-2 interaction effects						
Health impairment * BJW	0.04	0.01	3.89	<.001	0.02	0.06
Health impairment * GDP (ln)	0.15	0.05	3.06	.002	0.06	0.25
BJW * GDP (ln)	0.06	0.06	1.08	.280	-0.05	0.17
Health impairment * BJW * GDP (ln)	0.26	0.06	4.24	<.001	0.14	0.37
Conditional Values of BJW and GDP	*Slopes*					
At High BJW and High GDP	-0.34	0.02	-18.38	<.001		
At High BJW and Low GDP	-0.50	0.02	-21.32	<.001		
At Low BJW and High GDP	-0.49	0.02	-30.75	<.001		
At Low BJW and Low GDP	-0.48	0.02	-22.65	<.001		
Variance components						
Level 1 variance	2.26	0.02	126.86 [a]	< .001	2.23	2.30
Level 2 variance	0.11	0.04	2.84 [a]	.004	0.06	0.22
Pseudo-R square Marginal	0.21					
Pseudo-R square Conditional	0.24					

Note. N (Level 1 – individual level) = 38,396. N (Level 2 – country level) = 27. BJW – Belief in a just world. GDP (ln) – Gross domestic product analysed by natural logarithm. CI – Confidence interval. LL – Lower Limit. UL – Upper Limit.

[a] Wald test.

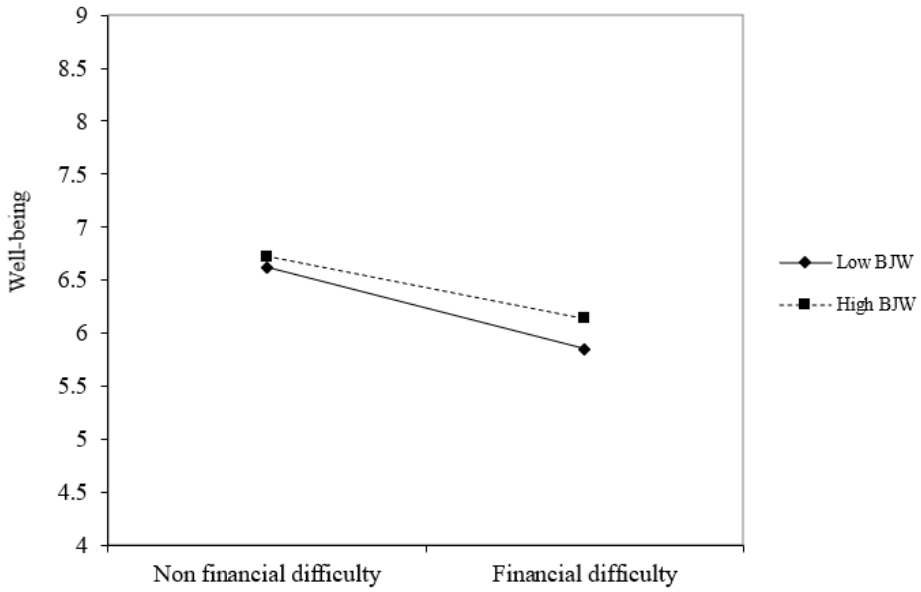

Figure 1

The moderating effect of BJW on the relationship between financial difficulty and well-being

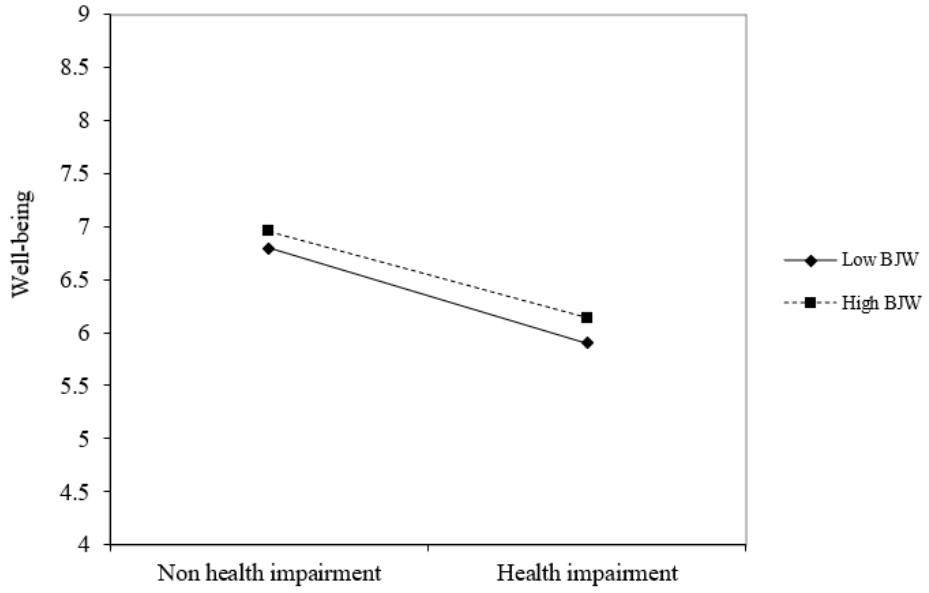

Figure 2

The moderating effect of BJW on the relationship between health impairment and well-being

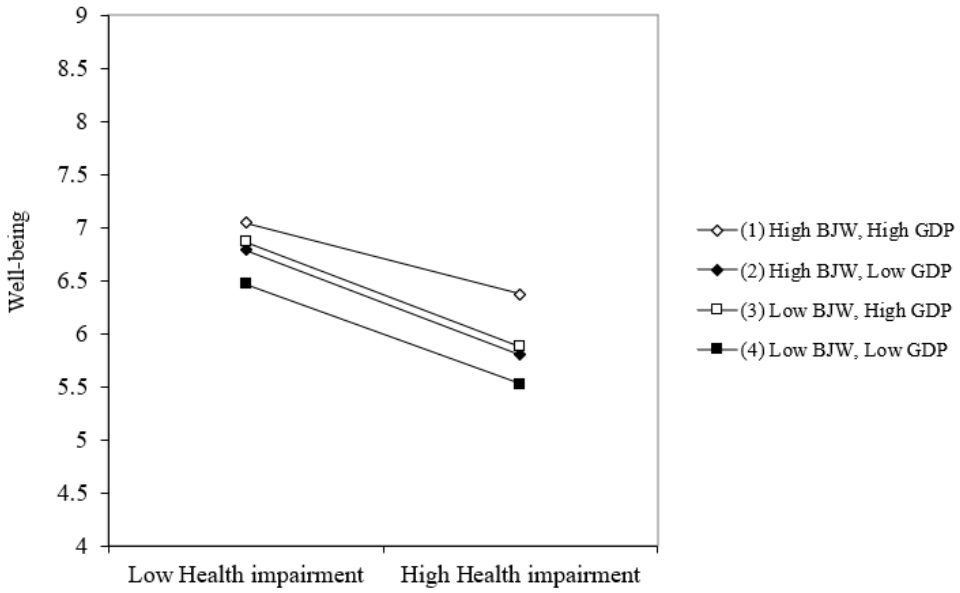

Figure 3

The moderating effect of BJW and GDP on the relationship between health impairment and well-being

Table 5

Sample descriptions for each country

Country	N	Female	Age [1)]	Years of full-time education completed [1)]	Political ideology [2)]	Emotionally attached [2)]	Religiousness [2)]	Health impairment [3)]	With financial difficulty	BJW [4)]	Gini	GDP	Subjective well-being [2)]
Austria	698	50.8%	48.78	13.22	4.64	8.08	4.73	-0.16	14.4%	3.17	26.80	58649.67	7.90
Belgium	931	50.8%	47.68	13.55	4.97	6.88	4.63	-0.08	19.5%	3.00	25.70	54628.10	7.65
Bulgaria	456	52.8%	50.11	12.11	5.37	7.65	4.27	-0.07	65.6%	2.83	39.60	24579.12	5.44
Switzerland	674	50.5%	48.01	11.31	5.10	7.96	4.70	-0.26	13.1%	3.13	29.70	70276.55	8.16
Cyprus	55	49.1%	46.38	12.47	5.41	8.35	6.63	-0.22	36.4%	2.82	29.10	41254.40	7.27
Czechia	782	51.2%	48.15	13.25	5.49	7.86	2.31	0.01	28.2%	2.45	24.00	43004.53	7.06
Germany	6883	50.5%	49.13	13.67	4.42	7.48	4.20	0.16	11.5%	3.06	31.10	55891.20	7.71
Estonia	109	53.8%	48.22	13.58	5.35	7.85	3.22	0.16	22.0%	3.02	30.60	38819.34	7.23
Spain	3532	50.5%	48.26	13.51	4.46	7.52	3.93	-0.10	21.6%	2.65	33.20	42185.59	7.58
Finland	452	51.0%	48.85	13.65	5.58	8.53	4.77	0.04	11.7%	2.99	25.90	51619.83	8.10
France	5129	52.1%	48.25	12.81	4.85	7.82	4.66	0.08	21.8%	2.79	28.50	49519.30	6.94
United Kingdom	5239	50.8%	47.64	14.39	4.89	6.82	3.54	-0.01	13.5%	2.88	33.50	48484.27	7.47
Croatia	326	52.7%	48.81	11.65	4.84	7.73	5.56	0.01	16.8%	2.74	29.70	30246.05	7.31
Hungary	731	52.6%	49.02	12.26	5.39	7.78	3.74	-0.01	31.0%	2.96	28.70	33949.63	6.48
Ireland	352	51.4%	46.11	14.86	4.93	7.88	4.65	-0.27	15.3%	2.95	28.90	87217.35	7.50
Italy	4251	51.6%	50.27	11.48	5.23	8.16	5.55	-0.18	27.0%	3.09	33.40	44395.11	7.03
Lithuania	204	56.8%	48.83	12.77	4.92	8.14	5.21	0.17	27.5%	3.16	36.90	38756.11	6.72
Latvia	153	55.0%	49.76	13.25	5.64	7.81	4.01	0.34	31.1%	3.09	35.60	32047.35	6.98
Montenegro	44	50.5%	43.83	12.27	4.54	7.69	5.25	-0.09	27.1%	3.07	34.70	23343.99	7.62
Netherlands	1387	50.7%	47.67	13.85	5.15	6.98	3.95	-0.03	8.1%	3.05	27.40	59469.08	7.96
Norway	413	47.9%	45.97	13.31	5.03	8.30	3.26	-0.04	7.8%	2.73	24.80	67978.72	7.87
Poland	2865	52.4%	47.65	12.74	5.64	8.33	6.12	-0.01	20.2%	3.09	27.80	34151.79	7.21
Portugal	823	53.5%	49.45	10.02	4.90	8.42	5.42	0.06	28.9%	2.79	32.10	36760.12	7.19
Serbia	535	50.9%	45.23	11.57	4.63	7.51	5.92	0.00	27.2%	2.94	35.60	18929.91	6.78
Sweden	796	49.0%	45.66	13.50	5.19	7.79	2.91	-0.15	6.5%	2.81	27.00	55027.37	7.85
Slovenia	158	50.3%	49.27	12.67	4.87	7.71	4.63	0.07	13.0%	2.80	23.40	41193.84	7.50
Slovakia	416	51.4%	47.08	12.85	5.20	7.77	5.66	-0.02	29.7%	2.76	20.90	32544.96	6.60

Note. N reported for the 27 countries using the weights. BJW – Belief in a just world. GDP (ln) – Gross domestic product analysed by natural logarithm

[1)] Mean. [2)] Country mean ranged from 0 to 10. [3)] Country mean standardized. [4)] Country mean ranged from 1 to 5.