

Research Report

A Prospective Investigation of the Relationship Between Just-World Beliefs and the Desire for Revenge After September 11, 2001

Cheryl R. Kaiser,¹ S. Brooke Vick,² and Brenda Major²

¹Michigan State University and ²University of California, Santa Barbara

ABSTRACT—*We prospectively examined the relationship between individuals' belief in a just world and their desire for revenge against the perpetrators of the September 11 terrorist attacks against the United States. Eighty-three undergraduate students who had completed a measure of just-world beliefs prior to the terrorist attacks were assessed approximately 2 months following the attacks. The more strongly they had endorsed just-world beliefs prior to the attacks, the more distressed they felt about the attacks and the more they desired revenge. Furthermore, the relationship between belief in a just world and the desire for revenge was mediated by feelings of distress in response to the terrorist attacks. The results point to the importance of justice beliefs in understanding responses to the terrorist attacks.*

Individuals have a fundamental need to perceive their social world as stable, orderly, and predictable (Bowlby, 1969; Erickson, 1950; Greenberg, Solomon, & Pyszczynski, 1997; Jost & Banaji, 1994; Lerner, 1980; Marx & Engels, 1846/1970). Perceiving the social world as orderly and predictable provides individuals with a number of benefits, including enhanced control, motivation, self-efficacy, self-worth, mental health, and normative proscriptions for behavior (Greenberg et al., 1997; Janoff-Bulman, 1989; Lipkus, Dalbert, & Siegler, 1996).

The belief in a just world (BJW) contributes to the perceived orderliness and stability of the social world. BJW refers to the conviction that individuals get what they deserve and deserve what they get

(Lerner, 1980). Individuals differ in the extent to which they endorse BJW, with strong endorsers of BJW being more likely to possess an internal locus of control, endorse the Protestant work ethic, support conservative political values, and score highly on measures of authoritarianism relative to weak endorsers of BJW (see Furnham & Procter, 1989, for a review). One important function served by BJW is to provide individuals with the ability to make sense of negative events in their social world (Lerner, Miller, & Holmes, 1976). This explanatory style is adaptive because it protects individuals from feeling vulnerable to negative events. As long as people are good, bad things will not happen to them. Indeed, the more individuals endorse just-world beliefs, the less vulnerable they feel to a wide array of threats (Bulman & Wortman, 1977; Hafer & Olson, 1993; Lambert, Burroughs, & Nguyen, 1999).

What happens, however, when these beliefs are challenged? When individuals encounter strong evidence that their world is not just and fair after all, they experience a heightened sense of fear, stress, anxiety, and vulnerability (Janoff-Bulman, 1989; Lerner, 1980; Tannenbaum & Gaer, 1965). For most Americans, the terrorist attacks on the United States on September 11, 2001, qualified as such an unjust event (Pyszczynski, Solomon, & Greenberg, 2003). Indeed, in the days following the terrorist attacks, Americans reported a heightened sense of uncertainty about the world. A majority of Americans (63%) reported that their personal sense of safety and security was shaken by the attacks (Saad, 2001, as cited in Fredrickson, Tugade, Waugh, & Larkin, 2003). Six months after September 11, 47% of Americans reported feeling less safe and secure because of the terrorist attacks (Institute for Social Research, 2002). Thus, the victimization of thousands of innocent Americans on September 11 posed an extreme challenge to BJW.

One response to such unjust events would be to restore justice cognitively, for example, by convincing oneself that people who

Address correspondence to Cheryl R. Kaiser, Department of Psychology, Michigan State University, East Lansing, MI 48824; e-mail: kaiserc6@msu.edu.

suffered deserved their fate and by derogating innocent victims (Lerner & Miller, 1978; Lerner et al., 1976). After September 11, BJW could be sustained if America was seen to have deserved the attack. This strategy of blaming the victim is attenuated, however, when individuals identify with the victim (Chaikin & Darley, 1973; Lerner & Mathews, 1967). When individuals perceive that they could suffer the same fate as the victim, they respond with sympathy and understanding, rather than victim blame. Because the terrorist attacks represented an attack against Americans as a whole, interdependence of the victims' and observers' fate was extremely strong, making victim blame an unlikely response.

A second response to such events would be revenge—to punish the transgressor or group responsible for the threat. Getting retribution is an effective technique for protecting one's belief that the world is just and for reestablishing moral order (Lerner, 1980; McCullough, Bellah, Kilpatrick, & Johnson, 2001). If the transgressors are punished for their behavior, then perceptions of injustice are attenuated because the perpetrators get what they deserve (Walster, Walster, & Berscheid, 1978). Furthermore, individuals who are most distressed over moral offenses are particularly likely to advocate revenge (McCullough et al., 2001). Because the events of September 11, 2001, may have been particularly challenging to individuals who strongly endorse BJW, they may be especially likely to desire revenge.

In the present study, we examined prospectively the relation between individuals' BJW (assessed prior to September 11) and their desire for revenge against the terrorists. We hypothesized that the more strongly individuals believed prior to the attacks that the world is just, the more distressed they would feel about the terrorist attacks, because the attacks posed such a challenge to BJW. Further, we hypothesized that the more strongly individuals endorsed BJW, the more they would attempt to restore justice by advocating revenge after September 11. Finally, we hypothesized that the relation between BJW and the desire for revenge would be mediated by feelings of distress in response to the terrorist attacks. Though we believed it unlikely that participants would attempt to restore justice by blaming the victim, we did assess the extent to which they responded to the terrorist attacks by blaming America, and whether BJW predicted this response.

METHOD

Overview of Design and Participants

Participants were 83 undergraduates at the University of California, Santa Barbara (35.4% male, 64.6% female; mean age at initial assessment = 18.6 years, $SD = 0.7$ years). Participants were all U.S. citizens and were predominantly European American (64.1%), with the remainder reporting Asian American (20.5%), Latin American (7.8%), African American (3.8%), or "other" (3.8%) racial-ethnic backgrounds. In the initial assessment (conducted between January and April 2001), participants completed a BJW measure as part of a mass testing session. Students who completed this measure were randomly contacted to participate in the post-September 11 assessment phase (conducted during a 1-week period in mid-November 2001). Prior to their arrival, students were not informed that the research study concerned reactions to the terrorist attacks or was related to their survey responses in the initial assessment phase. Participants received \$10 in exchange for participating in the post-September 11 assessment.

At the post-September 11 assessment, participants received a written summary describing the study as an investigation of students' feelings about the terrorist attacks. Participants then completed a number of measures, only some of which were relevant to the present research. Relevant measures included items assessing terrorism-related distress, the desire for revenge, and victim blame.

Pre-September 11 Assessment Measure

BJW was assessed with an 8-item measure of BJW for other people (Lipkus et al., 1996). Items on this measure include "I feel the world treats people fairly," "I feel that people get what they deserve," and "I feel that when people meet with misfortune, they have brought it upon themselves" ($\alpha = .84$). Scale endpoints were 0 (*strongly disagree*) and 6 (*strongly agree*).

Post-September 11 Assessment Measures

Terrorism-Related Distress

Distress items assessed the extent to which participants were bothered by "feeling very upset when something reminded you of the terrorist attacks and the aftermath of the events"; "repeated, disturbing memories, thoughts, or images of the terrorist attacks and the aftermath of the events"; and "feeling threatened by terrorism targeted against the United States" ($\alpha = .68$). Scale endpoints were 1 (*not at all*) and 5 (*extremely*).

Desire for Revenge

The desire for revenge was assessed with the following items: "I support the retaliatory political actions taken by the United States government," and "It is important that the United States take revenge on the people and countries that were responsible for the terrorist attacks" ($\alpha = .77$). Scale endpoints were 1 (*not at all true*) and 5 (*extremely true*).

Victim Blame

We assessed victim blame with two items: "I blame America's foreign policy decisions for causing the terrorist attacks," and "I blame America for bringing the terrorist attacks upon itself" ($\alpha = .77$). Scale endpoints were 1 (*not at all true*) and 5 (*extremely true*).

RESULTS

As can be gleaned from Table 1, the correlations obtained are consistent with the hypotheses that the more strongly individuals endorsed BJW prior to September 11, the more distressed they were about the terrorist attacks, and the more they desired revenge against the terrorists. The correlations show no relationship between BJW and victim blame, and show a negative relationship between terrorism-related distress and victim blame.

We used Baron and Kenny's (1986) mediational-analysis procedures to test our hypothesis that pre-September 11 BJW would be associated with increased distress after the terrorist attacks, which in turn would be positively associated with the desire for revenge. Because men are more likely than women to endorse dominance-related behaviors such as revenge seeking (Sidanius, Pratto, & Bobo, 1994), we entered participant's sex as a covariate in the first step of all

TABLE 1
Means, Standard Deviations, and Partial Correlations Between the Variables

Variable	Mean	Belief in a just world	Terrorism-related distress	Desire for revenge
Belief in a just world	2.4 (0.9)	—	—	—
Terrorism-related distress	2.5 (0.8)	.30**	—	—
Desire for revenge	2.9 (1.1)	.24*	.33**	—
Victim blame	2.0 (1.1)	-.04	-.33**	-.28*

Note. Standard deviations are in parentheses. Correlations between variables control for the influence of participant's sex.

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

analyses presented here. In these analyses, there were never higher-order interactions involving participant's sex ($ps > .18$).

Our first regression analysis examined whether BJW significantly predicted the desire for revenge. The first step of the analysis indicated that men were more likely than women to desire retaliatory actions for the September 11 terrorist attacks, $\beta = -.38, p < .01; R^2 = .14; F(1, 80) = 13.44, p < .01$. Consistent with predictions, the second step of the analysis was significant and indicated that the more participants endorsed BJW, the more they approved of seeking revenge for the terrorist attacks, $\beta = .23, p < .05; \Delta R^2 = .05; F(1, 79) = 4.94, p < .05$ (see Fig. 1).

Our second regression analysis examined whether BJW was a significant predictor of terrorism-related distress. The first step of the analysis was significant, indicating that women experienced greater terrorism-related distress than men, $\beta = .32, p < .01; R^2 = .10; F(1, 80) = 8.90, p < .01$. Consistent with predictions, the second step of the analysis was significant and revealed that BJW significantly predicted terrorism-related distress, $\beta = .28, p < .01; \Delta R^2 = .08; F(1, 79) = 7.54, p < .01$. The more participants endorsed BJW, the more terrorism-related distress they experienced.

The third analysis tested for mediation by simultaneously entering BJW and terrorism-related distress into a regression analysis predicting desire for revenge. The second step of the analysis demonstrated that the overall regression was significant, $\Delta R^2 = .11; F(2, 78) = 5.84, p < .01$. Terrorism-related distress was a significant and

positive predictor of desire for revenge, $\beta = .27, p < .05$. Furthermore, when terrorism-related distress was entered into the model, the direct relationship between BJW and desire for revenge was no longer significant, $\beta = .15, p = .15$. A Goodman II test indicated the drop in the beta for BJW was significant, $p = .05$. Thus, terrorism-related distress mediated the relation between BJW and desiring revenge for the September 11 terrorist attacks.

Because the initial correlational analyses revealed that BJW was unrelated to blaming the terrorist attacks on America, mediational analyses of victim blame were inappropriate.

DISCUSSION

The present study prospectively examined the relation between individuals' belief in a just world and their desire for revenge against the terrorists who attacked the United States on September 11, 2001. As predicted, those individuals who most strongly endorsed BJW prior to the terrorist attacks reported the most distress following the attack, and were most likely to desire revenge. These results are consistent with our hypothesis that a strong challenge to just-world beliefs can increase distress and motivate individuals to advocate revenge, as a means of justice restoration. Punishing the people who perpetrated the injustice is a form of retributive justice: Although bad things happened to good people, if those responsible are punished, they will get what they deserve, which will restore justice.

The most studied response to threatened just-world beliefs is blaming the victim, for example, by derogating his or her personality or character (Lerner & Miller, 1978). Participants in the current study, however, generally did not blame the terrorist attacks on the United States, probably because of their shared identity with the United States. In the immediate aftermath of the attacks, it was unlikely that many Americans would blame fellow Americans or the policies of their country for the horrible events of that day.

Finally, some caveats are appropriate in interpreting our findings. First, because of the prospective nature of the study, we were unable to include other potentially important correlates of pre-September 11 BJW that might provide complementary or alternative explanations for our findings. For example, it is possible that political conservatism or authoritarianism (both of which are positively correlated with BJW), rather than BJW, is responsible for the effects observed in this study (Furnham & Procter, 1989). Second, our explanation that BJW was not associated with increased victim blame because Americans identified with the September 11 victims is speculative because we did not include a measure of identification with the victims. However, because membership in social groups, such as one's nationality, is a part of the self, American identity was likely salient for U.S. citizens, including those in our study, after the terrorist attacks. Indeed, in the days and months following the attacks, Americans reached out to help their fellow citizens in record numbers. For example, blood-donation centers were overwhelmed with donors, and Americans contributed millions of dollars to the victims of the attacks (Pyszczynski et al., 2003). Additionally, displays of American identification were widespread—stores could not keep American flags in stock, patriotic songs were commonplace on the radio, and New York citizens showed up for jury duty in record numbers (Fritsch, 2001; Pyszczynski et al., 2003). These responses are consistent with Allport's (1954) claim that threats to the group increase group cohesion.

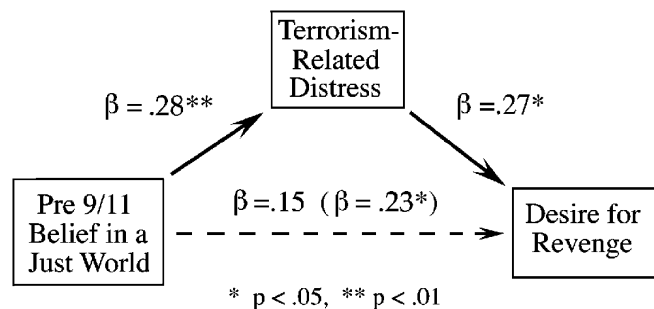


Fig. 1. Path analysis of the relation between pre-September 11 belief in a just world and the desire for revenge. The dashed line shows the direct unmediated relationship between pre-September 11 belief in a just world and the desire for revenge (beta in parentheses) and the subsequent relationship (beta not in parentheses) when the mediator is included in the model.

The effects of the terrorist attacks can be felt all over the world, as individuals, leaders, and nations all struggle with how to respond to these events. In such a climate, it is important to understand the significant role that justice beliefs play in determining and understanding those responses. This prospective study shows that BJW can leave individuals vulnerable to feelings of distress when faced with large-scale injustice and that those feelings of distress can contribute to the desire to seek revenge.

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REFERENCES

- Allport, G. (1954). *The nature of prejudice*. New York: Doubleday Anchor.
- Baron, R.M., & Kenny, D.A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, *51*, 1173–1182.
- Bowlby, J. (1969). *Attachment and loss: Vol. 1. Attachment*. New York: Basic Books.
- Bulman, R.J., & Wortman, C.B. (1977). Attributions of blame and coping in the “real world”: Severe accident victims react to their lot. *Journal of Personality and Social Psychology*, *35*, 351–363.
- Chaikin, A.L., & Darley, J.M. (1973). Victim or perpetrator?: Defensive attribution of responsibility and the need for order and justice. *Journal of Personality and Social Psychology*, *25*, 268–275.
- Erickson, E.H. (1950). *Childhood and society*. New York: Norton.
- Fredrickson, B.L., Tugade, M.M., Waugh, C.E., & Larkin, G.R. (2003). What good are positive emotions in crises? A prospective study of resilience and emotions following the terrorist attacks on the United States on September 11th, 2001. *Journal of Personality and Social Psychology*, *84*, 365–376.
- Fritsch, J. (2001, October 5). A change in jury duty: Now, a call may be enough. *The New York Times*, p. D1.
- Furnham, A., & Procter, E. (1989). Belief in a just world: Review and critique of the individual difference literature. *British Journal of Social Psychology*, *28*, 365–384.
- Greenberg, J., Solomon, S., & Pyszczynski, T. (1997). Terror management theory of self-esteem and cultural worldviews: Empirical assessments and conceptual refinements. In M.P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 29, pp. 61–139). San Diego, CA: Academic Press.
- Hafer, C.L., & Olson, J.M. (1993). Beliefs in a just world, discontent, and assertive actions by working women. *Personality and Social Psychology Bulletin*, *19*, 30–38.
- Institute for Social Research. (2002). *How America responded*. Retrieved April 15, 2003, from University of Michigan News Information Services Web site: <http://www.umich.edu/%7Enewsinfo/Releases/2002/Sep02/r091002.html>
- Janoff-Bulman, R. (1989). Assumptive worlds and the stress of traumatic events: Applications of the schema construct. *Social Cognition*, *7*, 113–136.
- Jost, J.T., & Banaji, M.R. (1994). The role of stereotyping in system-justification and the production of false consciousness. *British Journal of Social Psychology*, *33*, 1–27.
- Lambert, A.J., Burroughs, T., & Nguyen, T. (1999). Perceptions of risk and the buffering hypothesis: The role of just world beliefs and right-wing authoritarianism. *Personality and Social Psychology Bulletin*, *25*, 643–656.
- Lerner, M.J. (1980). *The belief in a just world: A fundamental delusion*. New York: Plenum Press.
- Lerner, M.J., & Matthews, G. (1967). Reactions to suffering of others under conditions of indirect responsibility. *Journal of Personality and Social Psychology*, *5*, 319–325.
- Lerner, M.J., & Miller, D.T. (1978). Just world research and the attribution process: Looking back and ahead. *Psychological Bulletin*, *85*, 1030–1051.
- Lerner, M.J., Miller, D.T., & Holmes, J.G. (1976). Deserving and the emergence of forms of justice. In L. Berkowitz & E. Walster (Eds.), *Advances in experimental social psychology* (Vol. 9, pp. 133–162). New York: Academic Press.
- Lipkus, I.M., Dalbert, C., & Siegler, I.C. (1996). The importance of distinguishing the belief in a just world for self versus others. *Personality and Social Psychology Bulletin*, *22*, 666–677.
- Marx, K., & Engels, F. (1970). *The German ideology* (C.J. Arthur, Ed.). New York: International Publishers. (Original work published 1846)
- McCullough, M.E., Bellah, C.G., Kilpatrick, S.D., & Johnson, J.L. (2001). Vengefulness: Relationships with forgiveness, rumination, well-being, and the Big Five. *Personality and Social Psychology Bulletin*, *27*, 601–610.
- Pyszczynski, T.A., Solomon, S., & Greenberg, J. (2003). *In the wake of 9/11: The psychology of terror*. Washington, DC: American Psychological Association.
- Sidanius, J., Pratto, F., & Bobo, L. (1994). Social dominance orientation and the political psychology of gender: A case of invariance? *Journal of Personality and Social Psychology*, *67*, 998–1011.
- Tannenbaum, P.H., & Gaer, E.P. (1965). Mood change as a function of stress of protagonist and degree of identification in a film-viewing situation. *Journal of Personality and Social Psychology*, *2*, 612–616.
- Walster, E., Walster, G.W., & Berscheid, E. (1978). *Equity: Theory and research*. Boston: Allyn & Bacon.

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