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The Belief in a Just World in Face of Injustice: Victim, Observer, and Perpetrator Perspectives

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Abstract

Injustice happens every day either to us, to our neighbors, or people across the world. Yet, believing that the world is a fair place helps us to cope with this injustice and motivates us to behave fairly. Scholars have found that these functions that the belief in a just world (BJW) serves are crucial for maintaining mental health. However, the conditions under which BJW is functional and when people give up this belief are not well studied. The current dissertation aims to examine: when the BJW can be shattered, the role of the external world and other internal resources in face of injustice, and the role of BJW in predicting corrupt behavior. Three studies were conducted corresponding to each party of injustice: a victim, an observer, and a perpetrator.

Study 1 examined the effects of criminal victimization on BJW and buffering role of perceptions of justice in the criminal justice process. A cross-sectional study showed that victims of very severe crimes such as domestic violence and human trafficking had lower personal BJW than non-victims and victims of less severe crimes, and higher informational justice perceptions reduced the effect of victimization on the personal BJW. Study 2 aimed to test the changes in BJW after observing severe injustice. A longitudinal study showed that after observing school rampage attacks that happened at other schools, BJW of adolescent participants increased. Moreover, life satisfaction and perceived social support moderated the change of BJW. Study 3 examined relationships between BJW and corrupt behavior. A cross-sectional study showed that personal BJW can predict bribery behavior.

The findings of three studies provided evidence that BJW does not function in isolation. An external world and internal resources can reduce the threat of injustice on BJW. BJW plays an important role in predicting unfair behavior therefore authorities should aim to maintain the BJW of their citizens.

Chapter I

General Introduction

"Injustice anywhere is a threat to justice everywhere"

(Martin Luther King Jr., 16 April 1963)

Martin Luther King Jr. strived for justice everywhere and hoped that people everywhere in the world would be moved by injustice that occurred elsewhere. Though specifically intended to respond to criticism of his campaign in Alabama and his methods (Hornsby, 1986), his quote spoke truth. People are greatly concerned about justice. Just world research has shown that every individual can be threatened by injustice anywhere—whether it happened to them personally, to others, or was caused by them. However, people differ in how much they are threatened by injustice, how they react to injustice, and what they do with it.

Just-World Theory

Scholars of social justice have proposed that people have a fundamental need for justice—a need to believe that the world is a fair place where everybody gets what they deserve and deserves what they get. In early research, this urge for justice emerged as an important motive that fulfils primal existential and safety needs and leads people to form an illusion that satisfies this need—the belief in a just world (BJW; Hafer & Rubel, 2015; Hirschberger, 2006; Lerner, 1980; Lerner, 1997). BJW is formed from experiences in early childhood as well as in later life as a cognitive schema that reflects the order that is perceived in the world (Dalbert, 2001; Janoff-Bulman, 1992). When these experiences are fair and stable, BJW provides people with the confidence that they will receive fair outcomes as long as they behave fairly. In other words, a stable and fair environment allows people to form a "personal contract" with themselves and the surrounding

world. This contract implicitly suggests that one should act fairly in order to obtain fair outcomes and provides one with a trust that others will do the same (Dalbert, 2001; Lerner, 1977).

Scholars have established that BJW carries important adaptive functions (Bartholomaeus & Strelan, 2019; Dalbert, 2001; Hafer & Rubel, 2015; Lerner, 1980). Dalbert (2001) identified two main functions. First, BJW provides a sense of trust that others will behave fairly, which can serve as a buffer and a personal resource. Second, it motivates people with BJW to act fairly and contributes to prosocial behavior (Dalbert, 2001; Hafer & Rubel, 2015). A number of studies have clearly shown that these positive functions result in positive outcomes. These studies have shown that people who have a strong BJW tend to be more satisfied with their lives, be in better moods, have better mental health (Busseri, Hafer, & Choma, 2020; Dalbert, 1999; Dzuka & Dalbert, 2007; Hafer et al., 2019; Jiang, Yue, Lu, Yu, & Zhu, 2015; Kamble & Dalbert, 2012; Lipkus, Dalbert, & Siegler, 1996; Ritter, Benson, & Synder, 1990; Sadiq & Bashir, 2020; Yu, Ren, Huang, & Wang, 2018), and engage in more prosocial, helpful, altruistic behavior and in less antisocial, dishonest, and delinquent behavior (e.g., Correia & Dalbert, 2008; Correia, Salvado, & Alves, 2016; Donat, Rüprich, Gallschütz, & Dalbert, 2019; Donat, Dalbert, & Kamble, 2014; Jiang, Chen, & Wang, 2017; Münscher, Donat, & Ucar, 2020). These results show that BJW has positive functions for the well-being of the individual and society. Therefore, people are motivated to defend BJW whenever it is threatened by injustice (Hafer & Rubel, 2015; Lerner, 1980).

Facing injustice can be a great challenge to the BJW because an injustice presents contradictory information to the schema of the BJW. According to Piaget (1976), contradictory information results in cognitive dissonance. Because humans strive for consistency, they try to resolve this cognitive dissonance by assimilating new information into the existing schema or by accommodating the schema to reality (Dalbert, 2001; Janoff-Bulman, 1992; Piaget, 1976). BJW

research has shown that people use several strategies as a means for assimilating the information about unfairness. These strategies range from behavioral attempts to restore justice (e.g., by punishing the one who caused the unfairness and compensating the one who was harmed by it) to cognitive reappraisal of the unfair situation (e.g., by blaming the injustice on the victim or by minimizing or denying the injustice; Ellard, Harvey, & Callan, 2016; Hafer & Gosse, 2011; Hafer & Rubel, 2015; Lerner, 1980).

Every individual involved in the unfair situation needs to deal with cognitive dissonance, be they a victim, an observer, or a perpetrator. Each person involved in the unfairness uses strategies to assimilate contradictory information and accommodate the BJW if assimilation is no longer possible. Victims of injustice try to minimize injustice or attribute the cause of the injustice to themselves (Dalbert, 2001; Janoff-Bulman, 1992). Observers minimize the injustice by blaming and derogating the victim *(*Hafer, 2000a; Lerner & Simmons, 1966). Perpetrators of injustice minimize the injustice of their acts and blame the victim for bringing it upon themselves, which can reduce feelings of guilt and remorse which, in turn, contribute to further unfair behavior (Mendonça, Gouveia-Pereira, & Miranda, 2016; Sutton & Winnard, 2007). Under certain circumstances, assimilation is no longer possible, and the accommodation of the BJW begins to take place. The conditions under which accommodation takes place have not been well-examined. Studies that examined the BJW of victims of injustice found that accommodation tends to take place in cases of very severe victimization (Fasel & Spini, 2010; Janoff-Bulman, 1992; Payne, Joseph, & Tudway, 2007). However, BJW research has not yet considered whether, how, and when observers and perpetrators of injustice accommodate their BJW. Moreover, there are unexamined questions that remain about individual differences and personal resources that contribute to the handling of the injustice. The current dissertation aims to gather knowledge about the conditions

under which the BJW is assimilated and accommodated as well as about the individual and environmental factors that contribute to it. It also aims to expand knowledge about relationships between BJW and unfair behavior.

BJW Research

Previous research on the role of BJW when an individual is threatened by unfairness has followed two lines. One line of research has focused on the implicit need to defend one's BJW when presented with a just-world threat. This line of research has mainly employed experimental designs and has measured how BJW was threatened by testing the salience of justice (e.g., via a modified Stroop task) and the defenses people employ to manage the BJW threat (Hafer, 2000a). Another line of research has focused on the BJW as a personal disposition. Scholars have developed self-report scales to measure how strongly people endorse the BJW and conducted correlational studies to examine how it interacts with other measures (Hafer & Bégue, 2005; Rubin & Peplau, 1973, 1975). The two lines of research complement each other in providing knowledge about the role of BJW in the face of injustice.

BJW as a personal disposition has been proposed to have several dimensions (Dalbert, Lipkus, Sallay, & Goch, 2001; Furnham & Procter, 1989; Maes, 1998). To name a few, scholars have distinguished between belief in an unjust world (Dalbert et al., 2001; Furnham & Procter, 1989; Lench & Chang, 2007; Loo, 2002), belief in ultimate and immanent justice (Maes, 1998, Maes & Schmitt, 1999; Maes & Kals, 2002), and belief in a procedural and distributive just world (Lucas, 2009; Lucas, Alexander, Firestone, & LeBreton, 2007; 2008; Lucas, Kamble, Wu, Zhdanova, & Wendorf, 2016; Lucas, Zhdanova, & Alexander, 2011). The most commonly used distinction appears to be between the belief in a just world for the self versus others (Dalbert, 1999; Lipkus, Dalbert, & Siegler, 1996). The belief in a just world for the self—or the personal belief in

a just world (PBJW)—indicates people's belief that they themselves get what they deserve; and the belief in a just world for others—or the general belief in a just world (GBJW)—indicates the belief that other people get what they deserve (Dalbert, 1999). Studies have shown that these two constructs are psychometrically distinct and have unique correlations with other variables (Dalbert, 1999; Lipkus et al., 1996; Sutton & Douglas, 2005). Whereas PBJW is uniquely positively correlated with personal outcomes (e.g., better mood levels and life satisfaction; Dalbert, 1999; Lipkus, et al., 1996; Sutton & Douglas, 2005), GBJW is often associated with negative attitudes toward other people (e.g., discrimination, punitive attitudes toward delinquents, and harsh attitudes toward poor people; Bègue & Bastounis, 2003; Sutton & Douglas, 2005) and victim blaming (Hayes, Lorenz, & Bell, 2013; Van den Bos & Maas, 2009). Therefore, it is crucial to make a distinction between BJW for the self and others in order to better understand their outcomes for the individual.

The Current Dissertation

The main functions of BJW described by Dalbert (2001) serve to help people cope with injustice. However, which one of these functions is operating at any given time depends on the injustice perspective. The current dissertation examined injustice from three perspectives: when a participant is a victim of injustice, when a participant is an observer of injustice, and when a participant is a perpetrator of injustice. The following sections present research conducted on each perspective of injustice. Each section presents the gaps in the literature that the current dissertation attempts to fill.

BJW in the Face of Injustice: The Victim Perspective

Believing that the world is a fair place provides a sense of trust that others will behave fairly. This trust allows people to live with the confidence that unfair things will not happen to

them, provided they themselves behave fairly (Dalbert, 2001; Zuckerman & Gerbasi, 1977). When injustice befalls a person, the individual engages in behavioral attempts to reduce the injustice and restore justice or employs cognitive strategies such as reconstructing their perceptions of the event in a way that can provide trust that justice will be restored and one will be compensated for the misfortune in one way or another (Bartholomaeus & Strelan, 2019; Dalbert, 1998; 2001; Furnham, 2003; Otto & Schmidt, 2007). Successful coping results in better well-being (Correia & Dalbert, 2007; Donat, Peter, Dalbert, & Kamble, 2016; Donat, Wolgast, & Dalbert, 2018; Đorić, 2020; Gu, Lu, & Cheng, 2020; Jian, Sun, Dong, & Zeng, 2020). Such positive outcomes are more common among those who strongly endorse PBJW (Bartholomaeus & Strelan, 2019). For instance, a study with an adolescent sample showed that a stronger endorsement of PBJW was associated with higher perceptions of teacher justice, which, in turn, were associated with better school-specific well-being (Donat et al., 2016). In a study by Correia, Kamble, and Dalbert (2009), strong PBJW contributed to reducing distress at school for victims of bullying. In another study, strong PBJW helped victims of sexual abuse adjust to their experience (Fetchenhauer et al., 2005). Finally, in a study by Otto, Boos, Dalbert, Schops, and Hoyer (2006), flood disaster victims with strong PBJW tended to have less depression, anxiety, and other psychological symptoms. Therefore, one can assume that stronger PBJW can facilitate the ability to better cope with injustice. The stronger the PBJW, the more motivated one is to assimilate the injustice. However, there is evidence that at a certain level of unfairness, accommodation may take place. This is apparent from the fact that disadvantaged and victimized individuals tend to have lower BJW than advantaged and nonvictimized individuals. For instance, African Americans, due to their status in society in the 20th century, tend to believe in a just world less than European Americans (Calhoun & Cann, 1994; Hunt, 2000); women tend to have a weaker belief in a just world than men (Hunt, 2000; O'Connor,

Morrison, McLeod, & Anderson, 1996); students from low income families tend to have weaker just world beliefs than those from higher income families (Thomas, 2018); war and exclusion victims tend to have lower just world beliefs than nonvictims (Fasel & Spini, 2010). Severe victimizations such as sexual abuse (Grove, 2019) or childhood abuse (Wickham & Bentall, 2016) tend to have lower BJW as well.

The findings provided above suggest that facing some sort of injustice can immobilize BJW's positive functions and shatter it. However, previous studies have not yet thoroughly addressed some important questions such as: Exactly how severe does the victimization have to be to shatter BJW? What other variables can mitigate effects of victimization such as self-efficacy and social support. Chapter II presents a cross-sectional study that examined differences in BJW among victims of crimes and mitigating effects of the criminal justice system. The study participants were victims of all sorts of crimes, ranging from pick-pocketing to human trafficking. Such variability in the severity of the crimes allowed us to detect how severe a victimization needs to be to significantly affect BJW. Some of these participants reported the crime to the police, hence allowing us to examine differences in BJW among those who reported the crime and those who did not. Moreover, it allowed us to examine the role of different perceptions of justice in the criminal justice process for the BJW of victims of crime. Specifically, we expected that the BJW of more severely victimized individuals would be significantly lower than less severely victimized individuals. The effect of the victimization was expected to be moderated by reporting the crime and perceptions of justice in the criminal justice process.

BJW in the Face of Injustice: The Observer Perspective

When people see others receiving the outcomes that they deserve, it confirms the BJW and ensures that efforts will be rewarded and investments in the future will pay off. However, when

people see others receiving undeserved outcomes, their BJW is threatened because these others are from the shared world and provide an example of the (lack of) order in it. If others get undeserved outcomes, then we might too. To prevent oneself from having such a discomforting thought, people try to reduce the threat or restore their BJW in various ways (i.e., they assimilate the contradictory information). If such attempts are successful, BJW is confirmed (Hafer & Rubel, 2015).

Some unfair situations are more threatening than others. Research has shown that BJW is mostly threatened when the perpetrator of the injustice escaped punishment (Hafer, 2000a; Sullivan, Ong, La Macchia, & Louis, 2016), when an innocent victim knows the perpetrator and does not seek justice (Naseralla & Warner, 2020), when the suffering of the victim persists (Correia & Vala, 2003; Hafer, 2000b) or is severe (Dawtry, Callan, Harvey, & Gheorghiu, 2020), or when the crime disrupts natural laws (e.g., incest; Tepe, Cesur, & Sunar, 2020). In-group victims, older victims, and persistently unfairly treated victims seem to threaten BJW the most (Aguiar, Vala, Correia, & Pereira, 2008; Alves, Breyner, Nunes, Pereira, Silva, & Soares, 2015; Callan, Dawtry, & Olson, 2012; Correia, Alves, Sutton, Ramos, Gouveia-Pereira, & Vala, 2012; Correia, Pareira, & Vala, 2018; Dawtry, Callan, Harvey, & Olson, 2018; Modesto & Pilati, 2017). The more threatened the BJW is, the more inclined one feels to defend it. However, people also differ in the resources they have for handling such threats. Individual differences in how BJW is threatened and how people choose to defend it have not yet received much attention from researchers. Some studies have found that people with a strong GBJW (Correia et al., 2012; Correia & Vala, 2003) and a strong focus on long-term investments tend to be more threatened by observed unfairness than those low in these traits (Bal & van den Bos, 2012; Correia & Vala, 2003; Hafer, 2000b). Strong self-efficacy to undo injustice (White, MacDonnell, & Ellard, 2012) and empathy for a

victim (Ash & Yoon, 2020) can have an impact on the ways in which people choose to restore justice. Studies have not yet thoroughly explored other individual resources that can effectively reduce the threat to the BJW when observing injustice. In Chapter III, I present a longitudinal study in which we examined changes in BJW after adolescents witnessed school rampage attacks. Observing school attacks can be threatening to an individual's BJW. Therefore, we expected to observe changes in the BJW. Because social support and life satisfaction have been found to contribute to how people deal with stress and critical life events, we expected that people who are high on these characteristics would use these resources to handle the threat; therefore, we did not expect to observe changes in the BJW.

BJW in the Face of Perpetrated Injustice

BJW provides the confidence that efforts toward long-term goals will be rewarded. More importantly, it ensures that it is the prosocial (vs. antisocial) ways of pursuing these goals that will be rewarded (Hafer & Rubel, 2015). When people trust that they will get what they deserve, they are motivated to engage in fair and prosocial behavior because they trust that it will pay off, whereas antisocial ways will be punished (Dalbert, 2001). Because of this function, BJW should be related to higher tendencies to engage in prosocial behavior and lower tendencies to engage in antisocial behavior. There is plenty of evidence in support of this association among adolescents and young adults in various contexts. For instance, pupils with strong PBJW were found to be less likely to bully others at school and online (Correia & Dalbert, 2008; Donat et al., 2020) but were also found to be more likely to help those who were bullied (Correia & Dalbert, 2008). Strong PBJW among young individuals was also linked to a reduced likelihood of cheating (Donat et al, 2014; Münscher et al., 2020), engaging in delinquent behavior (Cohn & Modecki, 2007), or engaging in other negative school behaviors (Thomas & Mucherah, 2018). In adult samples, PBJW

has been negatively linked to dishonest behavior (Schindler, Wenzel, Dobiosch, & Reinhard, 2019) and positively linked to helpful attitudes (Correia et al., 2016) and altruistic behavior in real life (Bègue, 2014; Bègue, Charmoillaux, Cochet, Cury, & Suremain, 2008; Zuckerman, 1975) and online (Jiang et al., 2017).

There is a large body of research on samples of young individuals. Many studies have examined unfairness that is relevant for schools and universities such as cheating or bullying. However, these findings cannot be generalized to the whole population because little to no research has been done on the general population. Moreover, unfairness that would be more relevant to the general population (e.g., corruption) has not been examined much. It is also difficult to draw conclusions about how GBJW and PBJW are related to antisocial behavior because study findings have been inconsistent. Whereas PBJW was consistently shown to be linked to lower tendencies to engage in antisocial behavior (e.g., Donat et al., 2014; Donat, Umlauft, Dalbert, & Kamble, 2012; Münscher et al., 2020; Schindler et al., 2019), the role of GBJW differed from study to study. That is, in some studies, GBJW was associated with higher tendencies to engage in antisocial behavior (e.g., Sutton & Winnard, 2007; Wenzel, Schindler, & Reinhard, 2017), whereas in others, it was the opposite (Dalbert, 2002; Nesbit, Blankenship, & Murray, 2012; Poon & Chen, 2014). Furthermore, some studies found that GBJW had no significant effects on antisocial or unfair behavior (e.g., Schindler et al., 2019). GBJW seemed to play a positive role by reducing the likelihood of antisocial behavior in situations in which the consequences of such behavior were more detrimental such as aggressive behavior (e.g., Nesbit et al., 2012), whereas in cases in which antisocial behavior would create less harm, GBJW played a negative role by increasing the likelihood of such behavior (Wenzel et al., 2017). A study presented in Chapter IV examined the relationships between PBJW and GBJW and corrupt behavior in a sample of diverse age. We

expected that PBJW would negatively predict bribery. Because the role of GBJW is not fully clear, we proposed two competing hypotheses: GBJW will positively predict bribery and GBJW will have no relationship with bribery. Bribery does not have the detrimental consequences that aggressive behavior has; therefore, we did not expect that GBJW would negatively predict bribery.

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Chapter II

Study 1

Crime Victims' Belief in a Just World: Do Perceptions of Justice in the Criminal Justice System Matter?

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Abstract

Justice motive theory suggests that people have a need to believe that the world is a fair place; thus, they form a positive illusion that the world is actually a fair place. When they are faced with unfairness, they make behavioral or cognitive efforts to protect this illusion. But under what circumstances can such a belief be shattered? The current paper aimed to examine whether unfairness such as criminal victimization can shatter the belief in a just world and what role perceptions of justice in the criminal justice system play. A cross-sectional study was conducted with victims of various crimes and non-victims from Germany and Lithuania (total N = 339). Multiple regression analyses showed that victims of very severe crimes had lower personal belief in a just world than non-victims and victims of less severe crimes. Further analyses showed that higher informational justice perceptions reduced the effect of victimization on the personal belief in a just world. However, such a result was true only for victims of very severe crimes but not for victims of moderate crimes. We discuss implications and possible underlying mechanisms of such patterns in the personal belief in a just world.

***Keywords*: belief in a just world, criminal victimization, criminal justice system, informational justice**

Introduction

We live in an unfair world. Such unfairness can range from natural disasters that destroy multiple homes, terrorist attacks that terrify the whole world, and sexual assaults that traumatize a victim for life to the discrimination, harassment, and job losses that many people face every day. How do people who suffer from such unfairness maintain their mental health and continue their lives? Lerner (1980) proposed that people create an illusion that the world is a fair place that has some kind of order—where good things happen to good people and bad things to bad ones. Lerner called it a belief in a just world (BJW). The literature on the BJW has shown that BJW helps people make sense of unfair experiences, aids in maintaining mental health, and motivates people to act fairly with others (Bartholomaeus & Strelan, 2019; Dalbert, 2001; Hafer & Rubel, 2015; Ucar, Hasta, & Malatyali, 2019). Therefore, in the face of victimization, people tend to engage in various behavioral or cognitive strategies to maintain their BJW (Ellard, Harvey, & Callan, 2016; Hafer & Rubel, 2015). But are there conditions under which a person's BJW can no longer be maintained? The current study examines the conditions under which the BJW becomes shattered and factors that can moderate such effects.

Belief in a Just World in the Face of Victimization

A BJW is a fundamental belief that is thought to function as a cognitive schema (Dalbert, 2001; Janoff-Bulman, 1989; Janoff-Bulman, 1992). Therefore, it should be relatively stable, should generalize across life contexts, and should be resistant to change. Nevertheless, traumatic experiences can shatter this belief (Janoff-Bulman, 1989; Janoff-Bulman, 1992). Many empirical studies have shown that victims of various injustices tend to have lower BJW than non-victimized individuals (Cubela Adoric & Kvartuc, 2007; Fasel & Spini, 2010; Wickham & Bentall, 2016; Xie, Liu, & Gan, 2011). For instance, a study by Fasel and Spini (2010) showed that people who

were directly affected by the injustice of war and exclusion in the former Yugoslavia reported a lower general BJW (GBJW) than those who were not directly affected. Later studies did not find similar differences in the GBJW (Cubela Adoric & Kvartuc, 2007; Wickham & Bentall, 2016). However, personal BJW (PBJW) was repeatedly found to be lower for victims compared with non-victims. For instance, PBJW, but not GBJW, was lower for victims of mobbing in the workplace (Cubela Adoric & Kvartuc, 2007), victims who lost family and friends during an earthquake (Xie et al., 2011), and victims of childhood abuse (Wickham & Bentall, 2016).

The abovementioned studies repeatedly confirmed that under certain circumstances, victimization reduces the BJW. However, other research has shown the opposite pattern. Corey, Troisi, and Nicksa (2015) compared the GBJW of individuals who were victimized by various injustices (e.g., the death of a child, robbery, burglary, or attack) with non-victimized controls. They found that more severely victimized individuals (those who had experienced the death of a child) reported a stronger GBJW when compared with non-victimized controls, whereas those who had been robbed, burgled, or attacked (less severe victimization when compared with having lost a child) reported a weaker GBJW than did non-victimized participants. The authors concluded from their findings that individuals who experienced a severe kind of injustice had a strong need to believe that the world is a fair place, and therefore, their BJW increased. Experiences of robbery, attack, or burglary were traumatizing but not severe enough to increase the need for BJW. The BJW of these victims, on the contrary, decreased, possibly due to bitter feelings caused by directing attributions of blame toward a perpetrator (Corey, Troisi, & Nicksa, 2015). In light of justice motive theory, the explanation provided by the authors seems plausible. Research have shown that facing injustice can threaten the BJW and increase the need to defend it by, for example, convincing oneself that, sooner or later, one will be compensated for the misfortune and that justice

will prevail in the long run (Ellard, Harvey, & Callan, 2016; Hafer & Rubel, 2015). Such a reasoning can explain reactions to injustices in some cases. However it is not sufficient to explain why in some cases victims' BJW decreased. The current paper attempts to complement existing theories by introducing constructs that can explain different BJW patterns after victimization.

Severity of Victimization

Some scholars have attempted to attribute different BJW patterns to the severity of victimization (Brown & Grover, 1998; Corey et al., 2015). For example, in a sample of police officers, Brown and Grover (1998) tested whether BJW buffered the effect of stressful working conditions on psychological distress. They found that BJW was an important buffer for psychological distress only in low-stress situations, whereas in high-stress situations, other resources (e.g., social support) were more important (Brown & Grover, 1998). The study suggests that under low levels of threat, BJW can be maintained and serve its adaptive function; however, high stressors may create conditions under which believing in a just world no longer serves its adaptive role. On the other hand, Corey et al. (2015) found that moderate victimization can shatter BJW, whereas severe victimization may increase the need to protect BJW and use it as a resource that helps people cope with the experience. Differentiating types of victimization may help to explain these contradictory results. Participants in the Brown and Grover (1998) study were exposed to work-related stressors that they were prepared for. By contrast, participants in the Corey et al. (2015) study were not prepared to face the stressors they were exposed to. Moreover, some authors did not differentiate between the causes of severe injustice (death of a child). It may make an important difference for the BJW if the loss of a child was due to a crime or natural causes such as a fatal disease.

Victimization due to nature (e.g., natural disasters or illness) versus human agents (e.g., crime or terrorism) can result in different consequences for a victim (Janoff-Bulman, 1992; Riaz et al., 2015). Victimization caused by humans often results in larger disruptions of belief systems compared with victimization caused by natural disasters. Whereas victims of natural causes tend to receive support from loved ones and society in general, victims of human agents such as criminal victimizations are more likely to face rejection and victim blaming. Furthermore, criminal victimization exposes a victim to a criminal trial process, which is not the case in naturally caused victimizations (Janoff-Bulman, 1992). Therefore, it is plausible that the differences in the BJW found between the severe and moderate levels of victimization in the Corey et al. (2015) study were at least partly due to criminal trials or victim blaming, which followed some victimizations but not others. To understand how the severity of an unfair incident contributes to changes in or the maintenance of the BJW, the type of unfairness should be held constant. Accordingly, the current study focused on criminal victimization while differentiating between different severities of victimization.

Justice Perceptions in the Criminal Justice System

Early research proposed that compensation, reconciliation, revenge, and punishment can reduce a threat to the BJW after observing unfairness (Ellard et al., 2016; Ferguson & Kamble, 2012; Hafer, 2000; Kaiser, Vick, & Major, 2004; Lerner & Simmons, 1966). It is possible that such approaches could reduce a threat to the BJW for victims of unfairness as well. Studies that have examined such approaches for victims of unfairness are quite scarce. Ferguson (2000), for instance, examined the BJW of Catholic (disadvantaged group) and Protestant (advantaged group) communities in Northern Ireland during and after times of political conflict and violence. He found that disadvantaged groups had a lower BJW than advantaged groups. Moreover, when peace was

brought to the country, both advantaged and disadvantaged groups showed an increase in their BJW, suggesting that reconciliation and justice restoration can restore the BJW to some extent (Ferguson, 2000).

In cases of criminal victimization, criminal justice systems provide opportunities to restore justice, compensate victims, and punish perpetrators. Although the outcomes of the criminal justice process are important, scholars have suggested that the procedures that are used to achieve the outcomes are as important as the outcomes themselves (Lind & Tyler, 1988; Thibaut & Walker, 1975). Indirect evidence in support of this reasoning has come from studies showing that justice evaluations in the criminal justice process are important for victims' well-being and recovery after the crime (Campbell et al., 1999; Elliott, Thomas, & Ogloff, 2014; Herman, 2003, 2005; Kunst, Popelier, & Varekamp, 2014; Lind & van den Bos, 2002; Orth, 2002). Moreover, just treatment seems to be most important for severely victimized individuals (Kumar, 2017; Laxminarayan, 2012; van den Bos & Lind, 2002; Wemmers & Cyr, 2006). More generally, previous studies have shown that BJW is positively related to perceptions of justice (Dalbert & Filke, 2007; Johnston, Krings, Maggiori, Meier, & Fiori, 2016). However, moderator effects of justice perceptions on the BJW have yet to be explored.

Indicators of Justice Perceptions in the Criminal Justice System

Individuals use various criteria when judging the justice of a procedure (van den Bos & Lind, 2002; Wemmers & Cyr, 2006; Winick, 2008). Thibaut and Walker (1975) argued that when making judgments about procedural fairness, individuals rely on their sense of control over the process and the decision. The group-value model (Lind & Tyler, 1988) states that regardless of the actual impact on the outcome, merely having the opportunity to express one's opinion and being treated with respect by authorities contribute to satisfaction with the process as they both serve to

increase one's worth as a group member. Having a voice gives a person the chance to participate in group life, which in turn offers feelings of efficiency, control, and power. Respectful treatment can provide an individual with a sense of dignity and feelings of being a valued member of the group (Lind & Tyler, 1988). Criminal victimization deprives victims of their sense of control and detracts from their status in the group. Respect and voice during criminal procedures can restore these losses (Shnabel & Nadler, 2008). Studies have shown that when people get an opportunity to express their view on the case, they feel more satisfied with outcomes, procedures, or police work in general (i.e., Casper, Tyler, & Fisher, 1988; Kitzmann & Emery, 1993; van Prooijen, van den Bos, & Wilke, 2002). A recent study by Barkworth and Murphy (2016) showed that fair treatment reduced negative feelings, which in turn increased victims' quality of life.

Besides control, voice, and respectful treatment, other criteria such as honesty, suppression of bias (or neutrality), and the provision of information have been proposed to be important in procedural justice judgments (Laxminarayan, Bosmans, Porter, & Sosa, 2013; Leventhal, 1980; Tyler & Lind, 1992; Wemmers, van der Leeden, & Steensma, 1995). There is an ongoing discussion in the literature about the relative importance, degree of overlap, and uniqueness of these criteria (Colquitt, Conlon, Wesson, Porter, & Ng, 2001; Skitka, Winquist, & Hutchinson, 2003). As a reflection of this discussion, different studies have used different combinations of these criteria to measure procedural justice (Laxminarayan, 2012; Wolfe, Nix, Kaminski, & Rojek, 2016). The current study will not attempt to resolve these issues and will treat each criterion as a separate variable that might or might not contribute to a victim's perceptions of procedural justice. We refer to these criteria as criminal justice perceptions (CJP).

The Current Study

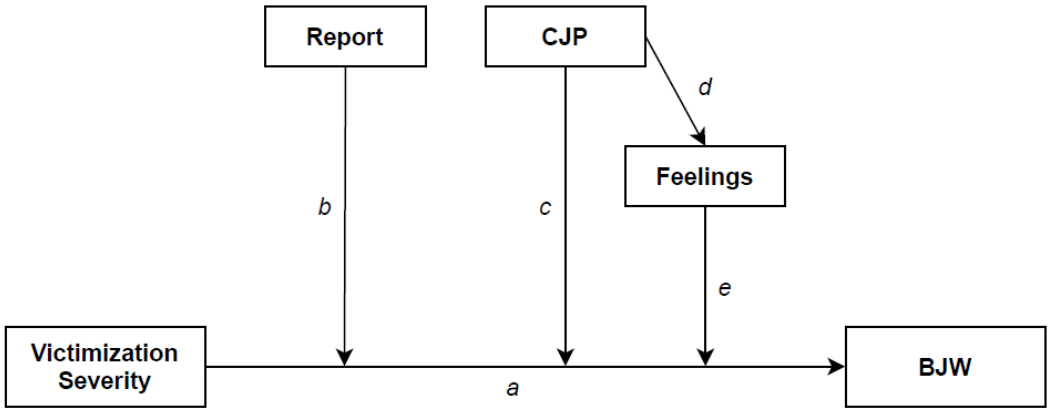
The reasoning presented so far was translated into a theoretical model and tested in the present study. The model is depicted in Figure 1. First, the model proposes that BJW will be lower in cases of severe victimization in comparison with less severe cases of victimization (path *a* in Figure 1). Because the criminal justice system provides opportunities to restore justice, victims who reported the crime and those who did not report the crime should differ in their BJW. Accordingly, we hypothesized that reporting a crime would moderate the effect of victimization on BJW (path *b* in Figure 1). Because experiences of procedural justice related to the criminal justice system may differ from case to case, we expected that CJP would moderate the effect of victimization severity on BJW (path *c* in Figure 1).

In line with basic assumptions of appraisal theories (Folkman & Moskowitz, 2000; Lazarus, 1991), a recent study by Barkworth and Murphy (2016) showed that effects of fair treatment were mediated by a reduction in negative feelings. Accordingly, our model proposes that the perception of fair treatment partially moderates the effect of victimization severity on BJW via feelings generated by these perceptions (paths *d* and *e* in Figure 1).

Scholars have distinguished PBJW and GBJW with the former reflecting beliefs about fairness for the self and the latter fairness for others (Dalbert, 1999). Some authors have argued that personally experienced unfair events are relevant for the PBJW but not for the GBJW (Cubela Adoric & Kvartuc, 2007; Wickham & Bentall, 2016). The empirical results on this assumption are mixed, however. Some authors found associations between personally experienced victimizations and GBJW (Corey et al., 2015; Fasel & Spini, 2010), whereas others did not (Cubela Adoric & Kvartuc, 2007; Wickham & Bentall, 2016). To help clear out these inconsistencies, the current study examined effects of victimization on both PBJW and GBJW.

Figure 1

Theoretical Model of Moderated Effects of Victimization Severity on BJW



Method

Procedure

The current study employed a cross-sectional design and mixed sampling. Given that samples of victims are difficult to obtain, we employed various strategies for recruiting participants. We posted invitations to our study in various forums and Facebook groups covering all of Lithuania, including groups with a focus on crime, justice, and victimization. We reached out to victims in Germany with the support of Weisser Ring (an organization that supports victims in Germany), which forwarded an invitation and a link to our survey via Facebook to groups of victims who received help from Weisser Ring. In addition, university students who collected data for their Bachelor theses recruited victims through Facebook posts. To increase the response rate and motivate participants to take part in our study in Lithuania, we set up a lottery in which three participants could each win a 20 € voucher. Participants who agreed to participate in the lottery provided their email addresses to be used to draw the winners.

Participants

We received a total of 341 questionnaires from Lithuania and Germany. Two participants were removed from the data set because they filled out the questionnaire only in part and did not provide information about their victimization. We performed a multivariate outlier analysis including all independent and dependent variables and adopting Mahalanobis and Cook's distances as criteria. No outliers were detected when we applied the cutoff values recommended in the literature (Chatterjee, Hadi, & Price, 2000; McDonald, 2002). The sample consisted of 339 participants with 241 victims and 98 non-victims. A total of 175 participants were recruited in Germany (95 victims and 80 non-victims) and 164 in Lithuania (146 victims, 18 non-victims); 41.9% of the victims reported having been victimized once in their life. The remaining victims (58.1%) reported having been victimized more than once. Most participants (77.2%) had experienced the victimization more than 2 years ago; 63.5% of the victims reported the crime to the police (62 victims from Germany and 91 from Lithuanian); 57.7% of the victims reported that the police terminated their case, which means that it did not proceed to a trial; 23.8% of the victims who reported the crime had their cases solved. In addition, 10.8% of the victims reported that the police did not start an investigation, and 7.7% of the cases were still under investigation or were in trial. The age of all participants ranged from 18 to 83 years (M = 35.45, SD = 13.75). In the victim subsample, age ranged from 18 to 83 years (M = 37.44, SD = 12.94).

Measures

BJW was measured with Lithuanian and German versions of the General Belief in a Just World Scale (Dalbert, Montada, & Schmitt, 1987) and the Personal Belief in a Just World Scale (Dalbert, 1999). The former contains six items (e.g., "I think basically the world is a just place"), and the latter consists of seven items (e.g., "I am usually treated fairly"). The items from both

scales are rated on a Likert scale ranging from 1 (*completely disagree*) to 6 (*completely agree*). Lithuanian versions of the scales were adapted by Stupnianek and Navickas (2019). The internal consistency of the GBJW (PBJW) scale was $\alpha = .78$ (.94) in the German sample and $\alpha = .79$ (.83) in the Lithuanian sample.

We measured victimization experiences with three items. The first item asked whether the person had been the victim of a crime and whether it happened once or more than once in their lifetime. The second item was a multiple-choice question about the type of crime. We provided a list of crimes ranging from minor crimes such as pick-pocketing and vandalism to severe crimes such as domestic violence and human trafficking. Additionally, participants could write down a crime that was not mentioned in the list. The third item assessed the time that had passed since the crime with multiple-choice options as follows: more than 2 years ago, less than 2 years ago, 1 year ago, less than 1 year ago, half a year ago, less than half a year ago. We used the first two items to categorize the types of crimes according to their severity. The categorization criteria were taken from the psychological trauma literature, which distinguishes between three types of trauma. A Type I trauma is related to a one-off incident or accident. A Type II trauma involves repeated or prolonged exposure to a traumatic event (e.g., sexual abuse). A Type III trauma is related to the exposure of a person to sustained violence that can start at an early age and result in developmental deficits, personality changes, fundamentally flawed beliefs, and can detrimentally affect trust and relationships (Basia, 2017; Solomon & Heide, 1999). After adopting these criteria, we defined four categories that reflected victimization severity: Level 0 victimization severity (VS 0) involves minor crimes that can be stressful and unpleasant but are least likely to induce psychological trauma (i.e., pick-pocketing, vandalism); Level I victimization severity (VS I) involves moderate crimes that are threatening but are one-off events that were not repeated and did not expose the

person to prolonged traumatization (robberies, thefts that happened once); Level II victimization severity (VS II) involves severe crimes that were repeated or exposed the individual to prolonged traumatization (sexual or physical abuse, robbery that happened more than once, burglary); Level III victimization severity (VS III) involves very severe crimes that exposed an individual to violent conditions that can result in personality changes or developmental deficits (domestic violence, human trafficking). In cases of multiple crimes, we categorized the victim on the basis of the most severe crime that was checked. The categorization resulted in 62 victims in the VS 0 group, 37 victims in the VS I group, 54 victims in the VS II group, and 85 victims in the VS III group.

Some scholars have argued that the relevance of criteria used in justice judgments depends on the role a person plays in an unjust incident and the context in which the event was embedded. For instance, what is important for the perpetrator may be less important for the victim; what is important in organizational settings may be less important in criminal justice settings. Moreover, different legal systems (e.g., common law and continental law) provide different ways to ensure justice. These can impact justice perceptions via the specific relevance of justice criteria and highlight the necessity of adjusting measures for justice perceptions to the specific societal and legal context (Laxminarayan et al., 2013; Wemmers et al., 1995). Therefore, we focused our measure of CJP on the European context (Laxminarayan et al., 2013; Valickas et al., 2013; Wemmers et al., 1995) and developed items that could capture the most important procedural justice criteria for victims of crime in this context (Laxminarayan et al., 2013): voice (4 items, e.g., “During the interview with the police officer, I felt like I could express my opinion”), respect or interactional justice (5 items, e.g., “The officer treated me with respect”), accuracy or neutrality (3 items, e.g., “It looked like the officer already had his or her opinion about the case,” reverse coded), informational justice (4 items, e.g., “The officer clearly and understandably explained my rights

and duties to me"), and fairness in general (3 items, e.g., "I think the officer was trying to behave fairly"). The items were rated on a Likert scale ranging from 1 (*completely disagree*) to 5 (*completely agree*). Originally, we wanted to examine CJP in interactions with the police and in interactions with the judge separately. However, only a small portion of victims in our sample went to court. Therefore, we decided to focus only on interactions with the police. We developed items in the Lithuanian language and translated them into German. The wording of the items was reviewed by a Weisser Ring referent and adjusted on the basis of feedback from the referent.

Factor Analysis of the CJP Measure

We conducted an exploratory factor analysis with principal axis factoring and an Oblimin rotation. Four factors with Eigenvalues exceeding 1 (1.03, 1.20, 1.93, 9.21) were extracted. Altogether, they explained 62.79% of the variance (see Table 14 in the Appendix). The initial loading pattern did not fully fit the conceptual distinctions of the procedural justice criteria. Based on unexpected correlations with other items (Table 1), two items were excluded. The first of these items, originally designed as a voice item ("The police officer interrupted me") had low correlations with the other items from the voice scale (r ranged from .41 to .46). Moreover, this item had similar correlations with the items from the interactional justice scale (r ranged from .41 to .50). This pattern of correlations suggests that this item had an ambiguous meaning. Specifically, interruption can be understood as a restriction of the opportunities to express one's opinion, but it can also be interpreted as a sign of impoliteness and pressure. Therefore, we decided to exclude this item from the scale. A second item, originally designed as a neutrality item ("In my opinion, the officer treated me differently than he/she treated other people because of my gender, age, nationality, etc.") had low correlations with the other two items from the neutrality scale (r = .31 and .35). Neutrality can be understood in two ways, in terms of treating all individuals equally

regardless of their age, nationality, etc. or in terms of accurate decisions that are based on facts rather than on personal opinions. Because the two highly correlated items from the neutrality scale referred to the accuracy aspect of neutrality, the third item was excluded from the scale. After these two items were deleted, three factors with eigenvalues > 1 (8.70, 1.88, 1.11) were extracted. The factor loadings of the remaining items after the Oblimin rotation to simple structure are reported in Table 2. Note that the loadings of Factors 2 and 3 were negative, which implies that these factors refer to a lack of procedural justice. Table 3 reports the factor correlation matrix. Consistent with the negative loadings reported in Table 2, the correlations of Factors 2 and 3 with Factor 1 were negative. Whereas the voice and informational justice items separated as expected, the interactional justice, general fairness, and neutrality items were not distinguished by our participants as expected. Rather, they seemed to measure trust and general fairness as a unitary principle of procedural justice. Next, two items that were originally designed to be interactional justice items ("The officer treated me with respect" and "The officer treated me ethically") had their highest loadings on the voice factor. According to the group-value model (Lind & Tyler, 1988), procedural justice is conceptualized as respectful treatment and voice. Therefore, we added these two items to the voice factor and renamed it procedural justice. The internal consistencies for the scales that we used to measure the final three factors were $\alpha = .89$ (trust and general fairness), $\alpha = .90$ (informational justice), and $\alpha = .89$ (procedural justice).

Table 1

Item Correlation Matrix

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	V1	.																		
2	V2	.71	.																	
3	V3	.69	.77	.																
4	V4	.44	.46	.41	.															
5	INT1	.44	.48	.46	.50	.														
6	INT2	.42	.38	.35	.49	.55	.													
7	INT3	.61	.54	.61	.45	.53	.54	.												
8	INT4	.58	.50	.59	.41	.57	.54	.76	.											
9	INT5	.43	.38	.39	.48	.61	.47	.37	.51	.										
10	N1	.23	.25	.19	.31	.28	.35	.27	.25	.37	.									
11	N2	.37	.34	.45	.30	.49	.31	.37	.50	.48	.35	.								
12	N3	.40	.35	.34	.46	.53	.39	.33	.42	.49	.31	.60	.							
13	F1	.51	.47	.51	.47	.51	.49	.53	.62	.57	.23	.47	.59	.						
14	F2	.54	.52	.60	.51	.51	.50	.61	.66	.57	.26	.47	.46	.88	.					
15	F3	.55	.51	.61	.40	.35	.32	.42	.55	.49	.18	.54	.41	.64	.72	.				
16	INF1	.53	.59	.58	.31	.37	.32	.40	.44	.33	.27	.32	.28	.43	.49	.55	.			
17	INF2	.51	.54	.50	.29	.45	.35	.34	.38	.32	.26	.32	.30	.46	.42	.42	.81	.		
18	INF3	.29	.45	.39	.30	.33	.20	.21	.19	.21	.18	.18	.12	.31	.31	.34	.56	.68	.	
19	INF4	.61	.58	.63	.40	.40	.35	.42	.46	.35	.28	.43	.32	.50	.55	.62	.78	.77	.59	.

Note. V1-V4 = Voice items; INT1-INT5 = Interactional justice items; N1-N3 = Neutrality items; F1-F3 = General fairness items; INF1-INF4 = Informational justice items.

Table 2

Factor Loadings for the CJP Scale

Item	1	2	3
During the interview with the police officer, I felt like I could express my opinions.			-.64
During the interview, I felt like I could ask questions.		-.35	-.60
The police officer heard me out.			-.69
During the interview, I felt pressured to take back my accusation. (reverse coded)	.59		
During the interview, the police officer raised his or her voice. (reverse coded)	.44		
The officer treated me with respect.			-.81
The officer treated me ethically.	.39		-.58
I felt like I was blamed for the crime. (reverse coded)	.74		
It looked like the officer already had his or her opinion about the case. (reverse coded)	.66		
I think the officer's personal opinion had an impact on the decisions he or she made. (reverse coded)	.81		
I think the officer was trying to act fairly.	.73		
The officer treated me fairly.	.59		
It looked like the officer was honestly trying to solve the case.	.42		
The officer clearly and understandably explained my rights and duties to me.		-.78	
I understood my rights and duties.		-.88	
If needed, I would know how to use my rights.		-.74	
I think the police officer truly cared about whether I understood my rights.		-.74	

Note. Principal axis factor analysis with an Oblimin rotation. The items were translated into English for the purpose of the publication but have not yet been adapted to be used in English-speaking countries.

Table 3

Factor Correlation Matrix

Factor	1	2	3
1. Trust and general fairness	.		
2. Informational fairness	-.44	.	
3. Procedural fairness	-.64	.50	.

Measure of Feelings in the Criminal Justice Process

On the basis of previous literature on the feelings that victims experience during the criminal justice process (Barkworth & Murphy, 2016; Krehbiel & Cropanzano, 2000; Mikula et

al., 1998; Valickas et al., 2013), we devised a list of three positive and eight negative feelings and asked victims to rate them on a scale ranging from 1 (*did not feel at all*) to 4 (*felt very strongly*). The correlations among the feeling items (Table 4) showed that the positive feelings had very low correlations with the negative feelings (*r* ranged from .01 to .27), whereas the positive feelings were highly correlated with each other as were the negative feelings (*r* ranged from .27 to .75). A principal axis factor analysis extracted two factors with eigenvalues > 1 (4.22 and 2.11), which together explained 48.44% of the variance. The rotated factor loadings are provided in Table 5 and the factor correlations in Table 6. The internal consistencies for the positive and negative feelings were α = .72 and α = .86, respectively.

Table 4

Item Correlation Matrix for the Feelings Scale

	Item	1	2	3	4	5	6	7	8	9	10	11
1	Anxiety	.										
2	Fear	.60	.									
3	Anger	.42	.46	.								
4	Stress	.59	.59	.40	.							
5	Helplessness	.45	.44	.43	.64	.						
6	Hopelessness	.38	.32	.33	.44	.75	.					
7	Disappointment	.27	.31	.45	.31	.54	.62	.				
8	Guilt	.39	.49	.34	.45	.39	.34	.34	.			
9	Satisfaction	-.01	.02	.10	.04	.08	.17	.09	-.05	.		
10	Hope	-.06	-.04	.21	-.03	.25	.27	.21	-.01	.44	.	
11	Relief	.07	-.14	.15	-.03	.20	.27	.16	-.01	.45	.51	.

Table 5

Factor Loadings and Rotated Solution for the Feelings Scale

Item	1	2
Anxiety	.69	
Fear	.74	
Anger	.57	
Stress	.78	
Helplessness	.76	
Hopelessness	.63	.35
Disappointment	.54	
Guilt	.60	
Satisfaction		.53
Hope		.73
Relief		.71

Note. Principal axis factor analysis with an Oblimin rotation.

Table 6

Factor Correlation Matrix

Factor	1	2
1. Negative feelings	.	.13
2. Positive feelings	.13	.

The survey included more scales to measure constructs that were not part of the present theoretical model and research question. A complete list of measures can be found in the Appendix.

Results

To manage the data set and run a basic descriptive analysis, we used IBM SPSS 25. Multiple regression models were tested with the RStudio (version 3.5.3) "interactions" package (Long, 2019a) and the "lavaan" package for the final path model (Rosseel, 2012). The packages "ggplot2" (Wickham, 2016), "jtools" (Long, 2019b), "lm.beta" (Behrendt, 2014), "broom"

(Robinson & Hayes, 2018), and "devtools" (Wickham, Hester, Chang, & Hester, 2020) were used to export and plot the results.

Descriptive Statistics

Table 7 provides descriptive statistics for all variables as well as their correlations. The GBJW scores were lower than the PBJW scores on average (3.20 and 4.13, respectively), and they were moderately correlated with each other (r = .36). Consistent with the factor loadings reported in Table 2 and the correlations among the factors reported in Table 3, the CJP scales were positively correlated with each other, and all the correlations were substantial and significant. GBJW was significantly positively correlated with procedural and informational justice (r = .20 and .29, respectively). PBJW was significantly correlated with all CJP variables. Neither PBJW nor GBJW was correlated with positive or negative feelings. Positive feelings were significantly positively correlated with all CJP variables, whereas negative feelings were positively correlated with interactional justice and negatively correlated with procedural and informational justice.

Table 7

Descriptive Statistics for the Variables in the Models and the Pearson Correlations Between Them

	Variable	*N*	Min	Max	*M*	*SD*	1	2	3	4	5	6	7
1	GBJW	339	1.00	5.33	3.20	0.91	.						
2	PBJW	339	1.00	6.00	4.13	0.98	.36**	.					
3	Procedural justice	146	1.00	5.00	3.95	1.00	.21*	.24**	.				
4	Trust and fairness	146	1.00	5.00	3.81	0.92	.13	.21*	.73**	.			
5	Informational justice	146	1.00	5.00	3.60	1.16	.29**	.26**	.62**	.54**	.		
6	Positive feelings	131	0.00	2.67	0.86	0.70	-.003	-.00	.37**	.41**	.44**	.	
7	Negative feelings	132	0.00	3.00	1.15	0.75	-.03	-.23**	-.37**	-.34**	-.38**	-.15	.

Note. GBJW = general belief in a just world; PBJW = personal belief in a just world.

* p < .05. ** p < .01.

To examine the associations of the CJP scales and feelings with the categorical variables in our study (i.e., VS and country), we compared the means of each continuous variable between the VS and country groups. Means, standard deviations, and F statistics are provided in Table 8

(by different VS levels) and Table 9 (by country). Victims of different levels of VS did not differ in their perceptions of procedural justice, trust and fairness, or informational justice. They also did not differ in the feelings they had while interacting with the police officer. Participants from Germany tended to have significantly stronger PBJW but weaker GBJW than participants from Lithuania. Positive and negative feelings and CJP variables did not differ significantly between the two countries with one exception: The trust and fairness judgments were significantly higher in Germany than in Lithuania.

Table 8

Mean Differences in CJP Variables and Feelings Between Different VS Levels

	Non-victim *M*(*SD*)	VS 0 *M*(*SD*)	VS I *M*(*SD*)	VS II *M*(*SD*)	VS III *M*(*SD*)	*F*
Procedural justice	-	3.97 (0.76)	4.14 (0.93)	3.81 (1.12)	3.94 (1.11)	0.58
Trust and fairness	-	3.80 (0.66)	4.18 (0.68)	3.79 (0.98)	3.61 (1.10)	2.25
Informational justice	-	3.37 (1.13)	3.97 (1.00)	3.56 (1.10)	3.59 (1.28)	1.46
Positive feelings	-	0.76 (0.67)	0.92 (0.76)	0.81 (0.65)	0.93 (0.75)	0.41
Negative feelings	-	1.04(0.62)	1.04 (0.60)	1.06 (0.80)	1.39 (0.85)	1.86

* $p < .05$. ** $p < .01$.

Table 9

Mean Differences in BJW, CJP Variables, and Feelings Between Participants From Lithuania and Germany

	Germany *M* (*SD*)	Lithuania *M* (*SD*)	*F*
PBJW	4.25 (1.12)	4.00 (0.80)	5.31*
GBJW	2.87 (0.84)	3.55 (0.85)	53.71**
Procedural justice	3.93 (1.05)	3.96 (0.96)	0.02
Trust and fairness	4.02 (0.81)	3.66 (0.96)	5.92*
Informational justice	3.60 (1.13)	3.60 (1.18)	0.0
Positive feelings	0.88 (0.72)	0.85 (0.70)	0.06
Negative feelings	1.18 (0.70)	1.12 (0.80)	0.19

Note. The table presents the means for the whole sample including victims and non-victims.

* $p < .05$. ** $p < .01$.

Relationship Between VS and BJW

We began our analysis by testing whether GBJW and PBJW differed across the VS levels (0, I, II, or III) and the non-victimized control group. Because VS is a categorical variable with five categories, four dummy variables were generated with 0 representing the non-victim group and 1 representing victims from the VS categories 0, I, II, and III, respectively. These VS dummies served as predictors of GBJW and PBJW in separate multiple regression analyses. Table 10 provides estimates of the regression weights (*b*) of the dummy predictors as well as the standardized regression weights (β). The unstandardized regression weights correspond to the differences in GBJW and PBJW between the VS categories and non-victims. The parameters in Table 10 (Model a) show that victims at VS Level III had a significantly lower PBJW than non-victims (and the difference was 0.84 scale units) and that victims at VS Level 0 had a significantly higher GBJW than non-victims (and the difference was 0.44 scale units). Figures 2 and 3 present the differences graphically. To test the differences in PBJW and GBJW between all VS levels, new dummies were generated with 0 representing the reference category of interest. The analyses revealed that the mean PBJW of VS III victims was 0.80 scale units lower than the mean PBJW of VS 0 victims (SE = .15, t = 5.22, p < .001), 0.69 scale units lower than the mean PBJW of VS I victims (SE = .18, t = 3.77, p < .001), and 0.66 scale units lower than the mean PBJW of VS II victims (SE = .16, t = 4.13, p < .001). The mean GBJW did not differ significantly across the four VS levels.

Our sample contained victims and non-victims from Lithuania and Germany. However, the number of victims in each country was uneven; that is, we had more victims in the Lithuanian sample than in the German sample. Therefore, we decided to test whether differences in BJW between different VS levels and non-victims remained when we included country in the model as

an additional predictor. We dummy-coded the country variable and assigned 0 to Germany and 1 to Lithuania. The parameter estimates in Table 10 (Model *a'*) show that including the country dummy as an additional predictor hardly changed the mean PBJW differences between non-victims and victims from different VS levels. Moreover, mean PBJW did not differ between Lithuania and Germany. By contrast, mean GBJW differed significantly between countries (Lithuania > Germany). Moreover, after including country as an additional predictor of GBJW, mean GBJW no longer differed significantly between non-victims and VS 0 level victims.

Table 10

Multiple Regression With VS as a Predictor of PBJW and GBJW

	PBJW				**GBJW**			
	b	***β***	**S.E.**	***t* value**	**b**	***β***	**S.E.**	***t* value**
Model *a*	R^2 **= 0.12,** F**(4, 334) = 11.53.** p **< 0.001**				R^2 **= 0.03,** F**(4, 334) = 2.44,** p **< 0.05**			
Intercept	4.40***		.09	47.05	3.01***		.09	32.98
VS 0	0.04	.02	.15	-0.30	**0.44****	**.19**	0.15	3.0
VS I	-0.16	-.05	.18	-0.87	0.19	.06	0.17	1.07
VS II	-0.18	-.07	.16	-1.14	0.29	.12	0.15	1.92
VS III	**-0.84*****	**-.37**	.14	-6.16	0.17	.08	0.13	1.3
Model *a'*	R^2 **= 0.12,** F**(5, 333) = 9.22.** p **< 0.001**				R^2 **= 0.16,** F**(5, 333) = 12.49,** p **< 0.001**			
Intercept	4.40***		0.10	45.95	2,87***		0.09	32.99
VS 0	-0.03	-.01	0.15	-0.20	0.16	.07	0.14	1.13
VS I	-0.15	-.05	0.18	-0.84	0.08	.03	0.16	0.52
VS II	-0.16	-.06	0.17	-0.97	-0.06	-.03	0.15	-0.42
VS III	**-0.82*****	**-.37**	0.15	-5.50	-0.22	-.11	0.14	-1.61
Country	-0.04	-.02	0.11	-0.32	**0.73*****	**.40**	0.10	7.16

Note. VS = victimization severity; Model a = a model testing Path a depicted in Figure 1; Model a' = a model testing Path a depicted in Figure 1 with country as a control variable. We also controlled for age and the time that passed after victimization, but the patterns of results remained the same.

* p < .05. ** p < .01. *** p < .001.

Figure 2

Mean PBJW Differences Between Non-Victims and Victims From the Four VS Levels

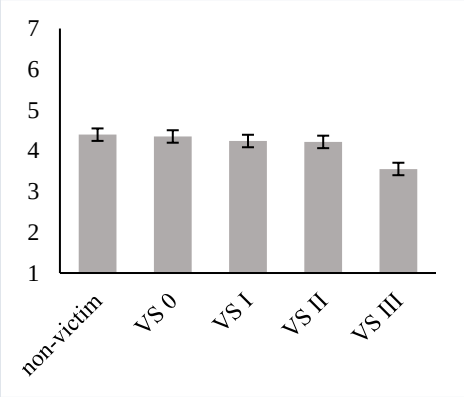
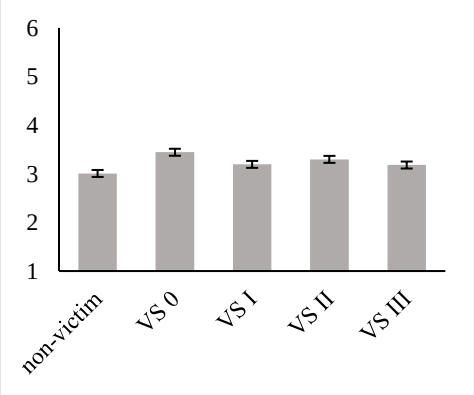


Figure 3

Mean GBJW Differences Between Non-Victims and Victims From the Four VS (Victimization Severity) Levels



Moderating Effects of Reporting Versus not Reporting the Crime

Next, we tested whether reporting a crime had a moderating effect on the relationship between VS and BJW. Both categorical variables were dummy-coded. VS was coded into three dummy variables (VI, VII, VIII). In each of these dummies, 0 was assigned to VS 0, the lowest VS level, and 1 was assigned to VS categories I, II, and III, respectively. Regarding the reporting variable, 0 was assigned to unreported cases, and 1 was assigned to reported cases. To test the

crucial moderator (interaction) effect, three product terms were generated by multiplying each of the three VS dummies by the report dummy. A multiple regression analysis with these seven predictors and the two BJW scales as dependent variables revealed a significant interaction between VS and reporting a crime for PBJW but not for GBJW (see Table 15 in Appendix). The negative regression weight (-0.89) of VS1 reported in Table 11 means that for those victims who did not report the crime, PBJW was significantly lower in VS category I in comparison with VS category 0. The positive regression weight (1.02) of the interaction term VS I*Report in Table 11 means that this difference in PBJW between VS 0 and VS I of victims who did not report the crime turned around for victims who reported the crime. The first four columns in Figure 4 illustrate this pattern of PBJW mean differences.

Table 11

PBJW Differences Between Victims Who Reported the Crime Versus Those Who Did Not

	b	***β***	**S.E.**	***t* value**
Model *b*	**R^2 = 0.14, F(7, 233) = 5.60. p < 0.001**			
Intercept	4.41***		.18	24.11
VS I	-0.89*	-.32	0.38	-2.33
VS II	-0.28	-.12	0.31	-0.91
VS III	-0.81***	-.39	0.24	-3.42
Report	-0.10	-.05	0.24	-0.41
VS I*Report	1.02*	.33	0.45	2.27
VS II*Report	0.23	.08	0.38	0.59
VS III*Report	0.02	.01	0.32	0.08

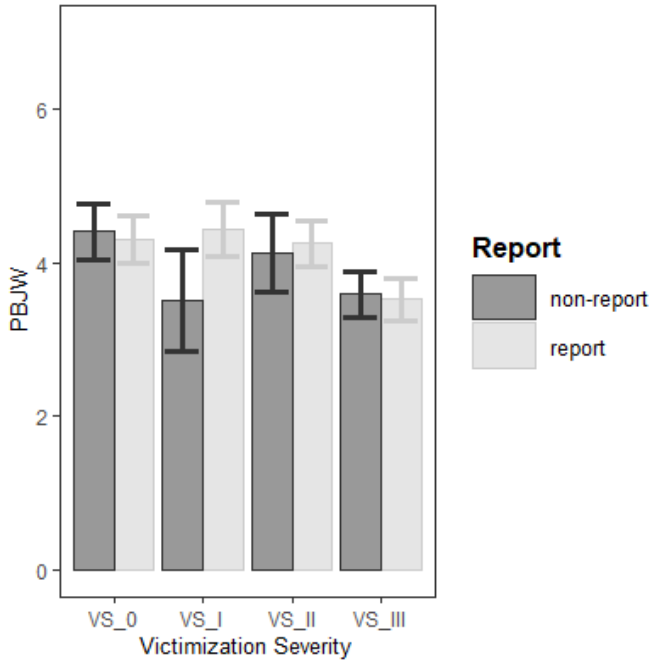
Note. VS = victimization severity; Model *b* = a model testing Path *b* depicted in Figure 1.

Results remained the same when controlling for country.

* p < .05. ** p < .01. *** p < .001.

Figure 4

Mean Differences in PBJW Between Victims of Different VS Levels in Groups of Victims Who Reported Versus Did Not Report the Crime



Moderating Effects of CJP

Moderating effects of CJP could be tested only among victims who reported the crime. Therefore, we excluded victims who did not report the crime from the data set. This exclusion resulted in a sample of 150 participants and a decrease in the number of participants in each VS group. To increase the number of participants per VS group and increase power, we merged the VS groups that did not differ significantly in mean PBJW. Table 10 and Figure 3 show that VS 0, VS I, and VS II did not differ significantly in their mean PBJW. These groups also did not differ significantly in reported cases (Figure 4). This means that the mean PBJW in the VS III group, the group that had suffered the most severely traumatizing crimes, was consistently lower than the mean PBJW in all other groups that had experienced less severely traumatizing crimes. Therefore, we merged VS 0, VS I, and VS II into one category, which we refer to as the moderate severity

group *or VS 0'*. We contrasted this group, which experienced moderately severe crimes, with the VS III group, which suffered the most traumatizing crimes. The new VS variable is a binary categorical variable. It was dummy-coded by assigning 0 to the VS 0' category, the new reference category, and 1 to the VS III category.

In order to test whether CJP acts as a moderator of the relationship between VS and BJW, we ran multiple regression analyses with PBJW and GBJW as the dependent variables. Each regression model included VS as a binary dummy predictor, CJP variables as continuous predictors, and the product between the dummy-variable and each CJP variable reflecting the moderator effect. These analyses revealed significant interaction effect between procedural justice and victimization for GBJW as a dependent variable, however, after including country as an additional predictor this interaction became insignificant (see Tables 16 and 17 in Appendix). Significant results were obtained for PBJW. Table 12 shows that PBJW increased as procedural justice increased, but the interaction between procedural justice and VS was not significant. The interaction between VS and informational justice on PBJW was significant. The positive regression weight ($b = 0.41$) of the VS*Informational justice product means that mean differences in PBJW between VS level 0' and VS level III were reduced when perceptions of informational justice increased. This means that informational justice buffers the effect of VS and neutralizes it. Figure 5 shows that at a low level of informational justice, the PBJW of the victims at VS level III was significantly lower than the PBJW of victims at VS 0'. When informational justice increased, these differences decreased. In addition, beyond a certain level of informational justice, these differences turned around; that is, the PBJW of VS III victims exceeded the PBJW of VS 0'.

An additional simple slopes analysis showed that in the VS III group (severe victimization), informational justice significantly predicted PBJW (the unstandardized simple slope was 0.44, *p*

< .01), whereas in the VS 0' group (moderate victimization), it did not (the unstandardized simple slope was 0.11, $p > .01$).

Table 12

Experiences With CJP as Moderators of the VS Effect on PBJW

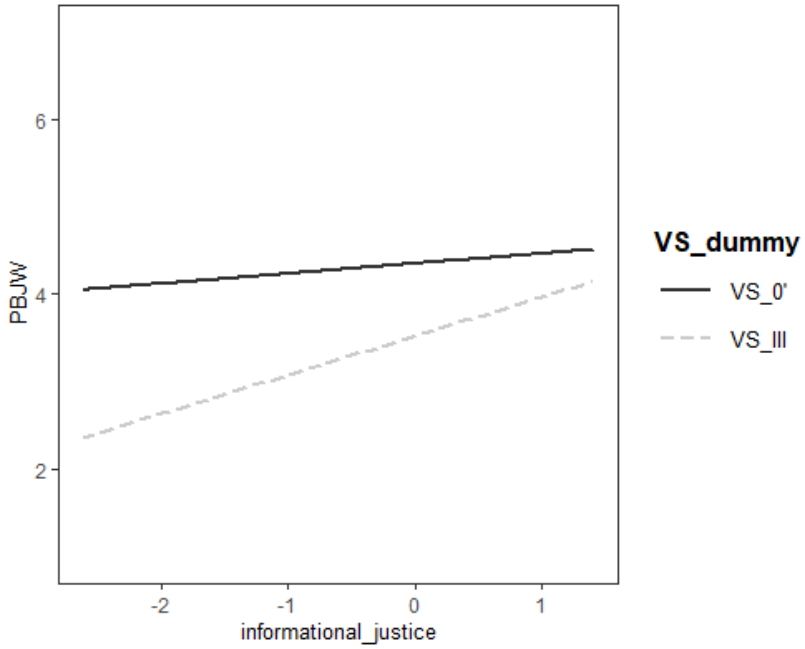
	PBJW			
	b	***β***	**S.E.**	***t* value**
Model *c*	**$R^2 = 0.25$, $F(7, 138) = 6.49$, $p < 0.001$**			
Intercept	4.37^{***}		0.10	44.13
VS_dummy	-0.83^{***}	-0.36	0.18	-4.66
Procedural justice	0.34^{*}	0.25	0.15	2.20
Trust and fairness	-0.21	-0.12	0.17	-1.26
Informational justice	0.01	0.03	0.11	0.12
VS*Procedural justice	-0.38	-0.16	0.28	-1.36
VS*Trust and Fairness	0.28	0.12	0.28	1.01
VS*Informational justice	**0.41^{*}**	**0.27**	0.18	2.26

Note. VS = VS_dummy; Model b = a model testing Path *c* depicted in Figure 1. VS_dummy = dummy variable of VS. Results remained the same when controlling for country.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Figure 5

Effects of Informational Justice Perceptions on PBJW for Victims of VS III and VS 0'



Mediating Effects of Feelings

As reported in the previous section, we found that informational justice moderated the relationship between VS and PBJW. In the next step, we aimed to test a mediated moderation model in which the moderating effect of informational justice was partially mediated by feelings (positive or negative) experienced in a criminal justice process as depicted in Figure 1 (Paths d and e).

The mediated moderation model we tested included PBJW as the dependent variable, VS dummy (as it was used in previous analyses) as the independent variable, informational justice as the moderator variable, and positive and negative feelings as mediators of the informational justice moderator. Maximum likelihood estimation was employed to test this part of the model. We calculated bootstrapped standard errors and corresponding 95% confidence intervals (CI) using 10,000 draws. A model with informational justice as a moderator and negative feelings as a

mediator was found to have a significant direct moderating effect, emitted from informational justice, and a significant indirect moderating effect of informational justice, mediated by negative feelings. Standardized beta coefficients, standard errors, confidence intervals, and *z* scores in the path model are reported in Table 13. The model accounted for 31% of the variance in PBJW. Informational justice had a direct negative and significant effect on negative feelings (β = -0.24, $p < .01$). With increasing perceptions of informational justice, lower negative feelings ratings were reported by victims while interacting with the police. Informational justice and negative feelings had no significant direct effects on PBJW, but their interaction with the VS dummy positively predicted PBJW (β = 0.53 for informational justice and β = *0.*75 for negative feelings, $p < .01$). The indirect moderating effect of informational justice, mediated by negative feelings, amounted to β = -0.18, $p < .05$, 95% CI[-0.36, -0.06]. Hence, victims of VS III (very severe crimes) tended to have stronger PBJW when they perceived high informational justice through a reduction in negative feelings during the criminal justice process.

Table 13

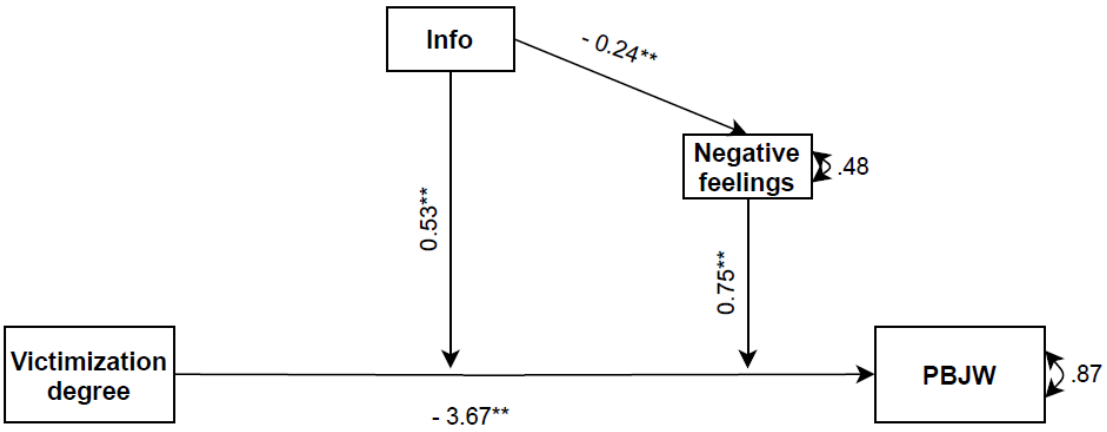
Parameter Estimates and Test Statistics for the Mediated Moderation Model

	β	**se**	**z**	**CI**
***R^2* (PBJW) = .31; *R^2* (Neg.Feel) = .14**				
PBJW ~ SV	-3.67**	0.82	-4.47	[-5.17; -1.98]
PBJW ~ Neg.Feel	-0.32	0.18	-1.80	[-0.69; 0.01]
PBJW ~ Info	0.08	0.09	0.86	[-0.10; 0.26]
PBJW ~ SV*Info	0.53**	0.16	3.37	[0.21; 0.84]
PBJW ~ SV*Neg.Feel	0.75**	0.29	2.61	[0.17; 1.29]
Neg.Feel ~ Info	-0.24**	0.05	-4.40	[-0.35; -0.13]
Indirect effect	**-0.18***	0.08	-2.37	[-0.36; -0.06]
Total effect	0.36*	0.16	2.24	[0.05; 0.67]

* $p < .05$. ** $p < .01$.

Figure 6

Moderating Effects of Informational Justice on PBJW Mediated by Negative Feelings



Discussion

The goal of the present study was to examine the patterns of BJW under threat of victimization. Unlike previous studies, the current study focused on only one type of victimization—criminal victimization—which allowed us to capture BJW differences between victimizations with different levels of severity. As in many previous studies (e.g., Wickham & Bentall, 2016), our study showed that PBJW was significantly lower for individuals who were victims of very severe crimes in comparison with non-victims and victims of less severe crimes. These findings support the notion that under high levels of victimization severity, BJW can be shattered (Janoff-Bulman, 1992). When victimization severity is lower, victims can maintain their BJW.

Our results showed different patterns of PBJW and GBJW. Whereas the PBJW of victims was lower than the PBJW of non-victims and decreased with higher victimization severity, GBJW was not associated with victimization severity. GBJW tended to be stronger for victims of minor

crimes than for non-victims, and procedural justice significantly moderated the effects of victimization on the GBJW. However, these effects became insignificant when country was controlled for. The significant differences found in GBJW between victimization levels seem to be due to the imbalanced samples from Lithuania and Germany. The Lithuanian sample contained more victims than the German sample, and the former had a stronger GBJW than the latter. The different results found for the two kinds of BJW are consistent with assumptions made by some authors who suggested that PBJW and GBJW perform different psychological functions. PBJW is considered to be a personal resource that helps people maintain well-being and cope with personal experiences of injustice, whereas GBJW is considered to interact with observed injustices and to involve reactions to other people's fates (Bartholomaeus & Strelan, 2019; Dalbert, 1999). The results of our study are consistent with this reasoning and once again show different relationships of GBJW and PBJW with justice-related events.

Victims of crime differ from victims of other kinds of misfortune and injustice because not only are they victimized by a perpetrator, but they also have to face the criminal justice system, which on the one hand can bring justice, but on the other hand can expose victims of crime to more unfairness and stress (Herman, 2003). As a result, such additional threats of secondary victimization can affect the BJW of the victims over and above the effects of their victimization by a crime. In our study, victims of victimization severity level I who reported a crime to the police had a stronger PBJW than those who did not. This finding suggests that even one-off unjust and stressful events such as a theft can threaten the PBJW; however, reporting a crime to the police provides a chance to restore justice and reduce the threat to the PBJW. We did not find significant differences between reported and unreported cases for victims at other levels of victimization severity. The reasons for this pattern cannot be fully determined with the data from our study.

However, it may be the case that victims of more severe crimes had different experiences—some positive, some negative—which might have influenced the overall effect of reporting a crime.

Indirect support for this reasoning came from the moderator effects that were identified, in line with the assumptions of our theoretical model, for perceptions of justice while interacting with the police. These moderating effects help to provide a more detailed picture of the role that judgments about justice play in the criminal justice system. Specifically, for severely victimized victims, perceptions of high informational justice were associated with stronger PBJW, whereas perceptions of low informational justice were associated with weaker PBJW. This means that justice perceptions displayed by police officers buffered the effect of severe victimization on PBJW. Even though most of the victims in our sample did not see the perpetrator being punished, police efforts to provide information to the victims in an understandable way were enough to buffer the adverse effects of victimization. These results are similar to studies that showed relationships between justice judgments in a criminal justice system and the mental health of the victim (Campbell et al., 1999; Herman, 2003, 2005; Kunst et al., 2014; Lind & van den Bos, 2002; Orth, 2002; van den Bos & Lind, 2002; Wemmers & Cyr, 2006). Some authors have suggested that fair treatment by the criminal justice system can restore victims' feelings of control over their lives and reduce uncertainty (Shnabel & Nadler, 2008; van den Bos & Lind, 2002). Believing that the world is a fair place that has some kind of order can provide a person with a sense of certainty that one will be treated fairly and a sense of control in that, if one behaves well, one will be rewarded (Bartholomaeus & Strelan, 2019; Dalbert, 2001). Hence, it is likely that a lost sense of controllability or certainty—due to victimization—can be restored at least partly when representatives of the criminal justice system provide clear and understandable information.

The relationship between justice and BJW might not be one-directional. It is possible and plausibe to assume that not only is the BJW shaped by the experience of injustice, but it shapes perceptions of injustice as well. In line with this reasoning, BJW was shown to positively predict perceptions of justice (Dalbert & Filke, 2007; Johnston et al., 2016). Hence, one could argue that victims with a stronger PBJW were more likely to use various strategies to downgrade the unfairness and perceive that the treatment was fair. However, most studies investigating the association between BJW and perceptions of injustice have been cross-sectional in nature and therefore could not disentangle bidirectional causal processes. Our findings, even though they were also generated in a cross-sectional study, provided more information about the relationship between BJW and fair treatment. They showed that specific perceptions of informational justice in interaction with victimization are associated with PBJW. This moderating effect is more consistent with our theoretical model than with a model that proposes that PBJW is not the consequence of victimization and justice perceptions but is rather their cause.

Another important finding from our study was that criminal justice perceptions were related to stronger PBJW only in cases of very severe crimes, whereas in moderately severe crime cases, the relationship between criminal justice perceptions and PBJW was nonsignificant. Scholars have previously suggested that psychological trauma that results from very severe crime may leave victims vulnerable, which, in turn, makes victims of severe crime more sensitive to unfair treatment than victims of less severe crime (Laxminarayan, 2012; Laxminarayan et al., 2013; van den Bos & Lind, 2002; Wemmers & Cyr, 2006). When BJW is shattered, the external world and other people can provide new evidence about the world that can aid in restoring the BJW (Janoff-Bulman, 1990). Hence, fair treatment by the police could have provided evidence that even though bad things sometimes happen, fairness will be restored. As victims of moderate

crime did not have their PBJW shattered, they did not need such evidence, and whether they were treated fairly or unfairly by the police was not that important.

Finally, the current study aimed to test whether effects of criminal justice perceptions can be explained by feelings experienced during the interaction with the police officer. Previous studies did not find direct links between feelings and BJW (Correia, Batista, & Lima, 2009). Our study showed that feelings can be indirectly associated with BJW in transmitting the effects of moderators. Specifically, we found that strong perceptions of informational justice were associated with reduced negative feelings, which, in turn, moderated the adverse effects of victimization on the PBJW. These findings are in line with previous study, which showed indirect effects of fair treatment (i.e., Barkworth and Murphy, 2016).

Limitations and Implications for Future Studies

The current study provided results that contribute to the literature on BJW. It showed that the severity of criminal victimization can explain to some extent why some victims have lower PBJW than others. VS contributed to the PBJW in our study regardless of which country victims were from. Moreover, our findings showed that interactions with the police made a difference for the victims who were harmed most severely. Nevertheless, our findings are somewhat limited due to the cross-sectional design of our study. Such a design allowed us to reach a variety of victims of crime and take a glimpse at the relationships between BJW, victim severity, and perceptions of justice in the criminal justice system. However, causal conclusions should be drawn with care because we had no information about participants' levels of BJW before their victimization. Despite this limitation, it seems unlikely that the BJW of victims and non-victims was causally responsible for the victimization or the severity of the victimization. Nevertheless, longitudinal data are needed to confirm this reasoning and to provide data that will allow the causal assumptions

of our theoretical model to be tested less ambiguously. Fair or unfair treatment could also be manipulated in a laboratory setting or a vignette study to test whether these different conditions have any effect on the experience of threat to the BJW or an increased need to defend it.

The current study examined the mediating role of feelings experienced during the criminal justice process. We classified a set of feelings into positive and negative feelings and examined them as a group. Future studies could further examine specific feelings that could be related to CJP and BJW. For example, as the group value model suggested, fair and respectful treatment by the authorities can restore feelings of control and power (Lind & Tyler, 1988). Because BJW was found to be related to perceived control (i.e., Ucar et al., 2019), we encourage future studies to directly test whether fair treatment increases feelings of control, which in turn reduces threat to the BJW.

The current study attempted to capture differences in the severity of victimization by categorizing crimes according to the criteria that have been proposed in the trauma literature. This method is somewhat limited as it did not take into account the subjective experiences of the victims themselves or the kinds of consequences (mental, physical, social, or financial) the crimes had for the victims. Some other studies chose to measure subjective perceptions of being victimized (Cubela Adoric & Kvartuc, 2007) or post-traumatic stress symptoms (Riaz et al., 2015). Future studies could focus on developing an instrument for measuring the impact of victimization on the victim. Such a measure could include objective indicators (e.g., crime type and its severity as characterized in our study) and subjective indicators (e.g., the material and physical losses a victim experienced, psychological difficulties, as well as the perceived level of victimization).

Conclusions

Despite these limitations, our study provides new findings on BJW by showing that it is not only retribution that can help to reduce the threat to the BJW but also fair treatment. This knowledge can be useful for the criminal justice system because not all crime cases are solved by the police, and sometimes perpetrators do not get what they deserve. In such cases, victims do not see justice being restored. Our study shows that fair treatment by authorities can help the victim, at least partly, to recover from the injustice they suffered.

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Appendix

Table 14

Factor Loadings of the Initial Factor Analysis of the CJP Variable

Item	1	2	3	4
During the interview with the police officer, I felt like I could express my opinions.			-0.61	
During the interview, I felt like I could ask questions.		-0.36	-0.56	
The police officer heard me out.			-0.65	
During the interview, I felt pressured to take back my accusation. (reverse coded)	0.45			
During the interview, the police officer raised his or her voice. (reverse coded)	0.67			
The officer treated me with respect.	0.55		-0.31	
The officer treated me ethically.			-0.81	
I felt like I was blamed for the crime. (reverse coded)			-0.58	
It looked like the officer already had his or her opinion about the case. (reverse coded)	0.61			
I think the officer's personal opinion had an impact on the decisions he or she made. (reverse coded)	0.45			
I think the officer was trying to act fairly.	0.40			-0.37
The officer treated me fairly.	0.59			-0.31
It looked like the officer was honestly trying to solve the case.	0.31			-0.57
The officer clearly and understandably explained my rights and duties to me.				-0.58
I understood my rights and duties.				-0.72
If needed, I would know how to use my rights.		-0.77		
I think the police officer truly cared about whether I understood my rights.		-0.90		
During the interview with the police officer, I felt like I could express my opinions.		-0.73		
During the interview, I felt like I could ask questions.		-0.72		

Note. Oblimin rotation extracted four factors with eigenvalues exceeding 1 (1.03, 1.20, 1.93, and 9.21) explaining 62.79% of the variance.

Table 15

GBJW Differences Between Victims Who Reported the Crime Versus Those Who Did Not

	b	***β***	**S.E.**	***t* value**
	R^2 = 0.03, F(7, 233) = 1.13, p > 0.05			
Intercept	3.42***		0.17	19.63
VS I	-0.38	-.15	0.36	-1.04
VS II	-0.48	-.22	0.30	-1.61
VS III	-0.12	-.06	0.23	-0.53
Report	0.04	.02	0.23	0.17
VS I*Report	0.15	.06	0.43	0.36
VS II*Report	0.44	.18	0.36	1.21
VS III*Report	-0.26	-.11	0.30	-0.85

Note. VS = victimization severity.

* p < .05. ** p < .01. *** p < .001.

Table 16

Experiences in CJP as Moderators of the Effect of VS on GBJW

	GBJW			
	b	***β***	**S.E.**	***t* value**
	R^2 = 0.14, F(7, 138) = 3.16, p < 0.05			
Intercept	3.21***		0.08	39.23
VS_dummy	0.20	.09	0.18	1.13
Procedural justice	0.00	0.00	0.12	-0.02
Trust and fairness	-0.07	-.07	0.12	-0.53
Informational justice	0.29***	.36	0.09	3.17
VS*Procedural justice	0.76*	.31	0.37	2.07
VS*Trust and Fairness	-0.21	-.07	0.34	-0.60
VS*Informational justice	-0.39	-.23	0.22	-1.77

Note. VS_dummy = dummy variable for VS. This variable was coded on the basis of the results presented in Table 10 where VS 0 but not VS III (as in PBJW) significantly differed from the non-victim group. In this case, VS 0 was compared with the rest of the victims.

* p < .05.** p < .01. *** p < .001.

Table 17

Experiences in CJP as Moderators of the Effect of VS on GBJW when country is included

	GBJW			
	b	***β***	**S.E.**	***t* value**
	$R^2 = 0.25$, $F(8, 137) = 5.84$, $p < 0.01$			
Intercept	2.84***		0.11	25.63
VS_dummy	0.17	0.08	0.17	1.03
Procedural justice	-0.09	-0.10	0.11	-0.77
Trust and fairness	0.08	0.08	0.12	0.64
Informational justice	0.27**	0.34	0.08	3.20
Country	0.66***	0.36	0.14	4.62
VS*Procedural justice	0.65	0.26	0.35	1.88
VS*Trust and Fairness	-0.06	-0.02	0.32	-0.20
VS*Informational justice	-0.38	-0.23	0.20	-1.85

Note. VS_dummy = dummy variable for VS. This variable was coded on the basis of the results presented in Table 10 where VS 0 but not VS III (as in PBJW) significantly differed from the non-victim group. In this case, VS 0 was compared with the rest of the victims.

* $p < .05$.** $p < .01$. *** $p < .001$.

List of measures used in the study:

1. Subjective well-being (World Health Organization Well-Being Index)
2. Legal rights that victim used during the criminal justice process
3. Crime time
4. Case stage
5. Perpetrator (known/unknown)
6. CJP in court
7. Satisfaction with the sentence
8. Satisfaction with the compensation

Chapter III

Study 2

A School Rampage Threatens Beliefs in Justice: A Longitudinal Study of the Belief in a Just World Among Chinese Adolescents

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Abstract

The current study examined whether and how severe injustice such as a school attack threatens the belief in a just world (BJW). We collected longitudinal data on the BJW from adolescents in China who witnessed random school attacks on the news (*N*=227). Change analyses provided evidence that the BJW increased after witnessing severe injustice. Furthermore, we tested for moderating effects of buffer variables such as life satisfaction and perceived social support on change in the BJW. Findings showed that these variables buffered the threat to the BJW after observing unfairness. We discuss these results in the context of justice motive theory and suggest implications for future research.

***Keywords*: belief in a just world, school attack, buffer variables, life satisfaction, social support**

Introduction

On March 23, 2010, Zheng Minsheng, a 42-year-old man, stabbed 13 children at the gate of a primary school in Nanping, Fujian Province. Eight of them died. In the 5 weeks that followed, more copycat killings happened in four other cities, and numerous children were killed or injured. These school attacks shocked the whole country. Officials ordered an increase in security at schools and nurseries, and the public security bureaus and judicial authorities called for severe punishment for such crimes. The attacks were widely publicized after the first set of killings; however, the news coverage was soon extinguished given the fears of further copycat killings (Steinmueller & Wu, 2011). Severe cases of unfairness such as these are rare, but in daily life, people are often confronted with some sort of injustice. Despite the unsettling nature of such events, most people manage to deal with them and maintain good mental health. According to Lerner (1980), resources for coping with such events are grounded in the fundamental illusion that the world is a fair place. He suggested that people need to believe that the world is a place where everyone gets what they deserve. In the face of injustice, people are motivated to sustain this belief (Lerner, 1980). But are people able to maintain their belief in justice even when they are exposed to extreme cases of injustice such as a school attack? Such attacks at schools seem to happen for no good reason, which leads victims, their families, and whole communities to various psychological consequences, including losing the sense that the world is a safe and predictable place (Jordan, 2003; Rosque, 2012). With the research presented in the current paper, we examined the effects of observing extreme unfairness on the belief in a just world (BJW).

Concepts of the BJW

The BJW has been theoretically conceptualized as both a general motive (Ellard, Harvey, & Callan, 2016) and a stable trait (Hafer & Sutton, 2016). Justice motive theory states that people

have a basic need for justice and therefore believe that the world is a fair place where people get what they deserve (Lerner, 1980). Rubin and Peplau (1975) were the first to propose that people differ in how strongly they believe in justice. They argued that the BJW is a trait that can be measured with self-report scales. Subsequently, it was suggested that the BJW can be decomposed into a personal BJW (PBJW) and a general BJW (GBJW) with the PBJW reflecting the assumption that the world is fair to the self and the GBJW reflecting the assumption that the world is fair to everyone (Dalbert, 1999; Lipkus, Dalbert, & Siegler, 1996). This distinction has found empirical support from studies demonstrating various differences between the two kinds of BJW. For example, the PBJW has been found to be correlated with mental health and psychological well-being (i.e., Correia, Kamble, & Dalbert, 2009), whereas the GBJW has been found to be associated with investments in future goals (i.e., Hafer & Rubel, 2015). Different correlates of the GBJW and the PBJW have been found in several cultures (i.e., Sendi, Ehteshamzadeh, Asgari, & Kafie, 2018; Wu et al., 2011). Thus, the GBJW and the PBJW should be measured and treated separately in empirical research.

Many empirical studies across the world have been devoted to the BJW since the pioneering work of Lerner (1980; i.e., Dalbert & Sallay, 2004; Donat, Dalbert, & Kamble, 2014; Wu et al., 2011). However, researchers still discuss whether the BJW reflects a motivated belief or whether a descriptive summary of a person's justice-related experiences and observations (Hafer & Sutton, 2016; Schmitt, 1998). Despite this unresolved question, ample studies have provided evidence that both – the GBJW and the PBJW – have great importance for people's well-being and adaptive functioning in a society. A number of studies have demonstrated that people with a strong PBJW and GBJW tend to act more fairly, less aggressively and commit illegal behavior less frequently than people with a weak PBJW and GBJW (Cohn & Modecki, 2007;

Correia & Dalbert, 2008; Dalbert, 2002; Donat et al., 2014; Stupnianek & Navickas, 2019). People with a strong PBJW also tend to be committed to long-term goals because they believe they will be awarded for their efforts and persistence (Hafer, Begue, Choma, & Dempsey, 2005; Hafer & Rubel, 2015). Next, people with a strong PBJW also tend to show better adjustment to life atrocities, have better mental health, and have higher satisfaction with life (Correia & Dalbert, 2007; Swickert, Deroma, & Saylor, 2004). The adaptive function of the GBJW and the PBJW was observed not only in Western societies but also in collectivistic (Xie, Liu, & Gan, 2011; Wu et al., 2011) and Muslim cultures (Sendi et al., 2018). Thus, it seems that the BJW is a fundamental resource that helps human beings maintain their psychological well-being and thrive.

The functions and correlates of the PBJW and GBJW seem to be similar across cultures but not identical. Specifically, some differences have been observed between individualistic and collectivistic cultures. Wu et al. (2011; Wu, Pan, Wang, & Nudelman, 2016) found that GBJW was stronger than the PBJW in collectivistic cultures, whereas the opposite pattern has typically been observed in individualistic cultures (Bégue & Bastounis, 2003; Dalbert, 1999; Lipkus et al., 1996). In a study conducted in China, GBJW and PBJW were both related to better mental health outcomes (Wu et al., 2011). By contrast, mental health outcomes in individualistic cultures seem to be specifically related to PBJW but not to GBJW (Dalbert, 1999; Dzuka & Dalbert, 2007). These differences might be rooted in cultural fundamentals. According to Taoism, the outside world is fair and should be accepted the way it is. Chinese people say that any efforts will be rewarded; thus, when people experience various atrocities in life, they should not worry because they will be rewarded eventually for their suffering (Wu et al., 2011). It is possible that this philosophy of life, which is common in collectivistic cultures, can explain the stronger GBJW and its adaptive function in these cultures in comparison with individualistic cultures. Consistent with this idea, a

study of survivors of an earthquake conducted by Wu et al. (2011) showed that GBJW and PBJW were both related to life satisfaction. However, only GBJW, but not PBJW, predicted psychological resilience. Additionally, the GBJW of the affected people was stronger than the GBJW in the general population, whereas the PBJW did not differ between the two groups (Wu et al., 2011).

BJW in the Face of Injustice

Wu et al.'s (2011) finding suggests that dealing with experienced injustice can boost the BJW, at least the GBJW, in collectivistic cultures. In fact, some research has been devoted to the question of what happens to the BJW of a person when that person is faced with injustice (i.e., Corey, Troisi, & Nicksa, 2015). Lerner (1980; 1997) claimed that people need to believe that the world is fair because it carries important functions. Specifically, BJW provides comfort to an individual by allowing the person to believe that suffering strikes only those who deserve it, thus releasing the fear that it might happen to oneself. When this illusion is threatened by observing the suffering of innocent victims (or some other unfairness), individuals tend to employ defense mechanisms to protect it (Lerner, 1997; Maes, 1994; Ryan, 1971). Successful defense of the BJW might boost it, i.e., make it even stronger than it was before injustice was observed (Hafer & Rubel, 2015).

Several studies have shown that observing injustice threatens the BJW (i.e., Hafer, 2000, see Hafer & Begue, 2005, for a review). For example, after observing an innocent victim, it took participants in Hafer's (2000) modified Stroop test longer to identify the colors of justice-related words than the colors of neutral ones. Furthermore, Stroop interference was correlated with derogating the innocent victim, a typical strategy used to reestablish justice when it is not feasible to provide compensation to a victim. The results of this and similar studies (i.e., Correia, Vala, &

Aguiar, 2007; Stel, van den Bos, & Bal, 2012) can help extend the understanding of how people cope with observed injustice. However, because these studies were experimental studies conducted in lab settings, one should be cautious about generalizing their results to observations of real-life injustice. Moreover, these studies did not examine what happens to the BJW after it was threatened. Consequently, the examination of effects of injustice observed in real-life situations on the BJW should be the goal of further research. The present study pursues this goal by implementing a longitudinal approach to measure changes in the BJW in reaction to witnessing a school attack.

If the BJW indeed changes in reaction to a severe case of injustice, what psychological mechanism might explain this change? Like other fundamental assumptions people hold, the BJW has been conceived of as a cognitive schema that interacts with perception, cognition, motivation, and behavior (Janoff-Bulman, 1992). Occurrences that deviate from a schema generate cognitive dissonance, which can be resolved either by assimilating the occurrence into the schema or by accommodating the schema to fit the occurrence. Whenever an undesired outcome that results from an occurrence, such as injustice, cannot be changed, assimilation via motivated reasoning rather than accommodation will be employed to resolve the dissonance. Assimilation is especially likely to occur if a schema is motivationally entrenched and is a core component of the self (Kunda, 1990). According to some authors (Hafer & Rubel, 2015; Piaget, 1976), any successful resolution of cognitive dissonance between a schema (BJW) and an occurrence (injustice) will strengthen the schema. Considered jointly, these conjectures lead to the expectation that the BJW will be strengthened when an assimilated incidence of injustice is severe and justice cannot be completely restored. It is likely that both of these conditions are met in the case of school shootings as the degree of injustice is pronounced and a full compensation of victims is not possible.

Incidents of injustice differ not only in their severity and in how easily justice can be restored but also in the degree of threat they pose to observers and the observers' BJW. When all else is equal, the more threat an observed injustice involves, the stronger an observer's need will be to engage in motivated assimilation. At least three factors contribute to the severity of a threat. First, injustice caused by humans, such as a school shooting, is perceived as more threatening than injustice inflicted by nature, such as an earthquake (Janoff-Bulman, 1992). Second, the similarity between and the shared group membership of victims and observers work to increase threat (Aguiar, Vala, Correia, & Pereira, 2008). Both of these conditions are met in the case of a school shooting when the victims and observers are both students. Third, witnessing injustice directly is more threating than learning about it indirectly via the media. This condition (i.e., directly witnessing injustice) was not met in our study. However, in some school-rampage studies (Jordan, 2003; Rosque, 2012), students who attended school when a rampage happened at their school were considered victims even when they were not directly injured. Similarly, observers who imagine that the same event could happen at their school—from watching the news—can be expected to feel a considerable level of threat.

Stress Buffers

Subjective well-being (Lyubomirsky, King, & Diener, 2005) and social support (Schacter & Margolin, 2019) have been found to be related to adjustment and coping in threatening situations. It seems plausible to assume that they also provide resilience in situations where the person is not directly threatened but observes a threat faced by someone else such as a victim of injustice. If this were the case, subjective well-being and social support would serve a similar function as the BJW. Subjective well-being and social support are both related to the BJW. However, how they interact under threat has not yet been examined (Correia, Batista, & Lima,

2009; Correia et al., 2009; Desrumaux, Gillet, & Nicolas, 2018; Dumont & Provost, 1999; Dzuka & Dalbert, 2007; Wu et al., 2011).

Subjective Well-Being

Subjective well-being (i.e., affective reactions and cognitive judgments about one's life; Diener, Oishi, & Lucas, 2009) has mostly been conceptualized and investigated as a consequence of stress (i.e., Diener, Suh, Luca, & Smith, 1999; Winkelmann, 2009). However, another line of research has focused on how happiness in general can affect the experience of stress (i.e., Lyubomirsky et al., 2005; Schiffrin & Nelson, 2010). According to stress coping models such as Folkman and Moskowitz's (2000) model, positive emotions can contribute to a person's ability to cope with stress by altering the interpretation of a stressful situation in a positive way. Positive affectivity has been proposed to also broaden the range of possible actions that can be used to deal with the situation, and via this, may contribute to coping resources (Fredrickson, 1998). Some studies have provided support for these ideas (Ong et al., 2006; Suldo & Hueber, 2004). For example, Ong et al. (2006) found that positive affect can buffer daily stress and contribute to resilience against the negative consequences of stress (Ong et al., 2006). Negative affect, on a contrary, was found to be related to greater vulnerability to stressful life events (Zautra, Smith, Affleck, & Tennen, 2001). Life satisfaction (i.e., the cognitive component of subjective well-being) was also found to buffer stress as it is considered to reflect a positive appraisal style (Lazarus, 1991; Suldo & Hueber, 2004). These findings support Lyubomirsky, King, and Diener's (2005) claim that not only do people feel good when good things happen to them but also that good things happen to them because they are happy, or at least they perceive the things that happen to them as good.

Several BJW studies have considered life satisfaction as an outcome of the BJW (e.g. Correia & Dalbert, 2007). However, most of these studies were correlational. An experimental study of Correia, Batista, and Lima (2009) showed that there is a reciprocal relationship between these two constructs. In a series of experiments, the authors manipulated either subjective well-being or BJW and observed whether one changed in response to manipulated changes in the other. While no relation was found between the affective component of well-being and the BJW, the BJW had a reciprocal relationship with the cognitive component of well-being – life satisfaction. When the BJW was bolstered, life satisfaction increased. When life satisfaction was bolstered, the BJW increased (Correia, Batista, & Lima, 2009). Hence, when people are satisfied with their lives, they also tend to believe that the world is fair. And when people believe that the world is fair, they also tend to be satisfied with their lives.

Social Support

Resources for coping with stress cannot only be located in the person as is the case for subjective well-being. Coping resources can also be located in a person's environment. Notably, other people can provide resources for coping with stress. According to Lazarus' (1966, 1991) stress appraisal model, an individual will experience stress in a threatening situation if he or she feels unable to deal with it. Cohen and McKay (1984) proposed that in threatening situations, the social environment can function as a coping resource by providing information on how the situation can be managed or by confirming that failing to deal with the stressor is not that important. Therefore, many researchers have claimed that social support is important for coping with stressful situations (Cobb, 1976; Cohen & McKay, 1984; Feeney & Collings, 2015; Prati & Pietrantoni, 2009; Schumaker & Brownell, 1984; Zimet, Dahlem, Zimet, & Farley,1988). This claim has received empirical support from studies showing that caring, nonsexual physical touch

(such as a hug) and perceived social support can act as buffers against the negative effects of diseases. People who receive social support during stressful times are less prone to getting sick (e.g., catching a cold) compared with those who do not receive social support and physical touch (Cohen, Janicki-Deverts, Turner, & Doyle, 2015). A recent diary study analyzed the role of parental and peer support for the well-being of adolescents (Schacter & Margolin, 2019). Adolescents who felt more supported by their friends and family across a 2-week period during the study felt happier and more socially connected than those who felt less socially supported. On the days when they felt more supported, they also felt happier and more socially connected than on the days when they were less socially supported. The study also revealed that support from both peers and family can compensate for each other when one of the sources is not present to help maintain the target person's well-being (Schacter & Margolin, 2019).

Because unfair situations imply threat, social support can be expected to buffer unfavorable effects of injustice like the BJW does. While empirical support for this expectation exists (Desrumaux, Gillet, & Nicolas, 2018), it is not yet clear how social support and the BJW interact and interdepend when a person is exposed to injustice. It seems plausible to assume that supportive others can provide new meaning to threatening events and reassure the threatened person that justice will prevail. Such a process would attenuate the threat that perceived injustice puts on the BJW and help to maintain it.

The Current Study

The current study was aimed at analyzing how the BJW changes after an observed injustice such as a school attack. In contrast to previous research, our research employed a longitudinal design in which the BJW was measured before and after exposure to a severe case of injustice, specifically, the school attacks in China. A number of terrible events happened at Chinese schools

in Spring 2010 (see our introductory report) right after we had measured the BJW in several schools. The original aim of the data collection was to explore the relationship of the BJW with an array of other variables, including the buffers against stress we discussed earlier. Thus, the shocking events had not been foreseen. From a research perspective, they provided a unique opportunity for us to examine the research questions we pose in this paper: How does the BJW change after observing a terrible adversity, and how does this change depend on the availability of stress buffers? To answer these questions, we decided to come back to the schools after the attacks and measure the BJW a second time. Note that none of the students in our sample were injured in the attacks. They saw the attacks on the news. Thus, these students were not direct victims but observers. However, observing injustice, especially a severe injustice that happens to people who are similar to oneself, can be a severe threat and can challenge the BJW.

Given that observed injustice threatens the BJW and increases the need to defend it, and also given that a successful defense can boost the BJW (Hafer & Rubel, 2015), we expected that the BJW would increase after observing an injustice. Additionally, given that social support and subjective well-being act as buffers in threatening situations, they might also reduce a threat to the BJW. We expected that an increase in the BJW in response to an injustice would be smaller among individuals with high levels of social support and life satisfaction and larger among individuals with low levels of social support and life satisfaction.

Our literature review suggested functional differences between the PBJW and the GBJW. Therefore, one might expect different changes in the two kinds of just world beliefs in reaction to an injustice as well. However, studies in China found that the GBJW and the PBJW played similar adaptive roles in determining an individual's well-being (Wu et al., 2011; Wu et al., 2016). Therefore, we refrained from specifying different hypotheses for the GBJW and the PBJW.

Materials and Methods

Participants

The questionnaires that we used in our study were administered to 239 students at two schools in two areas of China: Yunxi county (105 participants) and Beijing city (134 participants). Data from 11 students were incomplete due to nonparticipation in the first wave, whereas one participant was present for the first wave but not the second one. These 12 cases were excluded from our analyses. The final sample (N = 227) consisted of 116 (51.1%) male and 111 (48.9%) female adolescent participants. More than half of them (54.6%) were from the metropolitan city of Beijng, whereas the rest (45.4%) were from an impoverished area (i.e., Yunxi). Students' average age was 13.10 years (SD = 0.82) and ranged from 10 to 17 years.

Procedure

The first measurement of the BJW and buffer variables[1] took place between November 2 and November 6, 2009. The data collection was conducted in a civic education course about mental health, and the questionnaire was distributed and returned in the classroom. A written consent form was obtained from participants and their guardians, and this protocol was approved by the Institutional Review Board at the Institute of Psychology, Chinese Academy of Sciences. The participants were given a small gift (e.g., a pencil or four issues of a weekly newspaper about middle school students' health) as a reward.

The second measurement took place between May 10 and May 14, 2010, which was after the shootings had occurred. To increase the salience of the events, at the beginning of the second round of data collection, we asked students to read some information we provided about crime

[1] Along with measurements of buffer variables, the questionnaire included measurements of Big 5 personality factors, mental health, resilience, positive and negative affectivity, empathy, perpetrator punishment, and victim-blaming, however, these variables were not used in a current study.

news, including six brief stories (about 400 words in total) related to the recent school attacks. Stories did not include information about the prosecution of the perpetrators. After students had read the stories, we checked their levels of distress by asking them to answer three questions about how they felt about the events (i.e., "The school attacks scared me"). Items were rated on a Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) ($\alpha = .59$). After the distress check, participants were asked to fill out a questionnaire that contained our scales and questions about their world views and attitudes (see the Measures section). After the study, participants were debriefed and were provided opportunities to openly discuss their ideas and what they could do with their teachers and psychologists. After the study was completed, the educational program for safety at school took place.

Part of the data set was already used in a paper published by Wu and Cohen (2017). This study used only data from Beijing with the purpose of testing relationships between the GBJW, empathy, experienced distress, and perpetrator punishment. The current study added the data from the Yunxi area to the data set and examined relationships between the BJW and other variables. Specifically, empathy and perpetrator punishment were not relevant for testing the hypotheses from the present paper.

Measures

BJW was measured with Chinese versions of the General Belief in a Just World Scale (Dalbert, Montada, & Schmitt, 1987) and the Personal Belief in a Just World Scale (Dalbert, 1999). The General Belief in a Just World (GBJW) Scale contains six items (e.g., "*I think basically the world is a just place*"). The Personal Belief in a Just World (PBJW) Scale includes seven items (e.g., "*I believe that, by and large, I deserve what happens to me*"). Participants evaluated every item on a 6-point Likert scale ranging from 1 (*completely disagree*) to 6 (*completely agree*). The

Chinese versions of these scales were previously used in Chinese samples and were found to have scale properties similar to the German originals (Wu et al., 2011). The internal consistencies in our study amounted to $\alpha = .75/.77$ for the GBJW Scale and $\alpha = .81/.83$ for the PBJW Scale before/after the school attacks.

Perceived social support was measured with a Chinese version of the Multidimensional Scale of Perceived Social Support (Zimet et al., 1988). The scale includes 12 items rated on a 7-point Likert scale, which are divided into three subscales: family, friends, and a significant other. An example item is: "*My family really tries to help me*." The internal consistency of the total scale was $\alpha = .89$ in our study.

Subjective well-being was measured with the Satisfaction With Life Scale (Diener, Emmons, Larsen, & Griffin, 1985), which assesses global life satisfaction. The scale contains five items (e.g., "*In most ways my life is close to my ideal*") which are rated on a 7-point Likert scale from 1 (*strongly disagree*) to 7 (*strongly agree*). The internal consistency of the scale was $\alpha = .68$ in our study.

Results

The data were analyzed with IBM SPSS 25 and Mplus 8.

Descriptive Statistics

Table 1 provides descriptive statistics for the PBJW and GBJW before and after the school attacks and descriptive statistics for the buffer variables measured only at the first measurement occasion but not at the second. In line with previous studies in China, the GBJW was stronger than the PBJW. Both the PBJW and GBJW were stronger after the school attacks than before them.

Correlations between all variables are provided in Table 2. Results showed that all variables that were included in further analyses were significantly correlated with each other. The

PBJW and GBJW were strongly correlated with each other at the same measurement occasion (i.e., before and after the school attacks). The stability of both the PBJW and GBJW was low, suggesting substantial rank-order changes over the time period under consideration. All buffer variables were significantly correlated with all BJW measurements. The personal stress of the school attacks was not correlated with the PBJW and GBJW at either measurement occasion except for a small correlation with the GBJW at the first measurement occasion.

Table 1

Means, Standard Deviations, and Ranges for the General and Personal BJW, Before and After the School Attacks, and Buffer Variables

	N	Min	Max	*M*	*SD*
GBJWpre	226	1.17	6.00	4.40	0.95
GBJWpost	227	1.33	6.00	4.55	0.94
PBJWpre	226	1.00	6.00	4.09	1.02
PBJWpost	227	1.00	6.00	4.19	0.98
Perceived Social support	227	2.50	6.00	4.70	0.85
Life satisfaction	225	1.00	6.00	3.95	1.01
Personal stress	221	1.00	5.00	3.53	0.92

Note. GBJWpre = General belief in a just world before the school attacks; GBJWpost = General belief in a just world after the school attacks; PBJWpre = Personal belief in a just world before the school attacks; PBJWpost = Personal belief in a just world after the school attacks.

Table 2

Correlations between the General and the Personal BJW, Before and After the School Attacks, and the Buffer Variables

	1	2	3	4	5	6	7
1 PBJWpre	1						
2 GBJWpre	.70***	1					
3 PBJWpost	.42***	.38***	1				
4 GBJW post	.26***	.33***	.74***	1			
5 PSS	.49***	.64***	.23***	.22**	1		
6 LS	.57***	.60***	.32***	.25***	.51***	1	
7 Stress	.09	.16*	.03	.06	.19**	.03	1

Note. GBJWpre = General belief in a just world before the school attacks; GBJWpost = General belief in a just world after the school attacks; PBJWpre = Personal belief in a just world before the school attacks; PBJWpost = Personal belief in a just world after the school attacks; PSS = perceived social support; LS = life satisfaction.

*$p \leq .05$. **$p \leq .01$. ***$p < .001$.

Effects of Observed Injustice on the BJW and the Moderating Effects of Buffer Variables

In order to test the hypotheses that postulated that the BJW would change in reaction to an observed injustice and that these changes would be moderated by stress-buffering variables, we specified a multilevel multivariate model for a within-subject pre/post design with two occasions of measurement, as proposed by Lischetzke, Reis, and Arndt (2015). The multilevel multivariate model analysis enabled us to capture fluctuations in the dependent variable (i.e., BJW) in response to an intervention (i.e., the observed school attacks in China) and to test for the moderating effects of person-level variables (i.e., buffer variables).

Before testing for the moderating effects of the buffer variables, we tested a model with a dummy variable for the occasion of measurement (post-attack vs. pre-attack) in order to check

whether the observed school attacks had an effect on changes of the GBJW and the PBJW. Table 3 shows that the dummy variable had a significant positive effect on the GBJW, which means that it increased from the first to the second measurement occasion. The changes in the PBJW were not significant.

Table 3

Effects of Observed Injustice on the PBJW and GBJW

	GBJW				**PBJW**			
	b	**S.E.**	**Est./S.E.**	***p***	**b**	**S.E.**	**Est./S.E.**	***p***
Intercept	4.396	.063	69.725	.000	4.095	.068	60.507	.000
Post	0.157	.073	2.160	.031	0.099	.071	1.384	.167

Note. GBJW = general belief in a just world; PBJW = personal belief in a just world; Intercept = GBJW/PBJW score before the school attacks; Post = the change in GBJW/PBJW after the school attacks (predicted difference between post- and pre-school-attack measurements)

To further analyze whether the two buffer variables subjective well-being and social support moderated the effect of observed injustice on the GBJW and the PBJW, we added these buffer variables to the model simultaneously. The results are reported in the Table 4.

Table 4

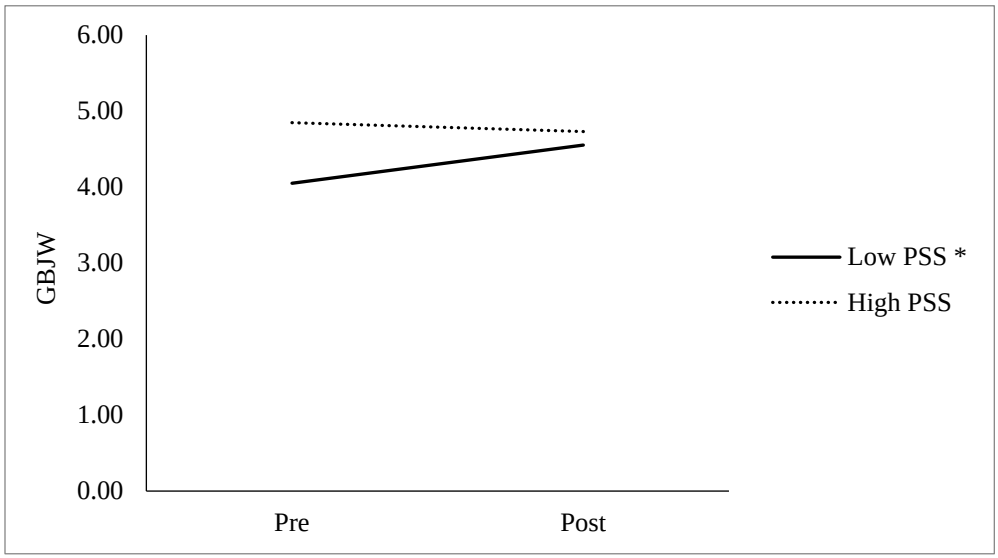
Moderating Effects of Life Satisfaction and Perceived Social Support, and their Interactions on GBJW and PBJW

	GBJW				PBJW			
	b	S.E.	Est./S.E.	*p*	b	S.E.	Est./S.E.	*p*
Intercept	4.44	0.05	89.09	.00	4.10	0.06	68.13	.00
Social support	0.52	0.06	8.60	.00	0.35	0.07	4.78	.00
Life satisfaction	0.36	0.05	6.99	.00	0.43	0.06	6.94	.00
PSS x LS	-0.10	0.05	-1.76	.08	0.01	0.07	0.19	.85
Post	0.14	0.08	1.79	.07	0.11	0.08	1.36	.17
Social support	-0.36	0.09	-3.94	.00	-0.22	0.10	-2.36	.02
Life satisfaction	-0.19	0.08	-2.49	.01	-0.17	0.08	-2.14	.03
PSS x LS	0.06	0.08	0.75	.45	-0.03	0.09	-0.33	.74

Note. GBJW = general belief in a just world; PBJW = personal belief in a just world; Intercept = GBJW/PBJW score before school attacks; Post = the change in GBJW/PBJW after the school attacks (predicted difference between the post- and pre-school-attack measurements); PSS x LS = interaction between perceived social support and life satisfaction; Social support/Life satisfaction/PSS x LS = effect of buffer variables and their interactions on the GBJW/PBJW scores before the school attacks (Intercept) and on the change in the GBJW/PBJW after the school attacks (Post). Buffer variables were centered on the grand mean.

Figure 1

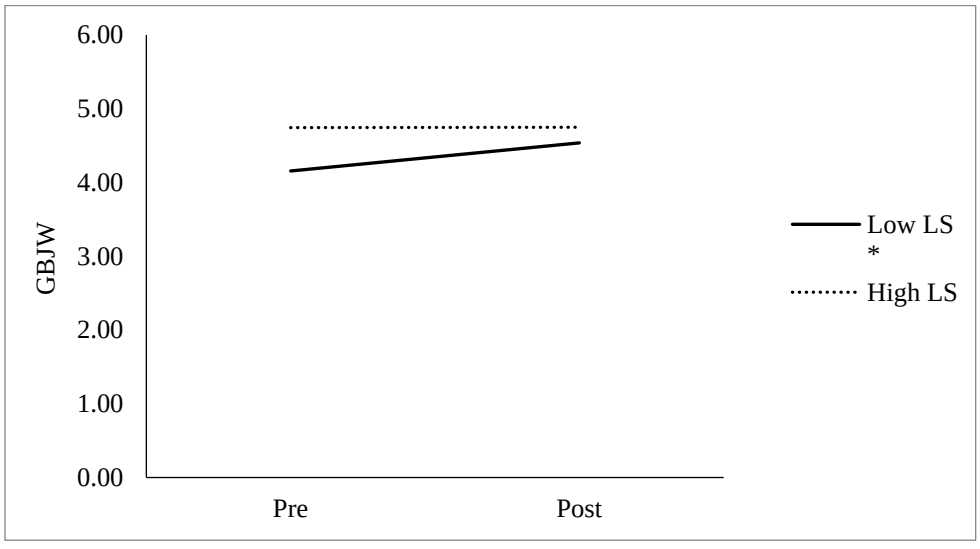
Moderating effects of perceived social support on the GBJW. PSS = perceived social support; Pre = GBJW before the school attacks; Post = GBJW after the school attacks



*the change in GBJW between the pre and post school attack occasions when PSS was low (M – 1 SD) was significant (p = .000).

Figure 2

Moderating effects of life satisfaction on GBJW. LS = life satisfaction; Pre = general BJW before the school attacks; Post = GBJW after the school attacks



*the change in GBJW between the pre and post school attack occasions when LS was low (M – 1 SD) was significant (p = .001).

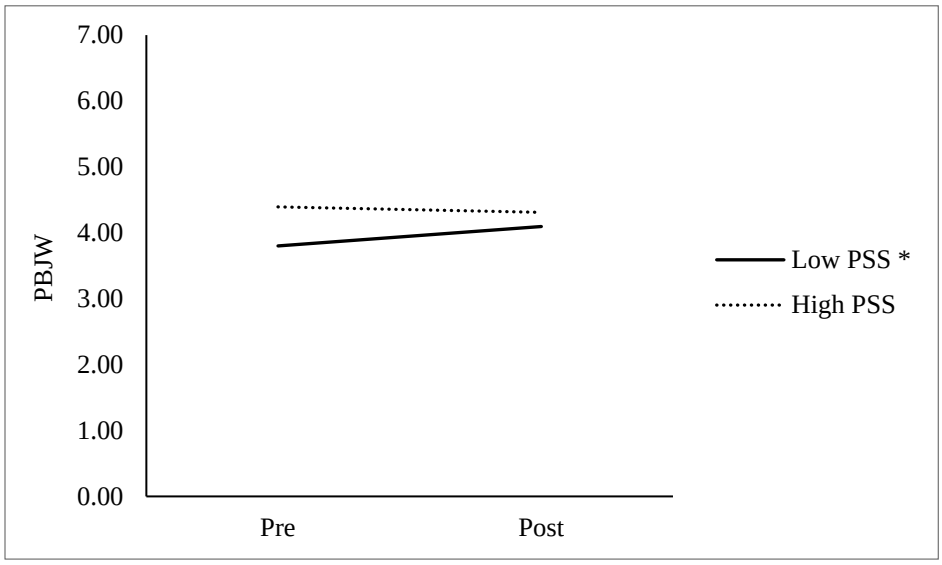
Table 4 shows that perceived social support and life satisfaction were significant moderators of changes in the GBJW and PBJW with social support being the stronger moderator. The moderating effects were negative, which means that with stronger social support and higher life satisfaction, the changes in the GBJW and PBJW were less pronounced.

Figure 1 illustrates that the GBJW of participants with weaker perceived social support increased after the school attacks, whereas the GBJW of participants with stronger perceived social support decreased after the school attacks, albeit to a slightly lower extent. The change of GBJW for participants with low perceived social support (see Figure 1) was significant (b = 0.441; S.E. = 0.107; Est./S.E. = 4.120, p = .000), while for participants with high perceived social support – insignificant (b = -0.172; S.E. = 0.110; Est./S.E. = -1.560, p = .119).

The same pattern was found for life satisfaction (see Figure 2). The change of GBJW for participants with low life satisfaction was significant (b = 0.328; S.E. = 0.107; Est./S.E. = 3.074, p = .02). The change of GBJW for participants with high life satisfaction was insignificant (b = -0.058; S.E. = 0.110; Est./S.E. = 0.525, p = .60).

Figure 3

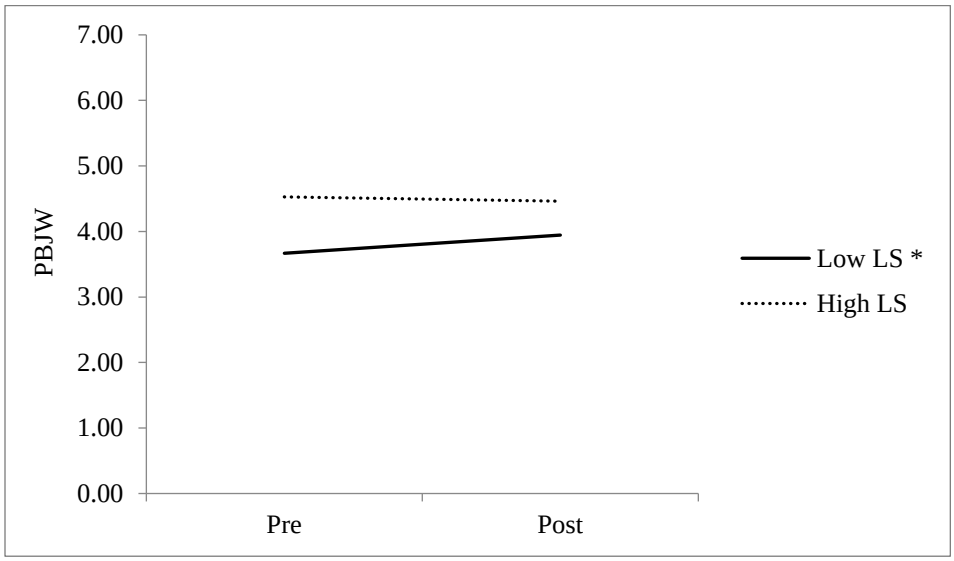
Moderating effects of perceived social support on the PBJW. PSS = perceived social support; Pre = PBJW before the school attacks; Post = PBJW after the school attacks



*the change in PBJW between the pre and post school attack occasions when PSS was low (M – 1 SD) was significant (p = .010).

Figure 4

Moderating effects of life satisfaction on the PBJW. LS = life satisfaction; Pre = PBJW before the school attacks; Post = PBJW after the school attacks



*the change in PBJW between the pre and post school attack occasions when LS was low (M – 1 SD) was significant (p = .010).

Similar effects were found for PBJW. Figure 3 shows that the PBJW increased with low levels of perceived social support (b = 0.294; S.E. = 0.110; Est./S.E. = 2.674, *p* = .007). However, when perceived social support was high the change of the PBJW was insignificant (b = -0.083; S.E. = 0.113; Est./S.E. = -0.734; *p* = 0.463). Life satisfaction had similar effects as perceived social support (see Figure 4). For the participants who had low life satisfaction, PBJW increased significantly (b = 0.272; S.E. = 0.110; Est./S.E. = 2.516, *p* = .012), whereas for the participants who had high life satisfaction, the change in PBJW was not significant (b = -0.065; S.E. = 0.113; Est./S.E. = -0.574, *p* = .566).

Discussion

The current study contributes valuable results to research on the BJW. Hafer and Rubel (2015) proposed that observing unfairness is threatening to the BJW. Under such a threat people are motivated to defend the BJW. If defense is prosperous, BJW can be reinforced. Previous studies examined what conditions threaten BJW and what kind of defense strategies people employ (e.g. Hafer, 2000). However, what happens to the BJW itself when it is threatened, is not fully examined, partly because most studies were cross-sectional. Some previous studies examined how BJW is affected by experienced injustices. For example, Corey, Troisi, and Nicksa (2015) found elevated levels of the BJW in severely victimized individuals in comparison with non-victimized individuals. Wu et al., (2011) compared BJW of individuals who were directly exposed to the earthquake and people who were unaffected by it. In contrast to these cross-sectional studies, we were able to measure the BJW before and after participants observed severe injustice inflicted by school attacks. Our data showed that after observing severe random injustice that happened to ingroup individuals, the average BJW increased (GBJW) or remained on the same level as before injustice was observed (PBJW). These results support the idea that when BJW is threatened, defense strategies can stabilize or even boost it. This result is consistent with findings of some

previous studies that examined BJW among people who have been victimized (Corey et al., 2015; Wu et al., 2011).

In order to test the idea that a threat to the BJW after observing injustice has different effects depending on the coping resources individuals have at their disposal, we analyzed moderating effects of buffer variables on changes in the BJW. The results showed that when severe injustice such as a school attack was observed, the GBJW increased only for participants with low life satisfaction and social support, whereas it did not change with high life satisfaction and social support. These findings are consistent with theoretical assumptions made by some scholars that when people are happy and satisfied with their lives in general, they tend to interpret threatening events less negatively (i.e., Suldo & Hueber, 2004). Applied to our study, participants with high life satisfaction interpreted events as less threatening to the GBJW than participants with low life satisfaction and thus did not need to defend it which resulted in no change in GBJW after observed unfairness. These results are in line with Correia et al. (2009) findings, which showed that not only that BJW contributes to the life satisfaction, but that life satisfaction also contributes to the BJW. Social support is another resource for managing threat (Cohen & McKay, 1984). Accordingly, when this resource of stress management was absent, participants experienced more threat to the GBJW and engaged in its defense which resulted in boosted GBJW.

The PBJW on average did not change after observing the school attacks in our study. Previous studies have often related it to personally experienced rather than observed injustice (i.e., Correia et al., 2009); thus, our results seem to be consistent with previous findings. However, this conclusion is challenged by the moderator effects of life-satisfaction and social support that we found and that were similar in direction to those for the GBJW. Participants who reported a low life satisfaction and a low social support reported significantly higher PBJW after school attacks.

This pattern implies that the observed injustice did not only threaten the GBJW but also the PBJW. Life satisfaction and social support have been found to be related to a more positive appraisal style and better coping with threats (Lazarus, 1991; Suldo & Hueber, 2004; Cohen & McKay, 1984). It seems possible that participants with low life satisfaction and low social support lacked sufficient resources to cope with the observed school attacks that seemed to be a threat not only to the world as such but also to their personal worlds. This threat increased the need to defend the PBJW for individuals lacking other coping resources and resulted in boosted PBJW.

Limitations and Future Research

Our study provides valuable insights into the dynamics of the BJW; however, some limitations need to be outlined. A first and important issue is the applicability of BJW scales in a collectivistic culture. We divided the BJW into a personal component and a general component as recommended in previous work (Dalbert, 1999). However, an exploratory factor analysis with all BJW items did not show a clear two-factor structure for the items. This result differs from studies conducted in individualistic cultures (cf. Dalbert, 1999). This difference in the factor structure of the PBJW and GBJW items might reflect a cultural difference as well as developmental changes as the participants in the present study were younger than the participants of previous studies from individualistic cultures. In adult Chinese samples, Wu et al. (2011) found different effects for the PBJW and GBJW compared with studies that were conducted in Western societies (cf. our literature review above). These findings suggest cultural differences that might also explain why the PBJW and GBJW could not be clearly separated in our sample. On the other hand, some authors have proposed that the BJW can be differentiated into the PBJW and GBJW in the late stages of child development (Dalbert & Sallay, 2004). Accordingly, the age of our participants also could have contributed to the one-dimensional structure of the BJW items. Additional

analyses of studies in individualistic cultures (e.g., Portugal) with similar aged samples also showed no clear two-factor scale structure (Correia & Dalbert, 2007; Correia & Dalbert, 2008; Correia et al., 2009). Unfortunately, we are not aware of a study that directly pitted the two explanations against each other by using age heterogeneous samples from individualistic and collectivistic cultures. Solving this ambiguity remains a task for future research.

Until such important research has been conducted, the results of our study cannot be generalized across cultures or age groups. As mentioned earlier, the fundamental beliefs of the Chinese culture differ from those of individualistic cultures (Wu et al., 2011; Wu et al., 2016) where most of the BJW studies have been conducted. Thus, the fluctuations observed in the BJW after observed injustice should be tested in individualistic countries. Importantly, these studies should employ the same kind of longitudinal design we employed in the present research. We are fully aware of the challenge this request implies. From a scientific point of view, we were fortunate to have measured the BJW before a severe injustice that could not be foreseen. Instead of waiting for a similar severe case of injustice in an individualistic country, future research on the BJW might turn to quasi-experimental designs with vulnerable samples such as people who might lose their jobs due to economic developments in their region or to large-scale political changes such as Brexit, which may affect many citizens in the UK and especially citizens from other EU countries.

Against our theoretical reasoning and expectations, stress did not moderate change in the BJW. At least three factors might be responsible for this finding. First, the reliability of the stress measure was low, which can attenuate correlations and regression effects. Second, stress as we measured it was presumably an immediate response to the crime and school shooting reports the students were given to read. This acute stress reaction might not be a good reflection of the threat students felt during the weeks that passed between the time when the shootings occurred and the

time when stress was assessed. To the extent that this possibility is correct, our stress measure lacked construct validity as a measure of threat felt after and due to the shootings. Accordingly, BJW might have changed in reaction to the threat felt after the school shootings and not in reaction to the stress felt after reading reports about crimes and shootings. Third, Correia et al. (2009) varied mood experimentally, checked whether BJW changed in reaction to this manipulation, and found that it did not change. Although the emotional nature of the negative mood induced in the Correia et al. (2009) study might not be identical to the stress induced by the reports used in our study, the two studies converge in that neither found an effect of acute negative emotion on BJW. This observation suggests that threat felt over a longer period of time was responsible for the BJW changes we observed.

The current study did not account for the area participants were living in. There is reason to believe that different buffer variables might play different roles for individuals living in a metropolitan city versus a rural area. Life in cities and life in rural areas provide different resources; for example, social support might be more available for individuals living in rural areas, whereas city life seems to be more autonomous and independent. Thus, in a city, social support might play no role in moderating changes in the BJW. On the other hand, the big city provides other resources, such as immediate professional help, which can also contribute to changes in the BJW. We acquired information about the residences of our participants. However, residency (rural vs. urban) had no effect on changes in BJW. The meaning of this result is unclear because residency is confounded with proximity to the shootings, which could also have affected changes in the BJW due to differences in the level of threat. Teasing apart unique effects of area of residency and proximity is not possible because of this confound. Deeper analyses on how different living areas might be related to coping resources will require additional research.

Finally, although our longitudinal design enabled us to measure the BJW before and after extreme unfairness, one should be cautious about drawing firm causal conclusions because other potential causes for the observed changes in the BJW were not controlled for. For example, reactions to the unfairness can contribute to the BJW threat. Such measures as perpetrator punishment and victim compensation tend to reduce a threat to the BJW and serve as confirmation of the BJW. Therefore, these conditions should be taken into account in future studies.

Implications

The results of our longitudinal study suggest that people assimilate severe cases of injustice into their BJW. According to Hafer and Rubel (2015), the increase in the BJW we observed in response to injustice suggests that the BJW as a cognitive schema was reinforced. In line with previous research on the psychological functions of the BJW, this reinforcement of the BJW is an adaptive response that can compensate for other coping resources, such as social support. However, the BJW has been characterized as a double-edged sword (Montada, 1998). It helps individuals feel safe, but sometimes it does so at the expense of others' welfare. We make this claim because because several studies have shown that in view of severe violations of justice that cannot be relieved via perpetrator punishment or victim compensation, observers of injustice tend to blame the victims (Maes, 1994; Ryan, 1971). This phenomenon has been called secondary victimization. Our results suggest that secondary victimization will be less likely among observers who enjoy high levels of life satisfaction and social support.

These findings have practical implications. In cases in which blaming victims has significant consequences for these victims (e.g., victims of rape or severe crimes), interventions aimed at bolstering observers' well-being and perceived social support will decrease the risk of secondary victimization. Decreasing the risk of blaming victims seems particularly important

whenever the observer and the victim are part of a relationship with a power distance between the observer (parents, teachers, police) and the victim (children, students, citizens). In cases where harmful consequences of secondary victimization are unlikely or temporary (e.g., when observers and victims are not part of a relationship or common social network), reassuring observers of their BJW, or at least not challenging it, might be an acceptable strategy because of the positive consequences it implies for observers and the lack of negative consequences for victims. Clearly, these implications touch moral issues. Dealing with them adequately requires not only knowledge about the functions of the BJW and other coping resources but also social skills and, last but not least, high levels of social and moral responsibility.

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Chapter IV

Study 3

Can Beliefs in Justice Predict Corrupt Behavior

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Abstract

The belief in a just world has been found to be related to rule breaking behavior. However, research has yet to determine whether the same relation holds for corrupt behavior. The current study focused on identifying whether the belief in a just world is a factor that predicts bribery behavior. We hypothesized that people with a weaker belief in a just world would be more likely to report that they had given a bribe compared with people with a strong belief in a just world. A retrospective design was used to conduct a study in Lithuania. Belief in a just world was measured with two scales for assessing personal and general beliefs in a just world. We measured bribery behavior by asking participants (N = 316) to report how many times they had given a bribe during the past 5 years. The results showed that a personal belief in a just world predicted bribery behavior, whereas a general belief in a just world did not. We discuss implications for further studies.

Keywords: **belief in a just world, corruption, bribery, Lithuania, Baltic States, Post-soviet countries**

Introduction

Corruption is a great threat to many societies and economies. It affects the growth of economy (Mauro, 1995), touches upon moral and business issues. The phenomenon exists in public and private sectors, and it prevails at micro as well as macro levels (Langseth, 2006). Corruption occurs in all countries with no exceptions. According to the 2016 Transparency International survey, even well-developed countries are affected by it (Transparency International, 2016). Therefore, studies on corruption are of critical importance.

Corruption is a phenomenon that is difficult to define (Wedel, 2012). There is no single and universal definition (Langseth, 2006); different fields of study define it in their own ways (United Nations Office on Drugs and Crime, 2003), and the perception of corruption may differ across different cultures. For example, a bribe in India is viewed as corruption only if it exceeds the market level of bribes, whereas in the US, any kind of bribe is viewed as corruption (Wade, 1982).

Nevertheless, it is possible to define acts that are considered corrupt. In the literature, a distinction is made between grand and petty corruption. Grand corruption involves acts that include the national government and huge amounts of money, whereas petty corruption involves small amounts that are used for minor benefits (Langseth, 2006). In addition, active (giving a bribe) and passive (receiving a bribe) corruption can also be distinguished (Langseth, 2006). This study focuses on active petty corruption, that is, bribe giving behavior and its correlates.

Corruption in Lithuania

According to Transparency International Lithuania's corruption perception index is 59 (on a scale from 0 [highly corrupt] to 100 [very clean]). The country does not stand out in the Baltic region. Latvia, the neighbor country, reaches the level of corruption index 58, and Estonia 71. The

Corruption Barometer shows that corruption is quite a serious and important problem in Lithuania. Transparency International's survey has shown that 68% of Lithuanian citizens believe that corruption is a very serious problem. It is rated as the 5th largest problem in Lithuania, after low salaries, high prices, emigration and alcoholism. Its relevance might be increased because of the ongoing political corruption scandals in Lithuania (Transparency International, 2016).

In the survey conducted by Transparency International 33% of the participants indicated that during the past 5 years they had given a bribe and almost half of those indicating that they had not given a bribe did not experience a situation where they could have given a bribe. The two most common reasons for giving bribes were bribing as a measure to fix problems (34%) and bribing out of conformity– because everybody gives bribes (21%) (Transparency International, 2016). These results demonstrate the prevalence of a corruption culture in Lithuania.

The culture of corruption in Lithuania seems related to the occupation of the Baltic States by the Soviet Union during the period from 1944 to 1990. The economic conditions during this period were bad. Society suffered from a huge deficit of various goods such as food, clothes, household materials etc. How many resources a family had at its disposal depended on the government and people in power. Under these conditions it was important to maintain good relations with people in power to gain better goods. This was ensured by having family members in positions of power and by providing people in powerful positions with gifts (Sampson, 1987; Šliavaitė, 2017). Even 30 years after the collapse of communism these traditions have survived. For example, people still give envelopes with money to the doctors (Praspaliauskiene, 2016), parents still give presents to teachers on various occasions (Christmas or teacher's birthday) in order to ensure good relationships with them so that their children will get good grades and admission to good schools (Šliavaitė, 2017). Praspaliauskiene (2016) and Šliavaitė (2017) point

out that young generations who grew up in free Lithuania fight against these traditions but eventually end up following them (for a more extensive review on the shadow economy in Soviet Union see Feldbrugge, 1984 and Sampson, 1987). Corruptive traditions are still embedded in everyday lives of Lithuanians. Thus, scientists should focus on studying psychological correlates of such behavior.

Even though the prevalence of corruption is quite high, psychological research on individual differences in corrupt behavior in Lithuania is surprisingly scarce. Diržytė and Patapas (2015) were among the first to attempt to analyze relationships between life satisfaction and encounters with corruption. The authors attempted to collect a representative sample and found that people who encountered corruption in various institutions reported higher levels of satisfaction in different aspects of their lives compared with people who did not encounter corruption at all. The authors encouraged researchers to continue studying the psychological determinants of corrupt behavior and to examine how seeing or experiencing corruption in a country can affect the well-being of its citizens.

Correlates of Corruption

Researchers from different domains such as sociology, criminology, economy, legal science, and psychology have tried to explain the phenomenon of corruption on different levels. Studies on micro-level correlates of corruption have found that various characteristics are related to corrupt behavior. For example, research in Jakarta found that people who were more likely to act in a corrupt manner were individualistic as opposed to collectivist (Abraham & Pane, 2014). Studies in Canada and West Africa showed that they also tended to be younger, less religious, and paid less (Armantier & Boly, 2008). Studies in the US showed that individuals who tended to be corrupt also had weaker moral identities (DeCelles, DeRue, Margolis, & Ceranic, 2012) and

belonged to the upper class (Piff, Stancato, Cote, Mendoza-Denton, & Keltner, 2012). Furthermore, researchers have emphasized the importance of cultural correlates. Culture was found to affect people's behavior and informal norms as well as policies on corruption, legal regulation, and punishment for corrupt behavior (Benuri & Eckel, 2012). Cross-cultural studies found that wealthier countries that have larger governments (a measure of a government's general final consumption expenditure as a percent of the country's GDP) and that value individual autonomy and social diversity tend to be less corrupt (O'Connor & Fischer, 2012). In addition, gender equality and women in politics was also found to be important aspects that are related to corruption in the country. In the developing countries where women are restrained from participating in political life, corruption levels tend to be high (Branisa & Ziegler, 2010). Other studies also showed gender differences in corrupt behavior. For example, a study conducted by Agerberg (2014) showed that women tend to be less tolerant of corruption and report giving fewer bribes. Additionally, studies conducted in European countries showed that males, more often than females, tend to act in a corrupt manner (Agerberg, 2014; Branisa & Ziegler, 2010; Dollar, Fisman, & Gatti, 2001). However, conclusions about the gender as a correlate of corruption should be drawn carefully because there might be third variables that are confounded with gender and are causally responsible for the relationship.

Belief in a Just World

Belief in a just world (BJW) has recently been proposed as another determinant of corrupt behavior (Bai, Liu, & Kou, 2014). The concept of BJW was proposed by Lerner in 1980 and refers to a person's belief that people get what they deserve and deserve what they get (Lerner, 1980). Since then, BJW has been studied in various fields, and some striking results have been found. To outline just a few, BJW was found to play a role in unjust situations by helping people reconcile

conflicting information between their beliefs and their experiences with or observations of injustice, thus helping people to adapt and maintain their mental health (Dalbert, 1999, 2009; Otto, Boos, Dalbert, Schöps, & Hoyer, 2006; Swickert, DeRoma, & Saylor, 2004). It was also found to motivate people to set goals for the future and maintain them (Hafer, Bègue, Choma, & Dempsey, 2005; Hafer & Rubel, 2015). Finally, BJW was found to be negatively related to socially deviant behavior (Sutton & Winnard, 2007).

Some authors have distinguished between two spheres of BJW: personal and general. A General belief in a just world (GBJW) reflects the belief that people generally get what they deserve, whereas a personal belief in a just world (PBJW) reflects the belief that events in one's own life are fair. These two constructs have different functions: GBJW was found to be important for dealing with observed injustice and was found to help people incorporate observed injustice into their general views about the world and to maintain a balance between what people observe and what they believe (Sutton & Winnard, 2007). On the other hand, PBJW was found to help people deal with injustices that are experienced on a personal level, and to help people cope with injustice and maintain mental health (Dalbert, 1999; Sutton & Winnard, 2007). In short, both GBJW and PBJW are crucial for dealing with injustice; however, the former deals with observed and the latter with personally experienced injustice.

Overall, BJW studies have suggested that people with a strong BJW should want to act fairly in order to receive positive deserved outcomes, and they should want to avoid engaging in unjust behavior in order to avoid a punishment—a negative outcome. People with a weak BJW, on the contrary, should not be concerned about the repercussions of their behavior because they should not believe they will receive any; such beliefs can lead people to be less fair to others or to inflict illegal or harmful behavior on others.

This latter reasoning has been demonstrated in studies that have identified a relationship between PBJW and rule-breaking behavior (Correia & Dalbert, 2008; Donat, Dalbert, & Kamble, 2014; Otto & Dalbert, 2005; Sutton & Winnard, 2007). For example, Otto and Dalbert (2005) identified this relationship in a sample of young prisoners. During incarceration, delinquent youngsters with a strong PBJW had fewer disciplinary problems compared with those holding a weak PBJW. The authors stated that the young adults who endorsed a strong PBJW tended to judge legal procedures as more just, which led them to believe that the state was willing to be fair, thus motivating them to obey the law. Therefore, PBJW may be related to further criminal behavior (Otto & Dalbert, 2005).

GBJW has also been found to affect rule-breaking behavior (Cohn & Modecki, 2007), however, in the opposite direction (Sutton & Winnard, 2007). Sutton and Winnard (2007) analyzed antisocial intentions of young people in a community sample. Major life goals and confidence in realizing them were measured as well. The authors found that a strong GBJW was related to higher intentions to act criminally, whereas a strong PBJW was related to lower intentions to behave criminally. The authors relate these results to positive correlations between GBJW and victim blame and derogation. They argue that for people who intend to commit illegal acts, a strong GBJW may allow them to blame and derogate victims, which, in turn, might attenuate the feelings of guilt, shame and regret. Thus participants could have minimized their feelings of guilt by derogating and blaming the victims of their misconduct and this may have resulted in greater intentions to break rules in the future (Sutton & Winnard, 2007).

The relationship between PBJW and deviant behavior has been replicated in different domains, such as prison (Otto & Dalbert, 2005) or school (Donat et al., 2014; Dzuka & Dalbert, 2007) and across cultures. It has been tested in Portugal (Correia & Dalbert, 2008), Slovakia

(Dzuka & Dalbert, 2007), Germany, and India (Donat et al., 2014). Donat, Dalbert, and Kamble (2014) tested the relationship between PBJW and students' cheating and delinquent behavior in school. This relationship was mediated by students' perceptions of teachers' justice (Donat et al., 2014), which suggests that PBJW has a negative relationship with unjust behavior through the perceived justice of authorities. The results proved to be the same even when gender, country, and neuroticism were controlled for (Donat et al., 2014). This study provides support for Otto and Dalbert's (2005) previous reasoning that strong PBJW leads people to evaluate authorities and the procedures they apply as more just, and this, in turn, leads to obedience.

Overall, research on BJW and deviant behavior is quite vast. However, conclusions about the relationship between BJW and corrupt behavior should be drawn with caution because corrupt behavior is distinct from the deviant behavior that was examined in previous studies. Most of these studies that examined the relationship between BJW and deviant behavior studied delinquent adolescents or the unjust behavior of young individuals. For example, Otto and Dalbert's (2005) sample consisted of young male prisoners from a German detention center, and the study by Correia and Dalbert (2008) was conducted in a school setting. Delinquent behavior differs from corrupt behavior because delinquent behavior primarily includes adolescents' criminal behavior as well as other kinds of rule violations (Shoemaker, 2018). Typically, criminal behavior involves a victim who is directly affected by the behavior, whereas corrupt behavior does not. In a situation involving corrupt behavior, both parties benefit from the arrangement, and in some cases it might be perceived as a gift rather than something illegal (Šliavaitė, 2017), therefore, there is no indication that a specific person is suffering from the unjust behavior. Thus, the relationship between corrupt behavior and BJW might be different from the relationship that delinquent behavior has with BJW.

One of the first studies relating the BJW to corrupt behavior was conducted by Bai, Liu, and Kou (2014). These authors ran three studies. In one study the authors manipulated the GBJW, the other two studies employed scenarios. It was found that GBJW, but not PBJW, was negatively correlated with perceived others' intentions of corruption. The perceived likelihood of punishment mediated this relationship. Similar results were found in different corruption scenarios (bribery and nepotism). When manipulating GBJW, perceived intention of corruption varied between the experimental and the control groups. The group that was primed with an unjust situation expressed significantly higher perceived intentions of corruption as compared to a control group and the group that was primed with a just situation. According to the authors, if Person A's stronger GBJW is related to his or her perception that Person B will not act corruptly, Person A might not be willing to act this way either (Bai et al., 2014).

The authors later tested this hypothesis in an additional study in which they focused on personal intentions, rather than perceived others' intentions as in their previous study (Bai et al., 2014), to act corruptly (Bai, Liu, & Kou, 2016). They proposed that corrupt behavior (i.e., both the giving and receiving of a bribe) would be related to the strength of PBJW and that this relationship would be mediated by perceived punishment. Two surveys concerning bribery from the positions of a bribe giver and a bribe receiver demonstrated that PBJW was negatively related to corrupt behavior and that this relationship was mediated by perceived punishment for the bribery behavior. To test for a causal relationship, the authors conducted an experiment that demonstrated that a weak PBJW indirectly caused bribery behavior through the mediating variable of perceived punishment (Bai et al., 2016). However, the results should be interpreted with caution. The experiment aimed to manipulate beliefs in justice by asking participants to recall a personal event in which they were treated fairly versus unfairly. Participants who recalled an unfair event

expressed a stronger intention to give or take a bribe (Bai et al., 2016). However, it is still unclear whether these results reflected the effect of BJW on bribery behavior or the effect of the recalled event and the emotions and cognitions it triggered. Recalling an unfair personal event might have strengthened the feeling that one is entitled to or deserves a benefit (to get what one deserves). According to the literature (e.g., Otto et al., 2006), BJW is a relatively stable construct. It is unlikely to change when an unjust event is recalled. Thus, we assume that the recalled event made the existing BJW salient but did not have any influence on the strength of BJW. Nevertheless, these results demonstrate the importance of maintaining and nourishing social justice in organizations and society (Bai et al., 2016).

In conclusion, previous research has found that BJW is negatively related to deviant and rule-breaking behavior. This was demonstrated in a number of studies conducted in different domains (prison and nonprison samples), age groups (adolescents and young adults in particular), and cultures. However, most of these studies concentrated on young participants, ranging from teenagers to young adults attending a university. The relationship between BJW and corrupt behavior was tested only in China, which raises the importance of conducting studies in Western cultures and Europe. In addition, the methods that were used to identify the relationship between BJW and corrupt behavior (Bai et al., 2016) were scenario-based ones, that is, participants were asked to read a scenario and give a response to a given situation. Therefore, to fill these gaps, we conducted a retrospective study of actual corrupt behavior, including a wider age group of participants from the European country of Lithuania.

Aim of the Study

In the present study, we further addressed the question of whether individuals with a strong BJW tend to act more fairly and less corruptly. Taking into account previous studies on the

relationship between BJW and deviant, corrupt behavior (Bai et al., 2016; Otto & Dalbert, 2005; Sutton & Winnard, 2007), we hypothesized that people with a weaker PBJW would be more likely to give petty bribes as opposed to people with a strong PBJW. We did not focus on bribe receiving because in general people who receive bribes are government officials. The consequences for a government official for taking a bribe are more serious – in addition to a fine they might lose their job. Therefore, these participants would be less motivated to participate in a study or more inclined to lie about their experience.

A previous study found differences between PBJW and GBJW in relation to deviant behavior (Sutton & Winnard, 2007). However, concerning evaluations of others' intentions to act corruptly in Bai et al.'s (2014) study, GBJW showed a negative relationship. Additionally, as mentioned before, corrupt behavior differs from other kinds of criminal behavior because it does not involve a direct victim, and sometimes it can be perceived as a gift rather than a bribe (Šliavaitė, 2017). Thus, there might be two competing hypotheses. First, if Sutton and Winnard's (2007) study results could be generalized to all rule-breaking behavior, we would expect to observe a positive correlation between GBJW and bribery. And second, if corrupt behavior, in fact, is not perceived as inflicting harm to some victim, which inhibits the experience of injustice, we would expect to find no relationship between these two constructs.

Method

Participants

The study was conducted from April to June and from September to October 2016. A convenience sample was obtained with the help of Vilnius university psychology students. Distribution of the questionnaire was one of activities to receive an additional credit point. In order to increase representativeness of the sample we collected data from different groups of age.

Participation in the study was voluntary, and we provided no material compensation for the participation. Overall, the questionnaire was administered to 330 participants, but 14 questionnaires were filled out only partially and were therefore eliminated from the study, leaving a total of 316 participants with usable data (47.5% men; 52.5% women). Age ranged from 18 to 77 years (M = 40.59, SD = 14.81). In order to compare bribery behavior between different generations we divided participants into three groups according to age: young adults (18 to 29 years, n = 100), adults (30 to 49 years, n = 116), and older adults (50 years or more, n = 100). This division was used for descriptive purposes. In all correlational and regression analyses age was treated as a continuous variable.

The demographic characteristics of the sample were as follows: 54% had a higher educational degree from a university, 11.1% had a high school leaving certificate, 11.7% were students at the university, 13% had some kind of special professional education, 7% had graduated from college, and 2.8% had finished what is considered "basic school" (10 grades) in Lithuania. A total of 49.7% of the sample lived in a big city, 34.8% in a city, and 7.9% and 7.6% in a little town or village, respectively.

We also asked about participants' income, but instead of asking for an amount, we asked whether their monthly earnings allowed them to save money. Answers were given as either yes or no: 72.8% answered yes, 36.3% answered no, and 0.9% did not answer this question.

The largest part of the sample worked in either governmental institutions (32.3%) or the business sector (36.1%).

Measures

The study was conducted as part of the research project "The Social Context of Corruption" (2016 – 2017) funded by the Research Council of Lithuania. The methods presented here were

part of a larger survey (for more information about scales used in a survey see Supplementary materials).

To measure BJW, we used the General Belief in a Just World Scale (Dalbert, Montada, & Schmitt, 1987) and the Personal Belief in a Just World Scale (Dalbert, 1999). Internal consistencies in our study were $\alpha = .82$ and $\alpha = .88$, respectively. The General Belief in a Just World Scale is measured with six items (e.g., "I think basically the world is a just place"). The Personal Belief in a Just World Scale includes seven items (e.g., "I believe that, by and large, I deserve what happens to me"). Participants evaluated every item on a 6-point Likert scale ranging from 1 (*completely disagree*) to 6 (*completely agree*). Both scales were translated from English to Lithuanian and back translated from Lithuanian to English by K. Stupnianek and V. Navickas. Factor analysis has revealed a presence of two components with items about the general belief in a just world loaded strongly on one component and items about the personal belief in a just world – on the other (for more information see Supplementary Materials).

To assess the experience with bribery we asked participants 3 dichotomous questions: "During the past 5 years, has someone expected a bribe from you?"; "During the past 5 years, has someone demanded a bribe from you?"; "During the past 5 years, have you ever given a bribe?", followed by a question asking participants to specify the number of times each had happened. However, for the purpose of our study we used only one of these questions: "During the past 5 years, have you ever given a bribe?", as it refers to the actual behavior of the participant.

Results

Data analysis was performed with IBM SPSS 25.

Descriptive Statistics

One hundred forty-six participants (46.2%) indicated that they had given a bribe at least once during the past 5 years (53.8% answered no). We asked participants to specify how many times they had given a bribe. The mean of reported number of bribes was 1.22 (*SD* = 2.49); 7.91% (25 participants) did not answer this question. We grouped the participants according to the number of times they had given a bribe. The percentage of participants in every group is provided in Table 1. Overall, participants who indicated that they had given a bribe reported that they had done this one to three times in 5 years; 9.2% of the participants reported more than four bribes.

Table 1

Frequency of Bribe Giving

Frequency of bribe giving	Percentage of participants who gave a bribe
None	53.8
1 time	15.8
2 to 3 times	13.3
4 or more times	9.2
No answer	7.9

We calculated whether giving bribes differed by gender or age. Although we found no significant difference between male and female participants, we found differences between age groups, $\chi^2(2) = 13.915$, $p = .001$, $n = 316$. Specifically, a larger proportion of older participants (58% for the group with over 50 years old and 48.3% for the group with 30 – 49 years of old) compared with younger ones (32%) indicated that they had given a bribe in the past 5 years at least once.

Table 2

Correlations Between Variables

Variable	1	2	3	4	5	6
Bribe	–					
GBJW	-.092	–				
PBJW	-.245***	.555***	–			
Age	.207***	.083	-.102	–		
Gender	-.034	.032	-.030	.021	–	
Income	.052	-.186***	-.275***	.030	.065	–

Note. GBJW = General belief in a just world; PBJW = Personal belief in a just world

***$p \leq .001$

Bivariate Statistics

We calculated correlations between all variables (Table 2) in our model and demographic characteristics. Two variables, PBJW and age, were correlated with bribe giving. Thus, we excluded other demographic variables from our analysis.

Logistic Regression

A logistic regression was computed to determine whether age, PBJW, and GBJW predicted the likelihood that participants had given a bribe. The logistic regression model with the variables age, PBJW, and GBJW was statistically significant (Table 3), $\chi^2(3) = 37.506$, $p < .001$; Hosmer and Lemeshow $\chi^2(8) = 9.414$, $p = .309$, which shows that the model fits the data. Negelkerke $R^2 = .156$. Table 4 shows that the model correctly classified 64.6% of the cases.

Table 3

Logistic Analysis Results Predicting Bribe-Giving Behavior (n = 310)

Predictor	B	*SE*	Wald χ^2	*df*	*p*	e^{β}
Constant	0.634	0.683	0.863	1	.353	1.886
Age	0.032	0.009	14.417	1	.000	1.033
PBJW	-0.610	0.166	13.484	1	.000	0.543
GBJW	0.078	0.161	0.237	1	.627	1.082

Note. GBJW = General belief in a just world; PBJW = Personal belief in a just world.

Table 4

The Observed and Predicted Frequencies of Bribery Behavior

	Predicted		
Observed	No bribe	Gave a bribe	% correct
No bribe	123	42	74.5
Gave a bribe	65	72	52.6
Overall % correct			64.6

An increase in age was associated with an increase in the likelihood of giving a bribe, but a stronger PBJW was associated with a reduction in the likelihood of giving a bribe. Odds ratios for age were 1.03 (95% CI [1.02, 1.05]) and 0.54 (95% CI [0.39, 0.75]) for PBJW.

Discussion

With this study, we aimed to analyze whether BJW would predict bribery behavior, specifically, giving a bribe. Unlike previous studies, our study was conducted in a nonlaboratory setting, where participants were asked to report their actual bribery behavior. As expected, and in line with previous studies (Bai et al., 2016), PBJW predicted bribery behavior. Thus, our findings might suggest that people who believe that they get what they deserve are less inclined to act unjustly because they fear punishment. By contrast, if people believe that they do not get what they deserve, then they will be more likely to act unjustly because they do not fear punishment.

Our results regarding GBJW were different from previous studies. Given the fact that personal and general BJW have been described as having different functions (Dalbert, 1999; Sutton & Winnard, 2007), our results should have uncovered trends that are similar to those documented in Sutton and Winnard's (2007) study. However, in our study, a stronger GBJW was not related to reported bribery behavior, different from its relation to criminal behavior in Sutton and Winnard's (2007) study (i.e., the stronger GBJW, the more likely the participants were to express the intention to behave in a criminal manner in the future). Sutton and Winnard (2007)

argued that people with a strong GBJW tend to justify their unjust behavior and blame the victim (direct and indirect) for her or his misfortune and that this may thus lead to continued unjust behavior through reduced feelings of guilt, shame and regret. If this reasoning is correct, we should have found similar results for corrupt behavior. One way to account for this difference is through the characteristics of bribery. In a corrupt arrangement, an individual who gives a bribe does not observe a direct victim of this behavior; instead, he or she observes that the other individual benefits from this arrangement. Thus an individual might not perceive his or her behavior as unjust or harmful and would not need to look for justifications of his or her behavior. The argument could be made that in a bribery situation, different from other types of misconduct, GBJW is not salient. Furthermore, although corrupt behavior is illegal, in some situations it might be perceived as a gift and not at all as a harm (Praspaliauskiene, 2016; Šliavaitė, 2017).

Praspaliauskiene's (2016) research about the phenomena of envelopes given to doctors has shown that even when people express negative opinions towards such practices, in situations where their life is at stake, they do give envelopes filled with money to the doctor (Praspaliauskiene, 2016). In our study we did not ask our participants in what situations they had given the bribe. We do not know whether they gave it to the police man in order to evade a fine or to a doctor in order to get priority treatment. Future studies could investigate whether the context of bribery affects the relationship between bribery and BJW.

Another possible explanation for our results might be obtained through the lens of Bai and colleagues' (2014) results, which showed a negative relationship between perceived intentions of corruption in others and GBJW, but not PBJW. This finding might suggest that when perceiving others' behavior, GBJW becomes more salient than PBJW. In a later study, conducted by the same authors (Bai et al., 2016), a relationship between personal intentions to act corruptly and PBJW

was found. This finding is in line with our findings. In this later study Bai and colleagues (2016) did not test, however, whether GBJW was related to personal intentions to act corruptly. Taken together, the findings of Bai et al. (2014), Bai et al. (2016) and our findings suggest that GBJW is more relevant for dealing with the bribery behavior of others, whereas PBJW is more relevant for dealing with own bribery behavior.

Another interesting result was the relationship with age. Age was a significant predictor of bribery behavior. This finding contradicts previous studies that have shown that younger age is related to giving bribes (e.g., Armantier & Boly, 2008). Age differences might be explained by cultural determinants specific to Lithuania or other post-Soviet countries. People from older generations were raised or lived parts of their lives while Lithuania was occupied by the Soviet Union. During this period, corruption was socially acceptable. Gifts to government officials, police officers, judges, and doctors for favorable treatment and outcomes were considered normal practice. Unfortunately, this phenomenon is still manifest in this society even though Lithuania has been independent for almost 30 years now. However, this corrupt tradition is gradually changing, and the younger generations that were born after Lithuania regained its independence are less affected by these traditions (Praspaliauskiene, 2016; Šliavaitė, 2017). Another possible explanation might be that older people may have had to face more situations where they felt they had to give a bribe than younger people. Even though the question we asked about bribery asked participants to report their behavior during the last 5 years, older participants may have considered their experiences over a longer period of time. Furthermore, 5 years ago, the young adults in the study may have been underage and possibly had not encountered corrupt situations at all.

Limitations and Implications for Future Studies

This study provides insight into the issue of corruption and extends the understanding of the mechanisms that underlie bribery behavior. Nevertheless, these results should be interpreted with caution. As in many psychological studies, the convenient recruitment of the sample may have led to biased results that reflect the tendencies in the specific group that was studied. It should also be noted that our sample was highly educated. More than half of the participants had graduated from a university. Therefore, we should be cautious in generalizing our results to other populations.

In addition, the retrospective study design may have led to inaccurate reports about bribery. Because of memory limits, participants may have reported bribes they had given throughout their lives or at least for a longer period of time than they were asked about. This issue could be addressed by conducting an experiment in which participants would be administered questions about BJW and would subsequently be put in a situation in which they would have to decide whether to give a bribe or not.

Problems involved in asking participants to report an illegal behavior might have affected their reports of this corrupt behavior. First, participants might have been afraid of the possible consequences of engaging in bribery and were therefore reluctant to indicate that they had given a bribe. However, participants were ensured that the information they gave would be kept confidential. Second, social desirability might have also been a concern in this study. Corrupt behavior is socially inacceptable and there is also a correlation between social desirability and BJW (Dalbert et al., 1987). That is, people with a stronger BJW tend to give more socially desirable answers. However, underreporting of bribery behavior did not seem to be a problem in our study. Almost half of our sample (46.2%) reported that they gave a bribe. The results of the Transparency International Barometer documented 33%. It seems that the participants of our study were more

open about their behavior. This might have happened because of two reasons. First of all, at the beginning of the study we ensured participants that their answers are kept confidential and we asked to answer honestly. Secondly, most of our participants filled out questionnaires outside of their work environment, where they might have felt reluctant to report such information about themselves. This is not the case in Transparency International's surveys, where participants are being surveyed in their work environment.

Other similar studies have found variables that mediated the relationship between BJW and unjust behavior, for example the justice of the teacher (Donat et al., 2014) and perceived punishment (Bai et al., 2016). In future studies, researchers might want to examine perceived justice of authorities or perceived punishment as mediators or moderators of the relationship between BJW and corrupt behavior.

Donat, Dalbert, and Kamble (2014) additionally examined whether neuroticism is related to rule-breaking behavior. Future studies could explore whether other variables affect corrupt behavior. Other variables, such as corruption level in the country, justice sensitivity, personal experience with corruption, psychological well-being, or life satisfaction could moderate or mediate the relationship between BJW and involvement in corruption.

Conclusion

The results of our study in Lithuania indicate that justice beliefs, particularly PBJW, can help understand bribery behavior. The belief that the world is personally just and that things that happen are deserved can decrease the likelihood that a person will give a bribe. Thus, psychological studies of corrupt behavior should put more emphasis on justice beliefs. Our data might provide some implications for practitioners. Perhaps justice beliefs, together with other variables related to corrupt behavior, might be considered during the recruitment of employees.

Sustaining justice feelings by increasing justice in business organizations, governmental institutions, police, court etc. might work as a prevention of rule breaking behavior.

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Appendix

Project title: "Social context of corruption: analysis of macro, mezzo and micro factors" funded by Research Council of Lithuania (2016 – 2017).

The project included psychological, sociological, legal and economical analysis of corruption.

Measured variables

1. Encounter with corruption α=.65 (Dirzyte & Patapas, 2015)
2. Measure for bribery experience (questions created by authors for the purposes of the project)

Table 1

Questions about bribery experience

Items in Lithuanian	**Items in English**
Ar per pastaruosius penkerius metus kas nors tikėjosi iš Jūsų gauti kyšį?	During the past 5 years, has someone expected a bribe from you?
Ar per pastaruosius penkerius metus kas nors reikalavo iš Jūsų kyšio?	During the past 5 years, has someone demanded a bribe from you?
Ar per pastaruosius penkerius metus kam nors davėte kyšį?	During the past 5 years, have you ever given a bribe?

3. Positive/negative affect scale α=.79 (Watson, 1994, translated to Lithuanian and adapted by Dirzyte and Patapas, 2015)
4. Satisfaction with different life spheres α=.87 (Dirzyte and Patapas, 2015)
5. Money attitudes scale α=.82 (Yamouchi ir Templer, 1982 – translated to Lithuanian from English and vice versa by K. Stupnianek and V. Navickas).
6. Personal belief in a just world scale α=.88 (Dalbert, 1999) – translated to Lithuanian from English and vice versa by K. Stupnianek and V. Navickas.

7. General belief in a just world scale α=.82 (Dalbert, Montada, & Schmitt, 1987) – translated to Lithuanian from English and vice versa by K. Stupnianek and V. Navickas.
8. Demographic questions (age, gender, city a person lives in, workplace, occupation, education). We did not refer to the income directly, because people in Lithuania tend not to like reporting their income. Instead we asked whether participants can put aside some money from their income for entertainment, relaxation, investment, insurance against accidents, unemployment, illness, etc.
9. Sources of information about corruption (created by authors for the purposes of the project). We asked participants to rate the main sources of information about corruption. The list included: personal experience, experience of family members, friends‘ experience, professional experience, media, and other. We also asked to name the media source from which information about corruption was obtained. These included: television, radion, press, internet, other.
10. We also asked participants what in their opinion is corruption. We used open-ended question for this purpose.

Factor analysis of the Belief in a Just World scale

The 13 items of the General and Personal Belief in a Just World scale (BJW) were subjected to a principal components analysis (PCA) using SPSS Version 24. Prior to performing PCA the suitability of the data for a factor analysis was assessed. Inspection of the correlation matrix revealed that all but three correlations exceeded the minimal limit of .3(Table 2). The Kaiser-Meyer-Oklin value amounted to .889 and the Barlett’s Test of Sphericity reached statistical significance, both results supporting the factorability of the correlation matrix.

Principal components analysis extracted 2 components with an eigenvalues exceeding 1. These components explained 44,66 % and 12,48 % of the total item variance respectively. Moreover, an inspection of the screeplot revealed a sharp break after the first component and a lesser break after the second. All items loaded strongly on this component (Table 3). The results of this analysis support the use of two factors as suggested by the original authors (Dablert et al., 1987).

Table 2

Correlation matrix of the BJW scale items

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**
1	1												
2	.424	1											
3	.502	.583	1										
4	.250	.533	.559	1									
5	.359	.408	.487	.392	1								
6	.383	.360	.442	.282	.465	1							
7	.273	.434	.281	.235	.175	.176	1						
8	.414	.395	.323	.214	.288	.369	.468	1					
9	.316	.523	.327	.266	.232	.301	.631	.671	1				
10	.364	.417	.464	.225	.248	.346	.516	.583	.667	1			
11	.193	.213	.294	.163	.326	.300	.338	.420	.426	.446	1		
12	.335	.370	.421	.239	.268	.292	.523	.595	.586	.637	.546	1	
13	.419	.366	.416	.247	.323	.340	.390	.557	.476	.555	.378	.697	1

Table 3

Factor loadings of the BJW scale items

Item	Factor 1 loading	Factor 2 loading
1	.176	.543
2	.185	.652
3	.048	.812
4	-.142	.796
5	-.075	.770
6	.082	.613
7	.753	-.065
8	.786	.028
9	.846	-.019
10	.799	.043
11	.625	.007
12	.853	-.015
13	.666	.143

Logistic regression model for the prediction of bribery

Table 6

Logistic regression analysis predicting bribery (n = 310) with age, personal belief in a just world (PBJW), general belief in a just world (PBJW), gender and income as predictors

Predictor	B	S.E.	Wald χ^2	*df*	*p*	e^{β}
Constant	0.599	0.699	0.735	1	.391	1.821
Age	0.032	0.009	14.093	1	.000	1.033
PBJW	-0.608	0.170	12.748	1	.000	0.544
GBJW	0.059	0.163	0.134	1	.715	1.061
Gender	0.144	0.249	0.337	1	.562	1.155
Income	0.056	0.297	0.035	1	.851	1.057

	χ^2	*df*	*p*
Overall model evaluation	37.033	5	.000
Goodness of fit test			
Hosmer and Lemeshow Test	10.892	8	.208

Table 7

Observed and predicted frequencies of bribery

	Predicted		
Observed	No bribe	Gave a bribe	% correct
No bribe	120	43	73.6
Gave a bribe	63	73	53.7
Overall % correct			64.5

Chapter V

General Discussion

Summary

The current dissertation aimed to examine BJW under the threat of injustice, the specific conditions under which injustice is assimilated into the concept of BJW, and when the concept of BJW is accommodated to injustice. It also aimed to expand knowledge about the relationship between BJW and fair behavior. For these purposes, three studies were conducted to examine BJW when an individual is faced with injustice from the victim, observer, and perpetrator perspectives. From a victim perspective, we tested whether there was a difference in BJW between victims with different victimization severity and whether perceptions of justice in the criminal justice process moderated the effects of victimization on the BJW. In Study 1 presented in Chapter II, participants who suffered from very severe injustice (e.g., domestic abuse or human trafficking) had a significantly lower PBJW than participants who suffered from less severe injustice (e.g., robbery, vandalism, theft). GBJW, on the other hand, did not differ between victims with different levels of victimization severity. The results are consistent with previous studies that showed that PBJW and GBJW are separate dimensions, such that PBJW is important for personal experiences, but GBJW is not (Dalbert, 1999; Wickham & Bentall, 2016). The findings are in line with the concepts of assimilation and accommodation (Janoff-Bulman, 1992; Piaget, 1976). When the outside world (events that happen in reality) is not too far from the cognitive schema of PBJW, it is possible to assimilate it using various strategies (e.g., blame attributions, ultimate justice reasoning). However, when the outside world presents evidence of injustice that is too far from the schema of a PBJW, accommodation takes place such that PBJW is adjusted so that it is more in line with reality. In previous studies, victims of severe injustices also tended to have a lower PBJW than

nonvictims (Đorić, 2017; Grove, 2017; Wickham & Bentall, 2016; Xie, Liu, & Gan et al., 2011). Furthermore, in Study 1, victimization effects were moderated by the victim's interaction with the police. When victims reported a crime to the police and the police provided information about the procedures applied in the criminal justice process and victim's rights in a clear and understandable way, differences in PBJW between severely victimized and moderately victimized individuals were reduced. These findings suggest that seeking justice and the attempts of the police to restore justice can serve to reduce the threat to the BJW. In other words, the cognitive dissonance between a person's reality and their PBJW can be reduced by justice restorative behaviors. By contrast, Corey, Troisi, and Nicksa (2016) found a pattern that was opposite to the one found in our study: More severe injustice was related to a stronger BJW. It was not clear whether the victims in their study were victimized by a criminal act, but one can assume that such a pattern of BJW was caused by different experiences in the criminal justice system.

From an observer perspective, we tested whether individuals' BJW changed after they observed severe injustice, and we proposed that a threat to one's BJW, similar to reactions to stress, can be moderated by social support and life satisfaction. In Study 2 presented in Chapter III, after observing school rampage attacks that happened to peers, participants' BJW increased. Previous studies have shown that observing severe injustice threatens BJW (Correia & Vala, 2003; Dawtry, Callan, Harvey, & Gheorghiu, 2020; Hafer, 2000a, b; Tepe, Cesur, & Sunar, 2020). However, these studies did not test for effects that this threat has on the BJW itself. Some researchers have suggested that when cognitive dissonance is resolved by assimilation, the cognitive structure is strengthened (Hafer & Rubel, 2015; Piaget, 1976). The findings of Study 2 supported this idea. Furthermore, Study 2 showed that social support and life satisfaction moderated the change in BJW. The social environment can provide alternative meanings of observed injustice, for instance,

by ensuring that a perpetrator will be punished and that such an injustice will not befall the observer. People who are satisfied with their lives also tend to perceive events in their lives in a more positive way (Lyubomirsky, King, & Diener, 2005). Therefore, when observing unfair events, individuals with strong life satisfaction could have seen the positive side of the event (e.g., that the victims received help and the perpetrator was caught). All in all, such resources could reduce the threat to the BJW, thereby reducing the need to defend it.

From the perpetrator perspective, the current dissertation tested whether BJW could predict bribery behavior. In Study 3 presented in Chapter IV, participants with a strong PBJW were less likely to offer bribes. These findings corroborate previous findings (e.g., Donat, Dalbert, & Kamble, 2014; Donat, Umlauft, Dalbert, & Kamble, 2012; Münscher, Donat, & Ucar, 2020; Schindler, Wenzel, Dobiosch, & Reinhard, 2019). However, GBJW did not have associations with bribery behavior. According to Sutton and Winnard (2007), GBJW is related to judgments about other people and victim blaming, which can contribute to a higher likelihood of unfair behavior. In a bribery situation, no clear victim is visible, and therefore, there is no one to make judgments about or to use as objects of behavioral justification. This might explain why in Study 3, GBJW had no significant effects. A more detailed discussion about the roles of PBJW and GBJW is provided below.

Implications About the Distinction Between Personal and General Dimensions of BJW

The literature suggested that it is important to differentiate between personal and general dimensions of BJW. PBJW plays a role when injustice appears in an individual's personal world, and GBJW plays a role when the worlds of others are involved (Bégue & Bastounis, 2003; Dalbert, 1999). It is important to incorporate both dimensions into studies because they have unique and sometimes even opposite correlates and can cover up each other's effects (Bègue & Bastounis,

2003; Schindler et al., 2019; Sutton & Douglas, 2005). Unlike some previous studies (e.g., Corey et al., 2015; Fasel & Spini, 2010), all three studies presented in the current dissertation examined both PBJW and GBJW. The findings of Study 1 were consistent with previous considerations about the importance of differentiating between the two aspects of BJW (i.e., personal victimization had significant effects on PBJW but not on GBJW), whereas the findings from Studies 2 and 3 showed that the roles of these dimensions are a bit more complex than previously thought. Study 2 examined changes in BJW after observing unfairness. According to previous studies (Bégue & Bastounis, 2003; Dalbert, 1999), when the worlds of others are involved, GBJW should be threatened but not PBJW. However, when we included personal resources as moderators, changes in PBJW appeared. Specifically, the PBJW of individuals with low life satisfaction and social support increased after they observed severe unfairness. This could have happened for various reasons. On the one hand, it is possible that when adolescents observed the suffering of their peers, they feared suffering for themselves. The people we identify with are part of our world, and therefore, their suffering can threaten the PBJW. Personal resources such as social support and life satisfaction seem to play a crucial role because they can affect how a situation is perceived. On the other hand, the study participants were adolescents, and developmental factors might have played a role. How exactly the differentiation between PBJW and GBJW happens and at what age are factors that are not well-understood. Therefore, it is possible that the participants in our study had not yet differentiated between the two parts of BJW and that is why similar effects were found for the two dimensions.

From a perpetrator's perspective, Study 3 showed that, as suggested in previous studies (e.g., Schindler et al., 2019; Sutton & Winnard, 2007), PBJW negatively predicted bribery behavior. However, GBJW had no significant effects. Previous studies have shown inconsistent

findings about GBJW effects as well. In some studies, GBJW significantly predicted unfair behavior (Wenzel et al., 2017; Sutton & Winnard, 2007), whereas in other studies, no significant effects of GBJW were found (e.g., Schindler et al., 2019). As mentioned above, GBJW and PBJW can sometimes cover up each other's effects (Bègue & Bastounis, 2003; Schindler et al., 2019; Sutton & Douglas, 2005). This might happen due to the BJW defense strategies. To handle injustice, an individual may attempt to minimize and justify the injustice by blaming victims for their misfortune or denying and downgrading the injustice. On the one hand, a strong PBJW is related to higher perceptions of justice and a lower hostile attributional bias, which can reduce the likelihood of reactive unfair behavior (i.e., Bègue & Muller, 2006; Donat et al. 2014; Donat et al., 2012; Münscher et al., 2020). On the other hand, GBJW is related to victim blaming (Mendonça, Gouveia-Pereira, & Miranda, 2016), which can contribute to lowering the moral costs of unfair behavior and increase the likelihood of unfair behavior (Sutton & Winnard, 2007; Wenzel et al., 2017) as long as the behavior does not cause serious harm to the victim, such as aggression (Dalbert, 2002; Nesbit et al., 2012). The presence of a victim may help to explain why GBJW is related to a higher likelihood of unfair behavior in some cases (Wenzel et al., 2017), whereas in other cases it does not have significant relationships with unfair behavior (Schindler et al., 2019). To my knowledge, there are not yet any studies that have directly tested such an idea. One might test this assumption experimentally by involving participants in a card game that offers an opportunity to cheat. One experimental group could face a situation in which cheating would have direct consequences for a victim, and the other experimental group could face a situation in which cheating would not have a victim. If my assumption is correct, GBJW would be related to the likelihood of cheating in the group with a direct victim, whereas PBJW would have effects in both situations.

Implications About Cultural Influences

The current dissertation did not aim to make cross-cultural comparisons; however, the three studies were conducted in different combinations of three different countries (i.e., Lithuania, Germany, and the Republic of China) and may be able to provide some insights for future studies. Concern for justice is universal, but how justice is construed and the meaning of it is not (Lerner, 1980; Montada & Maes, 2016). BJW is acquired through interactions with society and culture and can be adopted from one's family (Dalbert & Sallay, 2004; Hafer & Sutton, 2016). Therefore, differences in BJW between different cultures are not surprising (Furnham, 1985, 1993). The three countries that were the focus of the current dissertation have different cultural and historical backgrounds that could have contributed to the findings and are worth discussing.

Study 1 examined the BJW of victims of crime from Germany and Lithuania. These two countries differ in their historical background, economic development, and criminal justice system, which might have affected some differences between the victims in the two countries. More specifically, the victim support services that are available in Germany and Lithuania differ. Whereas Germany has victim support services that are available for all victims of crime, victim support services in Lithuania are provided only for the victims of very severe crimes such as domestic violence and human trafficking. Victim support services provide emotional support and aid in the criminal justice process. Bradford (2011) found that when victims are supported by victim support services, they also tend to perceive the criminal justice process as fairer. Though we did not test for this, it is possible that, similar to perceptions of justice in a criminal justice process, victim support may have a moderating effect on the relationship between victimization and BJW. Therefore, future studies should test whether the BJW of victims who receive victim support differs from the BJW of victims who do not.

Study 2 was conducted in the Republic of China, which is a collectivistic culture with its own philosophy. In collectivistic cultures, the outside world is highly valued and should be accepted as it is. Therefore, GBJW is expected to serve an adaptive function just as PBJW does in individualistic cultures (Wu et al., 2011; Wu, Pan, Wang, & Nudelman, 2016). Studies have shown that GBJW is related to mental health and resilience. For example, personal experiences with an earthquake have been found to affect GBJW but not PBJW (Wu et al., 2011; Wu, Pan, Wang, & Nudelman, 2016). Corresponding to these findings, Study 2 showed that observed injustices threatened not only GBJW but also PBJW when other factors were considered. Whether these patterns appeared for cultural reasons is not completely clear because similar studies were not conducted in individualistic cultures. The conditions under which Study 2 was conducted (i.e., school rampage attacks) were completely accidental. It would be difficult to predict the occurrence of such events in individualistic cultures. However, the current situation of the COVID-19 pandemic and a risk of economic crisis can provide a milieu in which injustice can affect many people across the globe. Researchers could use the circumstances to more closely examine the role of BJW in times of crisis. For instance, one might conduct a quasi-experimental study examining changes in BJW as a response to increasing COVID-19 infections and death rates or having someone in one's social circle who is infected with COVID-19.

Study 3 examined relationships between BJW and corrupt behavior. Perceptions of corruption vary between different cultures (Langseth, 2006; Wade, 1982). Some societies may justify some forms of corruption, whereas in others, any forms of corruption are unacceptable. For instance, in Lithuania, giving gifts and envelopes filled with money to doctors or teachers are common practices that are still viewed as socially acceptable by some people (Praspaliauskiene, 2016; Šliavaitė, 2017). In Brazil, corruption is a social norm, whereas in Western European

countries, such as the Netherlands, corruption is unacceptable. Such culturally specific perceptions and acceptance of corruption may affect the extent to which corrupt behavior and perceptions of corruption are associated with BJW (Modesto, Keller, Saraiva, & Pilati 2020) and should be considered when generalizing the results of studies. For instance, when corrupt actions are socially acceptable in a culture, members of that culture might not consider them to be unfair. BJW should not play a role in such situations. However, such an assumption should be tested. For instance, in the Lithuanian context, one might ask participants to respond to items about various situations, including giving presents to a child's teacher and bribing a police officer to avoid getting a ticket. Situations that are not considered unfair or corrupt would presumably not be related to BJW.

Limitations and Implications for Future Studies

The dissertation gathered valuable knowledge for the justice motive theory, but it is not without flaws. All three studies included in the current dissertation used explicit measures to measure BJW. These measures do not reflect the implicit justice motive or the implicit belief that the world is fair. Whereas explicit measures can capture implicit beliefs to some extent, they are subject to social desirability, social norms, and other factors (Alves & Correia, 2008; Dalbert, Montada, & Schmitt, 1987). Therefore, the findings should be replicated with instruments that can measure BJW implicitly. Studies that have used implicit measures of BJW are uncommon. Modesto and Pilati (2017) recently developed an implicit measure of BJW. They adapted Greenwald, Mcghee, and Schwartz's (1998) implicit association test for the measurement of BJW and used categories of deservingness and unpredictability. Words such as effort, justice, uncontrollable, and random were used as stimuli in the test. Response latencies and errors represented the implicit endorsement of BJW and were correlated with explicit BJW measures. A distinction between PBJW and GBJW was achieved by adding the attributes "me" and "not me"

(Modesto & Pilati, 2017). The method deserves further exploration and should be employed in future studies.

Study 2 examined BJW in adolescent samples. As in previous studies, PBJW and GBJW measures were used as suggested by Dalbert (1999), but exploratory factor analyses did not show a clear two-factor structure of the BJW measure. Therefore, it is plausible that participants did not distinguish between PBJW and GBJW. According to the BJW literature, at around 15 to 17 years of age, individuals already distinguish between PBJW and GBJW (Dette, Stoeber, & Dalbert, 2004). However, there is no well-developed theory that can explain how and when an individual begins to differentiate between these two dimensions. There have been some attempts to better understand how PBJW and GBJW develop in adolescence; for instance, Dalbert and Sallay (2004) related it to the development of abstract thinking. According to the authors, individuals first form a PBJW, and when their cognitive development allows them to understand abstract representations, they can develop a GBJW. However, to the best of my knowledge, no follow-up studies have been conducted to test this idea. One should be cautious about relying on only explicit measures of BJW when studying the development of BJW because the ability to respond to scale items is related to cognitive abilities (Borgers, De Leeuw, & Hox, 2000; Knäuper, Belli, Hill, & Herzog, 1997).

Differentiation of the PBJW and GBJW might also be related to the development of perspective taking. Inhelder and Piaget (1958) found that at around 5 years of age, children develop the ability to understand that other people might have different experiences; that is, children develop the ability to take another's perspective. Later in life, this ability continues to develop until it reaches maturity. Preadolescent children are able to take another's perspective but not to the extent that adults can (Choudhury, Blakemore, & Charman, 2006). Understanding that the

world might be different for others than for oneself requires the ability to take the perspective of the other; thus, the distinction between a just world for the self and a just world for others might be somewhat related to the development of perspective taking. Such an assumption could be tested by implementing an adaptation of the implicit association test for measuring implicit BJW developed by Modesto and Pilati (2017). Such a test is less sensitive to the ability to understand written items and can thus be applied to study children of various ages.

Studies 1 and 3 presented in this dissertation used questionnaire designs and tested the hypothesis cross-sectionally, whereas Study 2 applied a longitudinal design. Therefore, one should be cautious about making causal implications. Unlike experimental studies with student samples, the cross-sectional design allowed us to access individuals from the general population with real-life experiences of unfairness. Future research should instead aim to conduct quasi-experimental studies that will allow more information to be learned about the relationship between unfairness and BJW. However, acquiring participants who have experienced unfairness (e.g., victims of crime) is a difficult task. One way to overcome such a challenge would be to collaborate closely with victim support services and the police. Some BJW items could be included in routine assessments of victims' needs and psychological adjustment. Although such a method would introduce complex data protection issues that would need to be solved, this would allow researchers to collect large samples of various crime victims.

The three studies presented in the current dissertation showed that certain facets of the unfair situation as well as personal resources contribute to people's reactions to and ability to cope with unfair situations regardless of the person's perspective as a victim, an observer, or a perpetrator. The current dissertation acquired knowledge about possible moderators of threats to BJW such as perceptions of justice in the criminal justice process, social support, and life

satisfaction. Future studies could focus on variables such as justice sensitivity. Justice sensitivity reflects individuals' propensities to react to injustice from the victim, observer, perpetrator, and beneficiary perspectives (Baumert & Schmitt, 2016). It is plausible that people who are highly sensitive to justice matters would be more threatened by injustices. For instance, individuals who are high on victim sensitivity might feel more severely victimized and might perceive injustice in a criminal justice process, which, in turn, can have an effect on their BJW. Individuals who are high on observer sensitivity might witness more unfairness and react to it more severely, which might in turn have an impact on their endorsement of BJW. High perpetrator and beneficiary sensitivity can contribute to fair behavior because such people would notice if they had an unfair advantage in a situation and would immediately take action to reduce the unfairness. Because of this, beneficiary and perpetrator sensitivities might be confounding variables when the goal is to predict unfair behavior.

Practical Implications

The findings in the current dissertation have important practical implications. The findings from Study 1 showed that severe criminal victimization can threaten the BJW. Therefore, BJW measures could be included in police assessment tools that measure victims' needs. Measuring the endorsement of BJW can help researchers judge the magnitude of the threat a victim experienced. If an individual gives up their just world beliefs, it might signal possible psychological traumatization. Such information could be helpful for making appropriate referrals to specialized help centers.

A shattered BJW cannot serve its adaptive functions and can therefore lead to mental health problems (Janoff-Bulman, 1992). Recent literature suggested that the rebuilding of the BJW should be one of the goals of clinical interventions. Cognitive behavioral therapy and cognitive

processing therapy could address inadequate beliefs and thoughts about fairness in the world and help clients rebuild or accommodate their belief systems so they better reflect reality (Grove, 2019; Schleider, Woerner, Overstreet, Amstadter, & Sartor, 2018). Clinical interventions can also help strengthen other resources that serve similar functions as BJW (Hafer & Rubel, 2015). For instance, clinical professionals could emphasize social ties that would provide good social support or teach constructive coping techniques.

The findings from Study 1 showed that information provision plays a crucial role in helping victims recover their BJW and should be considered when training police officers and other first responders. There have been some procedural justice training practices that have focused on teaching procedural justice principles and interpersonal skills to police officers (Antrobus, Thompson, & Arial, 2019; Skogan, Van Craen, & Hennessy, 2015). These training programs have focused on procedural justice models, but they could be complemented by teaching the officers how to provide information effectively.

Study 2 showed that the BJW of observers of injustice can also be threatened. A threatened BJW can lead to harsh attitudes toward victims, which can pose additional stress to the victims (Herman, 2003). Therefore, attempts should be made to minimize threat for observers too. Some recommendations for the news media could be released to explain what kind of information helps to reduce threat. Cases of injustice attract people's attention and produce strong reactions, but they do not help improve the well-being of society in general. News media can provide information about actions that can restore justice (e.g., a criminal trial and its outcome and victim compensation), which can help to restore the BJW of those who were the witnesses of the events. Moreover, observers who are close to the victim can experience a threat to their BJW as well. Therefore, when providing support and professional help to victims, their social circles should be

included in the recovery process. Interventions that can teach people how to address and minimize the threat to a BJW (e.g., by providing more information about the experience of victimization and how to address harmful attitudes) could help support the victims indirectly.

Research on relationships between BJW and unfair behavior has been very promising. Knowing factors that contribute to unfair, criminal, and corrupt behavior can help predict such behavior and prevent relapse. One might use such knowledge in recruitment procedures for government and police positions as well as when making parole decisions. However, more research should be conducted to improve the understanding of how beliefs about a just world contribute to unfair behavior.

Conclusion

Overall, the three studies presented in the current dissertation showed that people everywhere in the world can feel threatened by injustice. When they observe, experience, or commit injustice, they try to restore it. Some, like Martin Luther King Jr., take action, whereas others restore justice by using cognitive strategies. How people deal with injustice depends on their personal resources and how the authorities and other people responded. Is it possible to eradicate injustice all together? Probably not. But it is up to governments to react to injustice in such a way that the citizens will not resort to irrational ways of restoring it.

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Affidavit

I hereby expressly declare that I have prepared the dissertation independently and have not used any sources other than those indicated. All passages, illustrations, and the like taken verbatim or in terms of content from other works have been clearly marked as such.

The dissertation has not been submitted in an identical or a similar form to any other examination authority. It has not been submitted to any other university.

The dissertation is based on three publications. Study 1 has been submitted to the journal of Social Justice Research and accepted for review. Study 2 has been submitted to the Journal of Personality and is in review. Study 3 has been published in the Journal of Social and Political Psychology, Vol 7(1), 246-249, https://doi.org/10.5964/jspp.v7i1.1031. The proof of the status of each publication is provided as an attachment to this document.

The general introduction and general discussion were written by me. Each publication was written by me as a first author and in collaboration with other researchers. The author contributions in each study are provided as an attachment to this document.

Karlsruhe, 03.02.2021 Kotryna Stupnianek

Author contributions

Study 1

Stupnianek, K., Schmitt, M.

“Crime Victims’ Belief in a Just World: Do Perceptions of Justice in the Criminal Justice System Matter?”

S.K. devised a conceptual idea, designed a study, prepared study materials, collected the data, processed and analyzed the data, wrote a paper with the input of S.M. S.M. was involved in planning and supervised the work.

Study 2

Stupnianek, K., Wu, M. Sh., Schmitt, M.

“A school rampage threatens beliefs in justice: A longitudinal study of the belief in a just world among Chinese adolescents”

S.K. devised a conceptual idea and wrote a paper with the input of W.M.Sh. and S.M, processed and analyzed the data. W.M.Sh. prepared the materials and collected the data. S.M. supervised the work.

Study 3

Stupnianek, K., Navickas, V.

“Can Beliefs in Justice Predict Corrupt Behavior?”

S.K. devised a conceptual idea and wrote a paper with the input of N.V., processed and analyzed the data. Both authors prepared the materials and collected the data.

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09 2008 – 06 2012	BA in Psychology Vilnius university, Vilnius (Lithuania) Bachelor thesis "Relations Between Stress and Social Information Processing" Thesis professor: Prof. G. Valickas

Publications

Stupnianek, K. and Navickas, V. (2019). Can beliefs in justice predict corrupt behavior? *Journal of Social and Political Psychology, 7*(1), 246-259. https://doi.org/10.5964/jspp.v7i1.1031

Stupnianek, K., Wu, M. S., and Schmitt, M. (*In Review*). A school rampage threatens beliefs in justice: A longitudinal study of the belief in a just world among Chinese adolescents.

Stupnianek, K. and Schmitt, M. (*Accepted for Review*). Belief in a just world of crime victims: Do justice perceptions in a criminal justice system matter?

Conferences

17th Biennial Conference of the International Society for Justice Research (2018)

Poster "The Stability of the Belief in a Just World When Experiencing Injustice: Effects of Procedural Justice"
Poster "Do People with Strong Beliefs in a Just World Give Less Bribes?"
Presentation at PhD Workshop "The Stability of the Belief in a Just World When Experiencing Injustice: Effects of Procedural Justice"

The 42nd Annual Scientific Meeting of the International Society of Political Psychology (2019)

Blitz presentation "Belief in a just world in face of injustice: A role of social support: Theoretical background"

15th DPPD Conference

Poster "Do People with Strong Beliefs in a Just World Give Less Bribes?"

Research experience

01 2019 – 07 2019	Researcher – Psychologist The Center for Crime Prevention in Lithuania Research project "VICToRIIA. Best Practices in Victims' Support: Referrals, Information, Individual Assessment" (funded by European Commission, Directorate – General Justice and Consumers) *Assisted in preparation of the project proposal.* *Drafted a national report about available legal, social, and psychological assistance for victims of crime in Lithuania.*
04 2015 – 12 2016	Junior Researcher Vilnius university Faculty of Philosophy, Criminology Studies Center Research project "Social Context of Corruption" (funded by the Research Council of Lithuania) *Conducted an empirical study about psychological factors of corruption in Lithuania. Prepared a report and published an article in peer-reviewed journal.*
08 2013 – 03 2015	Specialist Vilnius university Faculty of Philosophy Department of General Psychology Research project "Social Perception of Judges' Behavior and Image" (funded by the Research Council of Lithuania) *Took part in study planning, questionnaire design and data collection.*

Teaching experience

04 2017 – 07 2017	Postgraduate course "*Conflict prevention and promotion of cooperation*"
04 2018 – 07 2018	Undergraduate course "*Differential and personality psychology*"
10 2018 – 02 2019	Postgraduate course "*Personality psychology of conflict and cooperation*"
04 2019 – 07 2019	Postgraduate course "*Conflict prevention and promotion of cooperation*"
10 2019 – 02 2020	Postgraduate course "*Personality psychology of conflict and cooperation*"
10 2019 – 02 2020	Undergraduate course "*Empirical Research Practice*"

Additional activities

Work experience

03 2016 – 06 2016	Victim support service worker
	Vilnius Women's House, Vilnius (Lithuania)
	Provided informational, emotional, and social support for victims of domestic violence.
	Organized and participated in awareness raising campaign.
12 2014 – 01 2016	Psychologist
	Vilnius County Court, Vilnius (Lithuania)
	Collaborated with police officers, prosecutors, and judges.
	Conducted forensic interviews with and psychological assessment of children and adolescents.

Other activities

2014 - 2016	Victim support initiative
	Established and managed an initiative of support for victims of crime in Lithuania.
2014 - 2016	Crisis intervention center
	Volunteered in providing a psychological support for people undergoing psychological crisis.
2014 - 2016	Emotional support hotline
	Volunteered in providing emotional support for people at risk of suicide.

Media coverage

Expert comment about sexual harassment case at work:

https://www.lrt.lt/naujienos/lietuvoje/2/949792/siausiasi-del-baltu-drambliu-seksistinio-iraso-jie-turi-prisiimti-atsakomybe

An article about criminal victimization and an impact of criminal justice system:

https://www.bernardinai.lt/2017-07-07-kur-ir-kodel-kreiptis-pagalbos-nukentejus-nuo-nusikaltimo/

Expert comments about forensic interviewing of children in court:

https://www.delfi.lt/news/daily/law/klausk-teisininko-nuo-kokio-amziaus-vaikas-gali-issakyti-savo-nuomone.d?id=68041000

https://www.delfi.lt/news/daily/law/klausk-teisininko-ar-bylos-nagrinejimas-dar-labiau-nepakenks-iszagintai-mergaitei.d?id=66801952

Languages and skills

Lithuanian (*Native*)

English (*Fully proficient*)

German (*Can read and write with a dictionary*)

Russian (*Can read with a dictionary*)

Statistical software:

R Studio

Mplus

SPSS

Other technical skills:

MS Office

Website CMS: Wordpress

References

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