How Does Belief in a Just World Affect the Life Satisfaction of University Teachers?

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Abstract: To explore the relationship between university teachers' Belief in a just world (BJW) and Life Satisfaction (LS), and to identify underlying mediating mechanisms, this study employed a structural equation model with BJW as the independent variable, LS as the dependent variable, job burnout (JB) and gratitude as mediating variables, and subjective economic status as a control variable. A sample of 225 university teachers completed the Belief in a Just World Questionnaire, the Teacher Job Burnout Questionnaire, the Gratitude Questionnaire-6, and the Life Satisfaction Questionnaire. Results showed: (1) BJW directly and positively predicted LS ($\beta = 0.28$, $P < 0.001$); (2) JB and Gratitude exerted parallel mediating effects between the relationship of BJW and LS (indirect effects = 0.221 and 0.060, respectively).

Keywords: Belief in a Just World; Life satisfaction; Job burnout; Gratitude

1. Introduction

Life satisfaction (LS) refers to an individual's subjective evaluation and judgment of their overall quality of life [1]. As a cognitive component of subjective well-being, it is also one of the important indicators for measuring mental health. It shows a significant positive correlation with subjective well-being [2]. Studies have shown that LS is significantly associated with factors such as physical health, socioeconomic status, personality, and external stress. For example, Palmore et al. found that physical health and subjective socioeconomic status can significantly predict an individual's life satisfaction [3]. Peng reached consistent conclusions regarding the relationship between socioeconomic status and life satisfaction [4].

University teachers play a pivotal role in education and society. Their satisfaction with life not only directly affects their job performance and mental health, but also indirectly influences the development of students. Previous studies on LS of university teachers have mainly focused on the impact of external factors such as work-family conflict and various stressors, while few studies have explored the influence of teachers' internal individual

factors on LS [5].

The belief in a just world (BJW), first proposed by Lerner, refers to the conviction that individuals get what they deserve in life [6]. Early research focused on victim blaming in judicial contexts, showing that people devalue victims to maintain their BJW [7]. With the rise of positive psychology, attention has shifted to BJW's adaptive functions, including providing psychological security and a sense of control. As a cognitive framework for interpreting life events, BJW influences coping strategies during adversity, thereby impacting mental health.

Furnham claimed that the BJW provides psychological buffers against the harsh realities of the world as well as personal control over one's destiny [8]. A study of 406 employed and unemployed individuals found that BJW can enhance job satisfaction and boost mental health, including LS and self-esteem [9]. However, few studies explored the relationship between LS and BJW among university teachers, as well as the influence of other mediating factors in this relationship.

Based on this, this study has three objectives. The first is to explore the relationship between BJW and LS among university teachers. The second aim is to identify potential mediating factors in this relationship and seek possible paths to improve university teachers' LS. The last one is to propose possible directions and prospects for future research.

1.1. BJW and LS

Based on Tomaka and Blascovich's stress-coping model, BJW serves as a psychological resource that facilitates positive cognitive appraisal of stressors, thereby protecting subjective well-being (SWB), with LS as its cognitive component. Empirical support includes findings that BJW predicts a higher level of psychological well-being and lower levels of depression in graduate students [10]. It was claimed that perceived social justice had a positive effect on LS after controlling for demographic variables [11]. Furthermore, research has confirmed that BJW positively correlates with SWB among university teachers in Western contexts [12]. Thus, the authors hypothesize:

H1: BJW has a positive predictive value for LS among university teachers.

1.2. Mediating mechanisms of BJW on LS
1.2.1. The mediating role of job burnout (JB)

Siegrist's effort-reward imbalance model posits that chronic work stress arises when efforts exceed rewards, leading to job burnout (JB) [13]. The authors propose that low BJW, reflecting doubt in proportional rewards, promotes JB. Additionally, the Justice Motive Theory posits that people are motivated to believe the world is fundamentally just, where efforts and outcomes align. Individuals with higher levels of BJW are more likely to invest in their futures and then facilitate goal-directed behavior [9]. A strong BJW should foster investments in one's occupational career and alleviate concerns about the future. Consistent with this, Desrumaux et al. found that stronger BJW relates to lower emotional exhaustion in employees [14].

A study of 109 nurses stated that the experience of burnout, including exhaustion and disengagement, has a direct impact on their LS [15]. Anand and Arora examined the relationship between JB and LS of executives of multinational companies, and the result showed a significant negative correlation between JB and LS [16]. This connection was also supported among university employees [17].

1.2.2. The mediating role of gratitude

Gratitude is conceptualized as a tendency to respond with appreciative emotion once an individual identifies

others' generosity in contributing to themselves [18]. According to the justice motive theory, concern for justice is based on a "personal contract" between individuals and their social environment. In developing their personal contract, individuals learn the importance of mutually honored commitments between individuals who deserve fair treatment. In line with this belief, individuals are more likely to attribute their good fortune to the kindness of others. Consistent with this belief, individuals tend to ascribe their good fortune to the benevolence of others because individuals with high BJW believe that those who have helped them deserve to be rewarded and that they should express their gratitude [19].

As a validated well-being enhancer, gratitude mediates between BJW and prosocial behavior. It played a mediating role to link BJW to LS in college students [20]. Thus, the authors hypothesize:

H2: JB mediates the BJW-LS relationship.

H3: Gratitude mediates the BJW-LS relationship.

2. Methods

2.1. Participants

The study employed a snowball sampling strategy to recruit 225 valid participants via WeChat dissemination. The sample comprised 70 (31%) males and 155 (69%) females. Given the complex model with four variables, the sample size met the minimum requirement of 10 cases per parameter.

2.2. Instruments

2.2.1. Belief in a Just World questionnaire

This scale was developed by Dalbert and subsequently adapted for use in Chinese contexts by Su et al. [21]. It comprises 13 items on a 5-point Likert scale, measuring two dimensions: General Belief in a Just World and Personal Belief in a Just World. Cronbach's α of the scale in the study was 0.94.

2.2.2. Teacher job burnout questionnaire

Adapted from Maslach et al. by Shi, this 16-item scale assesses three dimensions of Job Burnout (JB): emotional exhaustion, depersonalization, and reduced personal accomplishment [22]. It is a 5-point Likert scale. Cronbach's α in the study was 0.94.

2.2.3. Gratitude Questionnaire-6

The Chinese version of McCullough et al.'s Gratitude Questionnaire-6 (GQ–6) was used, with the last item omitted due to ambiguous wording. It is a 5-point Likert scale (ranging from 1 = strongly disagree to 5 = strongly agree), with high reliability and validity. Higher scores indicate a higher level of gratitude. In this study, Cronbach's α of the scale was 0.81.

2.2.4. Life satisfaction scale

Life satisfaction was measured using Diener's (1994) 5-item scale. It is a 5-point Likert scale, with high reliability and validity. A higher score indicates greater satisfaction with life. Cronbach's α of the scale in the study was 0.88.

2.3. Procedures and data analysis

The study conducted an online questionnaire survey via SoJump. Participants received informed consent that

explained the study's purpose and provided assurances of confidentiality. Additionally, they did not need to provide any personal information. Those measures could minimize social desirability bias. SPSS 22.0 was used for reliability tests, and PROCESS 3.5 was used for regression analyses.

2.4. Control variables

Guided by the relative deprivation theory, researchers also controlled subjective economic status (SES) due to its impact on LS via perceived income inequality [23]. Empirical evidence shows teachers often report income-effort disparity, which undermines LS [24]. Therefore, the authors explored the relationship between SES and LS among college teachers. Besides, regression analysis was conducted while controlling for SES. In the study, participants evaluated their economic status by the question "How is your economic status compared with others." The score ranges from "1 = very high" to "5 = very low". A higher score represents a lower level of economic status.

3. Results

3.1. Common method variance

The authors employed the Herman single-factor test to evaluate the potential threat of Common Method Variance (CMV) in the study. The results of this test indicated that the first factor accounted for 38.31% of the variance, suggesting that there is no significant problem of CMV present in the study.

3.2. Preliminary analyses

Table 1 shows the Pearson correlations. SES was significantly correlated with LS, JB, and BJW. Specifically, university teachers with a higher SES exhibited lower levels of JB, were more inclined to perceive the world as just, and were more satisfied with their lives.

Table 1. Descriptive statistics and correlation analysis of variables

Variables	Mean	SE	1	2	3	4
1. Belief in a Just World	3.41	0.65				
2. Burnout	2.69	0.74	-0.58**			
3. Gratitude	3.40	0.48	0.37**	-0.20**		
4. Life Satisfaction	3.06	0.85	0.57**	-0.57**	0.32**	
5. Subjective Economic Status	3.25	0.69	-0.26**	0.27**	-0.10	-0.43**

Note: N=225, *$P < 0.05$, **$P < 0.01$, ***$P < 0.001$. M, Mean; SD, Standard Deviation

3.3. Mediating effects analyses

To test whether JB and Gratitude functioned as parallel mediators in the relationship between BJW and LS, the authors conducted a mediation analysis using the PROCESS Macro (Model 4; Hayes, 2018) with 5,000 bootstrap samples [25]. This model examines the direct effect of BJW on LS and the indirect effects transmitted through JB and Gratitude independently.

Table 2 summarizes the statistical values of direct effects analyses. The direct effect of BJW on LS was significant ($\beta = 0.28$, $P < .001$). Additionally, BJW negatively predicted JB ($\beta = -0.54$, $P < .001$) and positively predicted Gratitude ($\beta = 0.37$, $P < .001$). JB negatively predicted LS ($\beta = -0.31$, $P < .001$), and Gratitude positively

predicted LS ($\beta = 0.13$, $P < .05$).

Table 2. Regression analysis of variable relationships in the parallel mediation model

IDV	DV	R^2	F	B	β	t
BJW	JB	0.35	59.09	-0.62	-0.54	-9.66***
BJW	GRA	0.13	17.26	0.27	0.37	5.66***
BJW	LS	0.48	51.60	0.36	0.28	4.40***
JB	LS			-0.36	-0.31	-5.19***
GRA	LS			0.22	0.13	2.42*

Note: Controlling for SES. BJW, Belief in a Just World; JB, Job burnout; GRA, Gratitude; LS, Life Satisfaction; DV, Dependent Variable; IDV, Independent Variable

Table 3 displays the standardized regression coefficients (β), standard errors (SE), and 95% bias-corrected bootstrap confidence intervals (CIs) for mediating paths. The results indicated three key indirect effects. The indirect effect of BJW on LS through JB was significant ($\beta = 0.22$, 95% CI = [0.131,0.318]). The indirect effect through Gratitude was significant ($\beta = 0.06$, 95% CI = [0.002 to 0.14]). The total indirect effect (sum of the two individual indirect effects) was significant ($\beta = 0.28$, 95% CI = [0.17 to 0.40]). The 95% CIs didn't include 0, thus both parallel mediating effects were significant. **Figure 1** displays the validated structural model.

Table 3. Significance analysis of mediating effects

Path	Indirect effect	SE	95% Confidence Interval	
			Lower Limit	Upper Limit
BJW-JB-LS	0.17	0.48	0.13	0.32
BJW-GRA-LS	0.06	0.34	0.00	0.14
Total indirect effect	0.23	0.58	0.17	0.40

4. Discussion

Previous studies have shown that BJW positively predicts LS. Most focused on specific groups. However, empirical inquiry into university teachers remains scarce. This study addresses this gap by examining the relationship between BJW and LS among university faculty, as well as the mediating mechanisms underlying this association. Findings reveal that university teachers' BJW directly and negatively predicts LS, while JB and Gratitude exert partial parallel mediating effects.

The results support Hypothesis 1, confirming that BJW directly predicts LS among university teachers, consistent with prior research [12]. As a psychological resource, BJW mitigates the impact of external stressors, thereby maintaining mental health and enhancing LS. Specifically, university teachers with stronger BJW exhibit higher LS.

To dissect the underlying mechanisms, this study introduces JB (negative pathway) and Gratitude (positive pathway) as mediating variables. Mediation analyses confirm parallel mediating effects, supporting Hypotheses 2 and 3. On the negative pathway, job burnout explains how BJW influences LS: when individuals perceive

unfair treatment, effort-reward imbalance triggers burnout, which in turn diminishes LS. On the positive pathway, Gratitude mediated the effect of BJW on LS. It may be explained that individuals with a stronger BJW attribute positive outcomes to others' benevolence, thereby fostering Gratitude toward their environment. Grateful individuals perceive the social context more positively and employ adaptive coping strategies, thereby enhancing LS.

5. Limitations and future directions

The study provides more comprehensive insights into the relationship between BJW and LS of university teachers. It confirmed that SES is a key factor influencing university teachers' BJW, JB, and LS. In addition, it provided evidence that BJW increases LS indirectly by reducing JB and enhancing gratitude. However, there are several limitations as follows.

First, the participants in this study were recruited through forwarding among acquaintances, which resulted in insufficient sample representativeness. Therefore, caution should be taken when interpreting the results and applying them in a general sense. Future studies could expand the sample size while improving sample representativeness, thereby enhancing the generalizability of the research findings.

Second, BJW comprises two dimensions: personal belief in a just world (PBJW) and general belief in a just world (GBJW). Previous research has indicated that these two dimensions have somewhat different impacts on subjective well-being. However, the present study used the total average score of BJW for mediation path analysis, neglecting the differences between the dimensions. Future research could attempt to build a model using the average scores of each dimension to provide more details.

6. Theoretical and practical implications

Although with some limitations, the study makes several contributions. First, the findings contribute to the literature on BJW and LS by identifying dual parallel mechanisms (Gratitude and BJ) through which BJW affects LS in university teachers. Researchers know more details about the relationship between BJW and LS.

Second, interventions aimed at promoting LS of university teachers should target the identified mediators. For example, workshops focused on enhancing Gratitude or reducing JB could mitigate the negative effects of BJW.

Third, for policymakers, fostering university teachers' BJW through fair career development policies (e.g., salary equity, transparent promotion systems) could enhance their level of BJW and subsequently elevate LS, thereby contributing to social well-being.

Funding

Disclosure statement

The authors declare no conflict of interest.

Author contribution

Yinqiu Tan conceived the idea of the study and wrote the paper. Kong Xia conducted the survey and the data analysis.

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