

World Assumptions in Psychosis

Do Paranoid Patients Believe in a Just World?

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Abstract: The aim of this study was to examine the contents of world views held by patients with current persecutory beliefs. We examined whether these beliefs in a just world (BJW) were associated with the severity of psychopathology of participants. Our results showed that, compared with a healthy control group, the current persecutory beliefs group had weaker beliefs in a just world related to themselves (BJW-P), but there were no differences between both groups in their beliefs in general justice in the world (BJW-G). Regression analyses showed that BJW, particularly weaker beliefs in personal justice, significantly associated with more severe symptoms of depression and paranoia as well as with lower scores of psychological well-being. Our results support the relevance of the BJW framework in exploring world views in patients with persecutory beliefs. We discuss the implications of these results for the research and treatment of paranoid ideation.

Key Words: Psychosis, paranoia, world views, cognitive schemas, schizophrenia.

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In the last 2 decades, research on cognition in psychoses has confirmed the existence of distinctive cognitive deficits in theory of mind (Bora et al., 2009), in recognition of emotional faces (Kohler et al., 2009), and in semantic processing of information (Bokat and Goldberg, 2003). More recently, analyses of the contents of cognitive schemas have also been incorporated into models of paranoia and persecutory delusions (Bentall et al., 2001; Chadwick et al., 1996; Freeman et al., 2002).

In recent years, Garety et al. have proposed that delusional explanations reflect preexisting beliefs about the self, world, and others (Garety et al., 2001). Although there is an emerging body of research, and theoretical controversies, over the self-related components of paranoid patient's schemas (Fowler et al., 2006), there has been much less emphasis placed on examining social and world schemata of these patients. Yet, there is some indirect empirical evidence on the characteristics of these world views in patients with persecutory delusions. Research on causal attributions (Bentall et al., 2001), for instance, has shown a tendency in these patients to attribute to others negative outcomes. These findings provide empirical support to the clinical observation that patients with paranoia probably have a severely affected construction of themselves and their social environment (Kretschmer, 1927/1974; Swanson et al., 1970).

Investigation of paranoid patients' beliefs about the benevolence and justice of the world can be highly relevant in this regard. As Freeman and Garety (2000) pointed out, an essential characteristic of persecutory ideation is the belief that the persecutor has the intention to cause the harm. In other words, the content of paranoid beliefs is marked by the idea of being unfairly treated, or of being humiliated in a hostile world (Bentall et al., 2009). It is possible that these persecution ideas are somehow associated with shattered central beliefs regarding trust and justice in both the personal and interpersonal world. The major goal of this study is precisely to explore these beliefs in patients with paranoia.

A fruitful theoretical framework to analyze people's world views is that of the beliefs in the just world (BJW). According to this theory, healthy people are motivated to believe in a just world where every one generally gets what they deserve (Lerner and Miller, 1978). Studies with nonclinical samples have shown that BJW are a personal resource, which buffers against stress and enhances achievement behavior (Dalbert, 1998; Hafer and Olson, 1998). It has also been well documented that BJW effects are stable and generalized across cultures (Furnham and Procter, 1989).

Researchers of the BJW have distinguished two basic components in these beliefs (Dalbert, 1999). On one hand, personal BJW (BJW-P) implies that events in one's own life are just. On the other hand, general BJW (BJW-G) reflects the belief that the world is basically a just place. Results show that people from the general population score higher in the BJW-P component than in the BJW-G one (Dalbert, 1999) and several studies have supported the validity of this distinction. For instance, Dzuka and Dalbert (2002) have shown that, compared to BJW-G, BJW-P is a better predictor of well-being and self-esteem in the general population. However, BJW-G is highly associated with harsh social attitudes toward others' misfortunes (Bégué and Muller, 2006; Sutton and Douglas, 2005). Using community samples, Otto et al. (2006) found that BJW reduce the incidence of psychopathological symptoms following a natural disaster. Thus, there is evidence that suggests BJW-P, rather than BJW-G, not only promote well being but also buffer psychological distress.

The primary goal of this study was to examine beliefs on general and personal justice in persons with persecutory beliefs. First, we hypothesized that, compared with a nonpsychiatric control group, patients with current persecutory (CP) beliefs would have weaker beliefs in personal justice but there would be no differences in regard to general beliefs on the distribution of justice in the world. Our second hypothesis was that BJW-P would be negatively associated with the severity of psychopathology but positively associated with measures of personal well-being.

METHODS

Participants

All participants volunteered to collaborate in the study after reading and signing a consent form. Two groups of participants were formed; a summary of participants' characteristics is presented in Table 1.

CP beliefs group included 40 participants, 21 males and 19 females, who were adult inpatients of an 80-bed psychiatric unit in

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TABLE 1. Comparison of Demographic Characteristics of Paranoid Patients Versus Healthy Comparison Subjects

Characteristics	Paranoia Group (n = 40)	Control Group (n = 44)	Chi Square	F	p
Gender					
Women, n (%)	19.00 (47.50)	24.00 (54.50)	0.18	—	n.s
Age, mean (SD)	34.56 (11.90)	37.41 (13.00)	—	1.10	n.s
Education, n (%)					
Primary education	18.00 (47.40)	6.00 (13.60)	1.48	—	0.001**
Secondary school	9.00 (23.70)	10.00 (22.70)	—	—	—
University education	11.00 (28.90)	28.00 (63.60)	—	—	—
Employment, n (%):					
Never employed	8 (20.50)	12.00 (27.30)	7.29	—	n.s
Unemployment, >1 yr	11 (28.20)	5.00 (11.40)	—	—	—
Unemployment, <1 yr	5 (12.80)	2.00 (4.50)	—	—	—
Employed	15 (38.50)	25.00 (56.80)	—	—	—

Demographic variables were analyzed by Pearson *chi square* tests for qualitative variables, and by one-way ANOVA for quantitative variables.
 n.s = not significant.
 ***p* < 0.001.

a university hospital. These participants were currently suffering persecutory beliefs as assessed by the Present State Examination (PSE-10) (Wing, et al., 1974). Patients were selected through hospital records and DSM-IV diagnoses (American Psychiatric Association, 1994) were confirmed by trained clinicians with a clinical structured interview (MINIPLUS-v.5; Sheehan and Lecrubier, 2002). Patients with delusions of guilt were excluded, as these contents are usually associated with major depressive disorders with psychotic characteristics. Excluded from the study were also participants with severe cognitive impairment and active substance abuse. All inpatients meeting criteria were approached, 8 of 48 (16.66%) refused to participate. Patients met diagnostic criteria for the following categories: Schizophrenia paranoid type (*n* = 18) and residual type (*n* = 1), Schizophreniform disorder (*n* = 7), Schizoaffective disorder (*n* = 3), Delusional disorder (*n* = 8), Brief psychotic disorder (*n* = 2), and Psychotic disorder not otherwise specified (*n* = 1). All patients were receiving antipsychotic medication at the time of the study. All were on doses of atypical antipsychotic medication (injectable medication only, *n* = 1; oral medication only, *n* = 31; injectable plus oral, *n* = 8). Their mean age was 34.5 years (*SD* = 12.0). Their mean age of illness onset was 28.2 years (*SD* = 8.1) whereas their mean illness duration was 73 months (*SD* = 112.4).

The healthy control group (Group HC) was comprised of 44 participants, 20 males, and 24 females, who were recruited from the general population via informal contacts. Control participants were screened to confirm absence of current or history of mental health problems. These participants did not differ significantly from the clinical group in terms of age or gender. Their mean age was 37.4 years (*SD* = 13.0).

Measures

All participants in the study also completed a number of measures to assess psychopathology, well-being, and world views (Table 2).

Beck Depression Inventory-II

This is a widely used 21-item self-report questionnaire to assess depressive symptomatology (Beck et al., 1988). On the Beck

TABLE 2. General and Personal Beliefs in a Just World (BJW), Psychopathological Symptoms and Satisfaction With Life in Paranoid Patients and Healthy Comparison Subjects

Measure	Groups of Participants		
	Paranoia Group (n = 40)	Control Group (n = 44)	Cronbach α
BJW			
BJW-general	20.51 (6.05)	18.75 (5.46)	0.81
BJW-personal	18.39 (7.59)	25.00 (4.44)	0.91
Persecution ideation (PADS)	1.68 (1.21)	0.44 (0.43)	0.94
Depression (BDI-II)	13.89 (12.00)	6.13 (5.57)	0.94
Satisfaction with life (SWLS)	17.68 (7.82)	23.86 (5.07)	0.88

Values represent means (and SDs).
 SWLS indicates Satisfaction with Life Scale; BDI-II, Beck Depression Inventory II; PADS, Persecution and Deservedness Scale.

Depression Inventory-II, participants rated the occurrence of each symptom using a 4-point scale, and showed high internal consistency (α = 0.94).

The Persecution and Deservedness Scale

This instrument measures both severity of paranoid thinking and perceived deservedness of persecution (Melo et al., 2009). For the purpose of our study, we used the persecution subscale, 10 statements which assume that the individual is an object of the malevolence of others (e.g., “There are times when I worry that others might be plotting against me”). Participants are asked to rate each statement on a 5-point scale ranging from “certainly false” (0) to “certainly true” (4). Cronbach alpha was high (α = 0.94).

Beliefs in a Just World Scale—General (BJW-G)

This is a 6-item instrument to assess the extent to which one believes that there is justice in the world (e.g., “I think basically the world is a just place”) (Dalbert et al., 2001). Participants are asked to respond using a Likert scale ranging from “strongly disagree” (1) to “strongly agree” (6) where higher scores indicate a stronger belief in a just world. Cronbach alpha was high (α = 0.81).

Belief in a Just World Scale—Personal (BJW-P)

This scale includes 7 items designed to capture the conviction that, overall, events in one’s life are just (e.g., “I am usually treated fairly”) (Dalbert, 1999). Participants are asked to respond using the same 6-point scale as in the BJW-G. Cronbach alpha was 0.93.

Satisfaction With Life Scale

The satisfaction with life scale (SWLS) is a commonly used scale used to assess life satisfaction (Diener et al., 1985). The SWLS includes 5 items to assess the cognitive component of life satisfaction (e.g. “I am satisfied with my life”). Participants are asked to rate each item on a Likert-type scale ranging from “strongly disagree” (1) to “strongly agree” (7). The composite global score averaging its 5 items showed a high internal consistency (α = 0.87).

RESULTS

Participant Characteristics

A summary of participants’ demographic characteristics is presented in Table 1. Statistical analyses revealed no significant differences between groups in gender (χ^2 (1, *n* = 83) = 0.18,

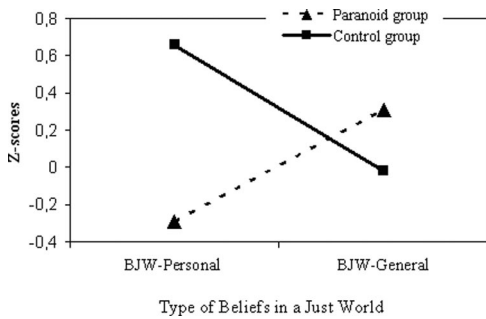


FIGURE 1. Means of normalized Beliefs in a Just World (BJW) scores by group.

TABLE 3. Product-Moment Correlations for Beliefs in Just World, Severity of Psychopathology, and Life Satisfaction

Variables	1	2	3	4	5	6
BJW-general	—	—	—	—	—	—
BJW-personal	0.34*	—	—	—	—	—
Life satisfaction (SWLS)	0.22	0.60*	—	—	—	—
Depression (BDI-II)	0.12	-0.20	-0.39*	—	—	—
Persecution ideation (PADS)	0.07	-0.49*	-0.32**	0.43*	—	—
Deservedness of persecution (PADS)	0.17	0.04	-0.27**	0.17	0.15	—

* $p < 0.01$.

** $p < 0.05$.

BJW indicates Beliefs in a Just World Scale; SWLS, Satisfaction with Life Scale; BDI-II, Beck Depression Inventory II; PADS, Persecution and Deservedness Scale.

$p = 0.67$, [ϕ] = 0.07), age ($F(1,82) = 1.11$, $p = 0.30$), and employment status ($\chi^2(3, n = 83) = 7.29$, $p = 0.063$, [ϕ] = 0.30). Yet, there was a significant difference on education ($\chi^2(2, n = 83) = 1.48$, $p = 0.001$, [ϕ] = 0.42), as the CP group had fewer graduate students than the HC group.

BJW, Psychopathology, and Life Satisfaction

Table 2 shows the means and standard deviations in the BJW scales and the rest of the scales. In regard to BJW, a 2-way repeated measures analysis of variance on Group (2) × Type of Beliefs (Personal/General) revealed a nonsignificant effect for the type of beliefs (Wilks Lambda (1,81) = 2.81, $p = 0.098$, $\eta^2 = 0.03$), which was qualified by a significant interaction (Wilks Lambda (1,81) = 35.99, $p = 0.0001$, $\eta^2 = 0.31$). One-way analysis of variance showed that although both groups did not significantly differ in their BJW-G ($F(1,81) = 1.94$, $p = 0.17$), the CP group had significantly weaker BJW-P than the HC group ($F(1,81) = 24.11$, $p = 0.001$; Fig. 1).

In regard to the rest of the measures, compared with the HC group, participants in the CP group showed more depressive symptoms ($F(1,79) = 14.60$; $p < 0.001$, $\eta^2 = 0.16$), higher scores in paranoid thinking ($F(1,77) = 27.75$; $p < 0.001$, $\eta^2 = 0.29$), and were significantly less satisfied with their life ($F(1,77) = 17.97$; $p < 0.001$, $\eta^2 = 0.19$).

BJW as Predictors of Satisfaction With Life, Depression, and Paranoid Thinking

We explored the relations of BJW to participants' severity of psychopathology and life satisfaction. As Table 3 shows, although BJW-G and BJW-P were positively related ($r = 0.34$, $p < 0.01$), BJW-G was not significantly related either to life satisfaction or psychopathology. However, BJW-P did significantly correlate with life satisfaction (SWLS) and severity of paranoia (persecution and

TABLE 4. Prediction of Severity of Persecution Ideation (PADS), Severity of Depression (BDI-II), and Well-being (SWLS), by Beliefs in a Just World (BJW) Scores

	ΔR^2	t	β	P
Dependent variable: persecution ideation (PADS)				
Step 1	0.12			
Gender		0.55	0.07	0.59
Age		-0.43	-0.06	0.67
Level of education		-2.17	-0.26	0.03
Employment status		-1.32	-0.18	0.19
Step 2	0.24*			
BJW-personal		-4.96	-0.61	0.00
BJW-general		2.46	0.28	0.02
Dependent variable: depression (BDI-II)				
Step 1	0.10			
Gender		2.35	.28	0.02
Age		-1.54	-0.20	0.12
Level of education		-1.49	-0.16	0.14
Employment status		-0.12	-0.01	0.91
Step 2	0.07**			
BJW-personal		-2.15	-0.28	0.04
BJW-general		2.01	0.24	0.05
Dependent variable: well-being (SWLS)				
Step 1	0.09			
Gender		-1.97	-0.24	0.05
Age		0.80	0.11	0.43
Level of education		1.98	0.22	0.05
Employment status		0.10	0.01	0.92
Step 2	0.31*			
BJW-personal		5.56	0.62	0.00
BJW-general		-0.11	-0.01	0.92

* $p < 0.01$.

** $p < 0.05$.

deservedness scale) but not with severity of depression. Higher scores on BJW-P were positively related to life satisfaction ($r = 0.60$, $p < 0.01$) but negatively related to the severity of paranoid beliefs ($r = -0.49$, $p < 0.01$).

To test the hypothesis that BJW have an effect on participants' satisfaction with life and clinical outcomes, we conducted a series of hierarchical multiple regression analyses to explore the relative contribution of the various sets of variables used in this study to predict those dependent variables (Table 4). Besides considering BJW-G and BJW-P as main predictors, demographic variables (i.e., gender, age, level of education, and employment status) were included into the analyses. Preliminary analyses were conducted to ensure no violation of the assumptions of normality, linearity, multicollinearity, and homoscedasticity.

In regard to the relations between BJW and the severity of persecution ideation (persecution and deservedness scale), demographic variables were entered at Step 1, explaining 11.6% of the variance of paranoia scores. After entering BJW-P and BJW-G at Step 2 the total variance explained increased significantly ($\Delta R^2 = 0.24$, $\Delta F(2,73) = 12.37$, $p = 0.001$) and the model reached significance ($F(6,77) = 5.99$, $p = 0.001$). Of all demographic variables that were taken into account, only educational level reached statis-

tical significance at Step 1 ($\beta = -0.26, p = 0.03$). Both BJW-G and BJW-P reached statistical significance in the regression model although the beta value for BJW-P was higher than for BJW-G (-0.61 vs. 0.28). The severity of paranoia symptoms was negatively related to beliefs in BJW-P but positively related to beliefs in BJW-G. These results suggest that BJW-G functions as a suppression variable (Lord and Novick, 1968) and variability of paranoia is better explained when both types of BJW are taken into account.

In regard to the prediction of severity of depression (Beck Depression Inventory-II), demographic variables were entered at Step 1, explaining 10% of the variance of depression scores. After entering personal and general BJW at Step 2 the total variance explained by the model as a whole was 17%, reaching statistical significance for the model ($F(6,77) = 2.50, p = 0.03$) after controlling for demographic characteristics ($\Delta R^2 = 0.07, \Delta F(2,74) = 3.04, p = 0.05$). Gender was statistically significant and positively related to depression ($\beta = 0.28, p = 0.0001$). BJW-G was positively related to depression ($\beta = 0.24, p = 0.05$), whereas BJW-P showed an inverse relation to the severity of depression ($\beta = -0.28, p = 0.04$). Similarly to our findings related to paranoid ideation, although BJW-G did not significantly correlate with depression (Table 3) the regression model indicated that it was a significant predictor of the severity of depression.

To assess the ability of general and personal BJW to predict satisfaction with life, demographic variables were entered at Step 1, explaining 9.1% of the variance in well-being (SWLS total score). After entering BJW-P and BJW-G at Step 2, the total variance explained by the model was 40.4%, reaching statistical significance ($F(6,77) = 8.00, p = 0.001$). BJW, personal and general, explained an additional 31.2% of the variance on well-being after controlling for demographic characteristics ($\Delta R^2 = 0.31, \Delta F(2,71) = 18.60, p = 0.001$). Gender, level of education, and BJW-P were statistically significant, but BJW-P yielded the highest beta value ($\beta = 0.62, p = 0.001$).

DISCUSSION

The examination of paranoid patients' world views confirmed our hypotheses. According to our first hypothesis, the group of participants with persecutory beliefs showed significantly weaker BJW-P than the control group, whereas there were no significant differences in regard to their views of justice in general. This pattern of results supports the validity of the personal versus general distinction (Dalbert, 1999) to explore differences in world views in patients with paranoid beliefs.

Deficits in BJW-P may have important behavioral and emotional consequences. According to Lerner (1980), a tendency to see the world as more fair for oneself than for others functions as a self-protective mechanism that allows perceiving oneself as a rather privileged person. It is likely that the relatively lower levels of personal BJW found in paranoia are a source of anger and frustration, making it more difficult to invest in prosocial goals and intensifying concerns about other's unfairness and ill-intentions which, ultimately, may lead to a negative mood and interpersonal hostility. Self-referent processing might play a crucial issue to explain these results. Most of delusions involve existential issues, which revolve around important personal concerns (Oltmanns, 1988). Given that stronger BJW have been associated with lower levels of rumination about the "why me?" question (Dalbert, 1997), it could be possible that significant lower levels of BJW-P found in paranoia could lock people into a self-rumination cycle, especially when they believe that others are treated comparatively better (as their preserved BJW-G reflects).

Another goal of our study was to explore to what extent these world views were related to negative and positive mental health

measures. Our results confirmed our second hypothesis, as stronger BJW-P was associated with less depression and less paranoid thinking. These relations persisted after controlling for gender, education level, and employment status. Therefore, although paranoid delusions are associated with a pessimistic thinking style (Bentall et al., 2009), it could be possible that this association is even stronger for thoughts specifically related to one's misfortune. Furthermore, our analyses have shown a positive relationship between BJW-G and psychopathology symptoms (i.e., high BJW-G scores were associated with higher levels of depression and persecution ideation). However, the effect of BJW-G on depression and paranoia occurred only when BJW-P was included into the equation. Thus, variability of psychopathology was explained better by lower scores of BJW-P when scores of BJW-G were higher.

In regard to this second hypothesis, our study also confirmed that BJW-P, rather than BJW-G, was significantly associated with different indexes of well-being. More specifically, regression analyses showed that life satisfaction was predicted only by BJW-P. This finding is congruent with the literature on psychological well-being that shows that life satisfaction is related to positive downward comparisons (i.e., the idea that one's life is more fortunate than the average)—e.g., Cummins and Nistico (2002). In our study, HCs seem to have a pattern consistent with a positive downward comparison bias, whereas paranoid participants seem to reflect a negative downward comparison bias (i.e., "my own life is less fortunate than the average").

This study is only a first step in the empirical examination of world views in paranoia. There are many issues that still deserve further exploration such as the origin of these central beliefs about the social and interpersonal world. Research on trauma has shown that highly traumatic events can sometime shatter victims' core assumptions on the predictability of life, the trust on other people, or the own self-worth (Janoff-Bulman, 1992). All current psychological models of delusion formation consider that traumatic events can play an important role in the origin of cognitive dysfunctions associated with delusions (Bentall et al., 2001; Garety and Freeman, 1999). Thus, a closer examination of the cognitive consequences of traumatic events in vulnerable populations could shed light on the origin of dysfunctional thoughts and beliefs related to personal or general justice.

A limitation of our study is that participants' contents of their cognitive schemas were evaluated through questionnaires. The use of implicit measures to assess cognitive schemas (e.g., Vázquez et al., 2008) can be an important step to explore core beliefs about the self and the world of which subjects are often not aware.

Although with some exceptions (e.g., Cubela Adoric, 2004; Otto and Dalbert, 2005), most studies show that BJW can be considered as a stable personality like variable (Dalbert, 2001). It would be important to determine whether, in the case of people with persecutory beliefs, these world views are stable or, on the contrary, are dependent on patients' clinical state. Further research should assess to what extent world views change after clinical interventions.

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REFERENCES

- American Psychiatric Association (Ed) (1994) *Diagnostic and Statistical Manual of Mental Disorders* (4th ed). Washington (DC): American Psychiatric Press.
- Beck AT, Steer RA, Garvin MG (1988) Psychometric properties of the Beck Depression Inventory: Twenty-five years of evaluation. *Clin Psychol Rev*. 8:77–100.

- Bégué L, Muller D (2006) Belief in a just world as moderator of hostile attributional bias. *Br J Soc Psychol*. 45:117–126.
- Bentall RP, Corcoran R, Howard R, Blackwood N, Kinderman P (2001) Persecutory delusions: A review and theoretical integration. *Clin Psychol Rev*. 21:1143–1192.
- Bentall RP, Rowse G, Shryane N, Kinderman P, Howard R, Blackwood N, Moore R, Corcoran R (2009) The cognitive and affective structure of paranoid delusions. A transdiagnostic investigation of patients with schizophrenia spectrum disorders and depression. *Arch Gen Psychiatry*. 66:236–247.
- Bokat CE, Goldberg TE (2003) Letter and category fluency in schizophrenic patients: A meta-analysis. *Schizophr Res*. 64:73–78.
- Bora E, Yucel M, Pantelis C (2009) Theory of mind impairment in schizophrenia: Meta-analysis. *Schizophr Res*. 109:1–9.
- Chadwick PD, Birchwood MJ, Trower P (Ed), (1996) *Cognitive Therapy for Delusions, Voices and Paranoia*. Chichester (United Kingdom): Wiley.
- Cubela Adoric V (2004) Belief in a just world and young adults' ways of coping with unemployment and the job search. In C Dalbert, H Sallay (Eds), *The Justice Motive in Adolescence and Young Adulthood: Origins and Consequences* (pp 189–214). London (United Kingdom): Routledge.
- Cummins RA, Nistico H (2002) Maintaining life satisfaction: The role of positive cognitive bias. *J Happiness Stud*. 3:37–69.
- Dalbert C (1997) Coping with unjust fate: The case of structural unemployment. *Soc Justice Res*. 10:175–189.
- Dalbert C (1998) Belief in a just world, well-being, and coping with an unjust fate. In L. Mantada & M J Lerner (Eds), *Responses to Victimization and Belief in a Just World* (pp 87–105). New York: Plenum.
- Dalbert C (1999) The world is more just for me than generally: About the personal belief in a just world scale's validity. *Soc Justice Res*. 12:79–98.
- Dalbert C (Ed) (2001) *The Justice Motive as a Personal Resource: Dealing With Challenges and Critical Life Events*. New York (NY): Plenum Press.
- Dalbert C, Lipkus IM, Sallay H, Goch I (2001) A just and an unjust world: Structure and validity of different world beliefs. *Pers Individ Dif*. 30:561–577.
- Diener E, Emmons R, Larsen RJ, Griffin S (1985) The satisfaction with life scale. *J Pers Assess*. 49:71–75.
- Dzuka J, Dalbert C (2002) Mental health and personality of Slovak unemployed adolescents: The impact of belief in a just world. *J Appl Soc Psychol*. 32:732–757.
- Fowler DG, Freeman D, Smith B, Garety PA, Kuipers EK, Bebbington PE & Dunn G (2006) The brief core schema scales: psychometric properties and associations with paranoia, depression, and anxiety in normal and psychosis samples. *Psychol Med*. 36:749–759.
- Freeman D, Garety PA (2000) Comments on the content of persecutory delusions: Does the definition need clarification? *Br J Clin Psychol*. 39:407–414.
- Freeman D, Garety PA, Kuipers E, Fowler D, Bebbington PE (2002) A cognitive model of persecutory delusions. *Br J Clin Psychol*. 41:331–347.
- Furnham A, Procter E (1989) Belief in a just world: Review and critique of the individual difference literature. *Br J Soc Psychol*. 28:365–384.
- Garety P, Freeman D (1999) Cognitive approaches to delusions: A critical review of theories and evidence. *Br J Clin Psychol*. 38:113–154.
- Garety PA, Kuipers E, Fowler D, Freeman D, Bebbington PE (2001) A cognitive model of positive symptoms of psychosis. *Psychol Med*. 31:189–195.
- Hafer CL, Olson JM (1998) Individual differences in the belief in a just world and responses to personal misfortune. In L. Montada, MJ Lerner (Eds), *Responses to Victimization and Belief in a Just World* (pp 65–86). New York (NY): Plenum.
- Janoff-Bulman R (1992) Shattered assumptions: Toward a new psychology of trauma. New York (NY): The Free Press.
- Kohler CG, Walker JB, Martin EA, Healey KM, Moberg PJ (2010) Facial Emotion Perception in schizophrenia: A meta-analytic review. *Schizophr Bull*. 36:1009–1019.
- Kretschmer E (1927/1974) The sensitive delusion of reference. In SR Hirsch, M Shepherd (Eds), *Themes and Variations in European Psychiatry*. Bristol (UK): John Wright.
- Lerner MJ, Miller DT (1978) Just world research and the attribution process: Looking back and ahead. *Psychol Bull*. 85:1030–1051.
- Lerner MJ (1980) *The Belief in a Just World: A Fundamental Delusion*. New York (NY): Plenum.
- Lord R, Novick M (1968) *Statistic Theories of Mental Test Scores*. Reading (MA): Addison Wesley.
- Melo S, Corcoran R, Shryane N, Bentall RP (2009) The persecution and deservedness scale. *Psychol Psychother*. 82:247–260.
- Oltmanns TF (1988) Approaches to the definition and study of delusions. In TF Oltmanns, BA Maher (Eds), *Delusional Beliefs* (pp 3–12). New York (NY): Wiley.
- Otto K, Dalbert C (2005) Belief in a just world and its functions for young prisoners. *J Res Pers*. 39:559–573.
- Otto K, Boos A, Dalbert C, Schöps D, Hoyer J (2006) Posttraumatic symptoms, depression and anxiety of flood victims: The impact of the belief in a just world. *Pers Individ Dif*. 40:1075–1084.
- Sheehan DV, Lecrubier Y (2002) MINI international neuropsychiatric interview for DSM-IV (English Version 5.0.0). Tampa (FL): University of South Florida.
- Smith B, Fowler D, Freeman D, Bebbington P, Bashforth H, Garety P, Kuipers E, Dunn G (2006) Emotion and psychosis: Direct links between schematic beliefs, emotion and delusions and hallucinations. *Schizophr Res*. 86:181–188.
- Sutton RM, Douglas KM (2005) Justice for all, or just for me? More evidence of the importance of the self-other distinction in just-world beliefs. *Pers Individ Dif*. 39:637–645.
- Swanson D, Bohnert P, Smith J (1970) *The Paranoid*. Boston (MA): Little.
- Vázquez C, Diez-Alegría C, Hernández-Lloreda MJ, Nieto M (2008) Implicit and explicit self-schema in active deluded, remitted deluded and depressed patients. *J Behav Ther Exp Psychiatry*. 39:587–599.
- Wing JK, Cooper JE, Sartorius N (1974) Present State Examination (PSE) Measurement and Classification of Psychiatric Symptoms; an Instruction Manual for the PSE and Catego Program-10th Revision. Schedules for Clinical Assessment in Neuropsychiatry (SCAN). London (England): Cambridge University Press.
- World Health Organization (1992) The ICD-10 classification of mental and behavioural disorders: Clinical descriptions and diagnostic guidelines. Geneva (Switzerland): World Health Organization.