

# The Impact Of Workplace Bullying On Employees' Workplace Loneliness: The Serial Mediating Role Of Social Anxiety And Fear Of Negative Evaluation

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## Abstract

Workplace bullying has grown in many professions and has various negative effects, of which workplace loneliness should be paid special attention to. This study explored the relationship between workplace bullying and workplace loneliness, and constructed a chain-mediated model to investigate the chain-mediated effects of social anxiety and fear of negative evaluation. In this study, 361 employees from government units and enterprises in a city of China were surveyed by convenient sampling method and the partial least squares structural equation modeling approach was used to analysis the data. The results showed that: (1) workplace bullying, social anxiety, fear of negative evaluation were significantly positively correlated with workplace loneliness. (2) Social anxiety has a significant mediating effect between workplace bullying and workplace loneliness. (3) Workplace bullying significantly predicted workplace loneliness through the serial mediating effects of social anxiety and fear of negative evaluation. The results of this study reveal the impact of workplace bullying on workplace loneliness and its mechanism, and provide some guidance for the intervention of workplace loneliness.

**Keywords:** workplace bullying; workplace loneliness; social anxiety; negative evaluation

## 1. Introduction

The issue of workplace bullying began in the 1980s [1] and nowadays is a widespread phenomenon, occurring in a variety of professions [2-4], despite that managers and leaders of organisations often deny the existence of bullying in their own organisations [5]. Workplace bullying is deliberate and persistent bullying, such as demeaning or physical attacks on a person in a public or non-public workplace [6,7]. Many studies have already demonstrated that workplace bullying having a serious detrimental effect on an individual's career development, negatively impacting the health of the victims, including physical and mental fatigue, lethargy, psychological

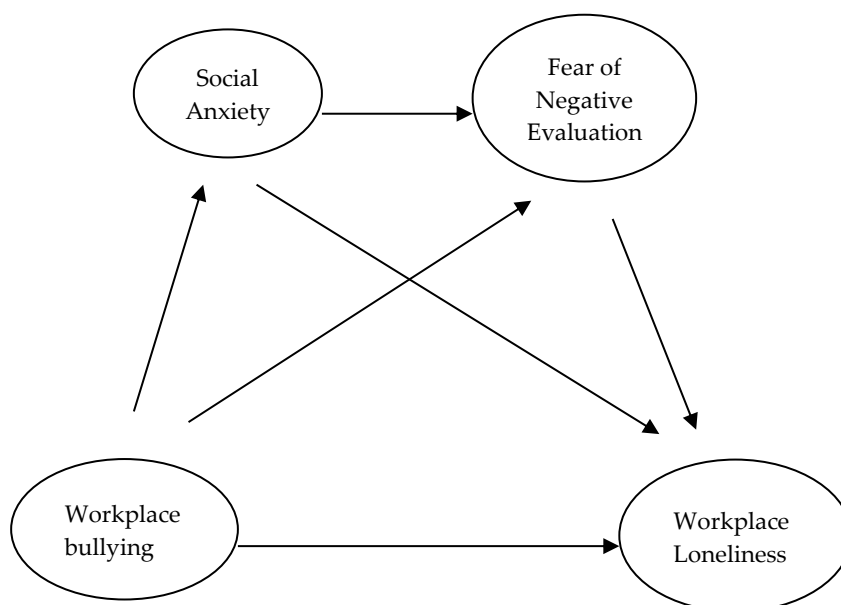
anxiety, social anxiety, and a sense of loneliness in the workplace [8-10].

Among the various negative effects of workplace bullying on individuals, loneliness may be a variable that organizational leaders should pay more attention to, because employees' workplace loneliness hinders group cooperation and will reduce organizational performance in the long run [11,12]. Some researches demonstrated that workplace bullying (including workplace ostracism) was the antecedent variable of workplace loneliness [10,13,14]. For example, the study of Meramveliotakis et al. indicated that high level bullying affected the employees' mental health negatively with high levels of anxiety, fear, loneliness etc. [10]. While

Dussault et al. showed that workplace loneliness as the antecedent variable was positively related to workplace bullying [15]. Although these researchers shed light on the relationship between workplace bullying and workplace loneliness, to the best of our knowledge, there are no study that considers the role of social anxiety and fear of negative evaluation in the mechanism. Studies have shown that when individuals encounter the dilemma of social bullying, such as abuse and isolation in workplace, the anxiety that arises can easily extend to normal social conditions, leading to their social anxiety [16-18]. Furthermore, it has also been shown that there

is a significant positive relationship between social anxiety and fear of negative evaluation [19], and that fear of negative evaluation is significantly positively associated with the development of loneliness [20,21].

Based on the above associations among workplace bullying, social anxiety, fear of negative evaluation and workplace loneliness in literature [16-21], we proposed a new model to explain how workplace bullying affects employees' feelings of loneliness. In this model, we mainly focused on the possible mediating role of social anxiety and fear of negative evaluation. Figure 1 illustrates the hypothesized paths and are described with details in the below.



**Figure 1.** The path describing the interrelationship between workplace bullying, social anxiety, fear of negative evaluation and workplace loneliness.

## 2. Research hypothesis

### 2.1. The impact of workplace bullying on employees' workplace loneliness

According to social needs theory, people are born with a need to interact with others and if this need is not met, loneliness can develop [22,23]. More specifically, loneliness is a subjective and unpleasant emotional experience that stems from the difference between the social relationships of individual's desires and the social relationships he or she actually has [24,25]. In most cases, individuals hope to integrate into the work environment in order to meet their innate social needs. Unfortunately,

workplace bullying, such as deliberate isolation, exclusion, abuse, suppression and ostracism, is rife in the workplace, making it easy for the victims to have their social needs unmet and thus increasing their level of loneliness [26,27]. Chen et al. concluded that among male nurses, the more serious the workplace bullying is in the workplace, the higher level of workplace loneliness is [28]. Accordingly, the first hypothesis  $H_1$  is: workplace bullying is positively related with individual's workplace loneliness.

### 2.2. The role of the mediator of social anxiety and fear of negative evaluation

According to the definition in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV), social anxiety is a persistent irrational apprehension and fear

that an individual exhibits in social situations because of the possibility of being observed or faced with the possibility of being judged by others [29]. Many studies have confirmed that repetitive and persistent vicious and persistent behaviors such as abuse, rejection, isolation, and humiliation from colleagues, superiors or subordinates can bring depression, anxiety, frustration, fear and other emotional pressures to the bullied [30,31] and this probably contributes to social anxiety. Moreover, when an individual is frustrated by unsuccessful interpersonal social interaction, he or she may feel unacceptable to the outside world (a kind of social anxiety), and then experience feelings of loneliness [22]. Empirical studies have also shown that social anxiety is positively associated with loneliness [20,32-34]. Lim et al. showed in his model that the earlier social anxiety was the only predictor of future loneliness [34]. Consequently, we assume that the influence of workplace bullying on loneliness is mainly through the effect of social anxiety. The second research hypothesis **H<sub>2</sub>** is: social anxiety is a mediator between workplace bullying and workplace loneliness.

The concept of fear of negative evaluation was introduced by Watson and Friend [35]. They considered this construct is an individual's fear and anxiety about the negative appraisal of oneself by others. The indicator of fear of negative evaluation includes avoidance of others' evaluations of oneself and anticipatory concerns about others' evaluations [35]. Individuals with higher levels of fear of negative evaluation are more concerned about negative evaluations of themselves by others and are more concerned about the impression they make on others [36]. Based on affective events theory, Commer et al. indicated that workplace ostracism could lead to employees' fear of negative evaluation [37]. Moreover, MacIntosh and his team members found that many victims of bullying experienced persistent psychological problems such as fear, lowered self-esteem levels, and anxiety [30]. When individuals with low self-esteem are in a social situation, they are probably to think with unconscious state that others will have some negative evaluations of themselves [30]. In addition to the close relationship between workplace bullying and fear of

negative evaluation, the evidence also showed fear of negative evaluation may contribute people's loneliness. A study launched by Jackson et al. showed that the fear of negative evaluation was significantly associated with loneliness in both adolescent and undergraduate samples [38]. Therefore, workplace bullying may have a certain impact on the individual's fear of negative evaluation, leading to workplace loneliness of the bullied victims. The third hypothesis **H<sub>3</sub>** is: fear of negative evaluation is a mediator between workplace bullying and workplace loneliness.

### **2.3. The combined mediating effect of social anxiety and fear of negative evaluation**

Social anxiety may also be combined with fear of negative evaluation to form a serial mediation effect between workplace bullying and workplace loneliness. More specifically, we believe that when an individual is bullied in the workplace, social anxiety will first be increased since when an individual is bullied, fear and anxiety are the most directly induced emotions [39]. After that, as social anxiety functions, the easier it is to focus on others' negative evaluations [40]. Namely, the appearance of social anxiety leads to more negative evaluation fear [41]. Finally, individuals with high-level negative evaluations may not be able to communicate with colleagues in the workplace normally, and they will be afraid of getting along with others, repelling social behaviors, leading to their loneliness in the workplace. Accordingly, the fourth hypothesis **H<sub>4</sub>** is: social anxiety and fear of negative evaluation are serial mediators between workplace bullying and workplace loneliness.

## **3. Research method**

### **3.1. Participants and procedure**

In this study, in-service employees including enterprises and civil servants in a city were selected as the participants with convenient sampling. A total of 400 questionnaires were sent out. 392 questionnaires were recovered and 361 valid questionnaires were obtained, with an effective question answering rate of 90.25%. Among them, there were 156 (43%) males and 205 (57%) females. People under the age of 20, aged 21-30, aged

31-40, aged 41-50 and above the age of 50 were 5%, 49%, 30%, 14% and 2%, respectively. Enterprise employees and government employees accounted for 50% each. Ordinary employees, grass-roots supervisors, middle managers and senior managers accounted for 68%, 17%, 10% and 5%, respectively.

## 3.2. Measures

### 3.2.1. Revised Version of the Negative Behavioral Event Questionnaire

The Revised Version of the Negative Behavioral Event Questionnaire (RVNBEQ) was adopted to evaluate the severity of workplace bullying. This scale was revised by Jiang et al. [42] with a total of 20 items separated by two dimensions: work-related workplace bullying and interpersonal related workplace bullying. Sample items include: "Tell embarrassing jokes in public about you" and "People with bad relationships with you play practical jokes on you". The RVNBEQ items are measured on a four-point Likert-type scale: 1 (never), 2 (sometimes), 3 (often) and 4 (always). The higher score of the item reflected the more frequent suffering from workplace bullying. The reliability of the RVNBEQ scale is high in this present study (whole scale: Cronbach's  $\alpha=0.927$ ; the subscale of work-related bullying: Cronbach's  $\alpha=0.874$ ; the subscale of interpersonal related bullying: Cronbach's  $\alpha=0.891$ ).

### 3.2.2. Workplace Loneliness Scale

The Chinese version of the Workplace Loneliness Scale (WLS) [43] was adopted to measure participants' workplace loneliness. The WLS is divided into two dimensions: interpersonal workplace loneliness and existential workplace loneliness. Sample items include: "I often feel alienated by my colleagues at work", "Competition among colleagues prevents us from becoming true friends", and "I feel empty at work and want to leave the workplace as soon as possible after work". The WLS was scored by a four-point Likert-type scale with responses ranging from 1 (completely inconsistent) to 4 (completely consistent). Higher scores indicate higher level of the individual's workplace loneliness. The reliability of the WLS scale in this present study is high

(whole scale: Cronbach's  $\alpha=0.891$ ; the subscale of interpersonal workplace loneliness: Cronbach's  $\alpha=0.831$ ; the subscale of existential workplace loneliness: Cronbach's  $\alpha=0.872$ ).

### 3.2.3. Chinese Version of Social Anxiety Scale

Chinese Version of Social Anxiety Scale (CVSAS) was developed by Wang et al. [44] and was used to evaluate the level of participants' social anxiety with one dimension. The scale consists of 6 items measured on a four-point Likert-type scale with responses ranging from 1 (Very disagree) to 4 (Very agree). Sample items from the scale include "It takes me a long time to overcome my shyness in a new environment" and "I feel nervous when talking in front of a crowd". In this study, the factor loading of Item 4 ("It is easy for me to talk to strangers") was too low (i.e., 0.067), so the item was not included in the further analysis. Higher scores of the CVSAS are interpreted as a greater level of social anxiety. In this study, Cronbach's  $\alpha$  for the scale was 0.834, indicating an acceptable reliability.

### 3.2.4. Brief Fear of Negative Evaluation—positive scoring item

The Brief Fear of Negative Evaluation Scale (BFNES) revised by Chen [45] was adopted in this study. Considering the reversed-scale items would easily cause confusion and wrong responses [46], we did not include the reversed-scale items in BFNES and the remaining items (i.e., 8 items) were used. Sample items, such as "I am often afraid that others will point out my shortcomings to me" and "I am afraid that I will not be approved by others". The BFNES was measured on a four-point Likert-type scale: 1 (never), 2 (sometimes), 3 (often) and 4 (always). The higher score of the item is, the stronger the fear of negative evaluation is. In this study, Cronbach's  $\alpha$  for the scale was 0.919, indicating an excellent reliability.

## 3.3. Data analysis strategy

In this study, SPSS25.0 software was used for the descriptive statistics and Pearson correlation. Since Shapiro-Wilk test showed that the sample data of this study was non-normal distribution (the values of

Shapiro-Wilk are between 0.645 and 0.871 with all  $p$ -values  $< 0.001$ ), the partial least squares structural equation modeling approach (PLS-SEM) was adopted by using SmartPLS 3.0 software to analyze the interrelationship among workplace bullying, social anxiety, fear of negative evaluation and workplace loneliness. PLS-SEM is a widely used modeling statistics which is suitable for addressing small sample data without needing to follow normal distribution [47].

In the approach of PLS-SEM, the measurement (outer) and structural (inner) model were evaluated in the sequence. Given that there is no consensus agreement of the criterion for PLS-SEM, some commonly used ones mentioned in the below were referred [48-50]. Regarding to measurement model in this study, the indicators of the constructs are all reflective measures. For these measures, the reliability (internal consistency reliability) as well as validity (convergent validity and discriminant validity) was evaluated [48]. The internal consistency reliability was examined by composite reliability (CR) and Cronbach's alpha. The value of CR is considered satisfactory if it is between 0.70 and 0.90, undesirable if it is above 0.95 [48] and Cronbach's alpha is good if it is higher than 0.70. Convergent validity was measured by the factor item loadings (standardized loading) and average variance extracted (AVE) [50]. It is suggested that the factor loading should be above 0.70 and AVE values should be greater than 0.50 [49,50]. Discriminant validity was also verified if the square root of AVE values are larger than other correlation values among the latent variables according to Fornell-Larcker [50].

As for structural model, the path coefficients and coefficients of determination  $R^2$  (explained variance) were evaluated. The estimates of path coefficients are provided and checked whether they were significantly different from zero with using bootstrapping tests (5000 bootstrap samples are produced).  $R^2$  can verify the capabilities and relationships between the constructs [48]. It is suggested that  $R^2$  values of 0.02, 0.13, 0.26 can be considered small, medium and large effects respectively [51].

Finally, the mediation effect tests were conducted. In these paths, workplace bullying was treated as the independent variable and workplace loneliness was as the dependent variable; social anxiety and fear of negative evaluation were as serial mediators. The indirect effect of workplace loneliness via social anxiety and fear of negative evaluation were assessed by bootstrapping. Meanwhile, point estimates and confidence intervals (95%) were also estimated.

### 3.4. Common method bias test

Because self-reported data collection methods may cause common method bias, we adopted Harman's single-factor method to test whether there was an obvious common method bias. Exploratory factor analysis is conducted on all the items of the variables, and it was found that 7 factors with eigenvalue greater than 1. Among them, the proportion of explanation of the first item was 32.830%, which is lower than the criterion (i.e., 40%) [52], indicating no obvious common bias in this study.

## 4. Results

### 4.1. Descriptive statistics and Pearson correlation analysis

The descriptive statistics (means and standard deviations) of each variable and the Pearson correlations ( $r$ ) between the variables are displayed in Table 1. The mean score of workplace bullying was 1.695 ( $SD = 0.494$ ), which was lower than the median value for the scale (i.e., 2.5), suggesting that the workplace bullying was not quite severe among our participants (27 participants among 361 reported scores were higher than median value). The mean score of workplace loneliness score was 1.801 ( $SD = 0.603$ ) which was approaching "sometime consistent" (2). The mean social anxiety score was 2.125 ( $SD = 0.701$ ) which was lower than the median value for the scale (i.e., 2.5). The mean fear of negative evaluation score was 2.321 ( $SD = 0.704$ ). This value was between "Sometimes" (2) and "Often" (3). As for the correlation among the variables, as expected, all variables show a significant positive correlation ( $p < 0.01$ ), among which the lowest correlation was fear of negative evaluation and workplace bullying ( $r = 0.326$ ,

$p < 0.01$ ), and the highest one was the relationship between workplace bullying and workplace loneliness ( $r = 0.757$ ,  $p < 0.01$ ).

**Table 1.** Descriptive statistic and correlation coefficient of the variables

Variables	M+SD	1	2	3	4
1 Workplace bullying	1.695±0.494	—			
2 Workplace loneliness	1.801±0.603	0.757**	—		
3 Social anxiety	2.125±0.701	0.442**	0.557**	—	
4 Fear of negative Evaluation	2.321±0.704	0.326**	0.503**	0.586**	—

<sup>1</sup> \*\*\* $p < 0.001$ . \*\* $p < 0.01$ .

#### 4.2. Assessment of Reflective Measurement model

The reliability and validity of the constructs were evaluated in this section. It is noted that in order to provide stabilize parameter estimates and also to improve model fit, we followed the approach of homogeneous parceling [53] wherein the indicators of workplace bullying and workplace loneliness are composed of items (using mean scores). The results indicated that Cronbach's alpha of all variables were higher than 0.70 and all values

for CR were above 0.70, below 0.95 (see Table 2), which revealed a high level of reliability [48]. Moreover, the convergent validity was also supported since the factor loading of every items were above 0.70 and all values of AVE were higher than 0.50. This results showed all measurement items represented the respective variables well [49,50]. Meanwhile, all the square root of AVEs were larger than other correlation values among the variables (see Table 3), meaning that there was adequate discriminant validity [50].

**Table 2.** Results for reflective measurement models

Constructs	Items	Convergent Validity		Internal Consistency Reliability	
		Factor loading	AVE	Cronbach's alpha	CR
		>0.70	>0.50	>0.70	>0.70
Workplace Bullying (WB)	WB_parcel1	0.924	0.862	0.841	0.926
	WB_parcel2	0.934			
Social Anxiety (SA)	SA1	0.759	0.602	0.834	0.883
	SA2	0.751			
	SA3	0.792			
	SA5	0.794			
	SA6	0.782			
Fear of Negative Evaluation (FNE)	FNE1	0.791	0.639	0.919	0.934
	FNE2	0.764			

	FNE3	0.819			
	FNE4	0.807			
	FNE5	0.830			
	FNE6	0.793			
	FNE7	0.810			
	FNE8	0.778			
Workplace Loneli- ness (WL)	WL_par- cel1	0.893	0.802	0.753	0.890
	WL_par- cel2	0.898			

<sup>2</sup> Note: WB\_parcel1= Interpersonal related workplace bullying, WB\_parcel2= Work-related workplace bullying, WL\_parcel1= Interpersonal workplace loneliness, WL\_parcel2= Existential workplace loneliness.

**Table 3.** Average variance extracted (AVE) and the correlation among the latent variables

Constructs	1	2	3	4
1 Workplace bullying	<b>0.929</b>			
2 Workplace loneliness	0.758	<b>0.895</b>		
3 Social anxiety	0.443	0.555	<b>0.776</b>	
4 Fear of negative Evaluation	0.331	0.504	0.589	<b>0.799</b>

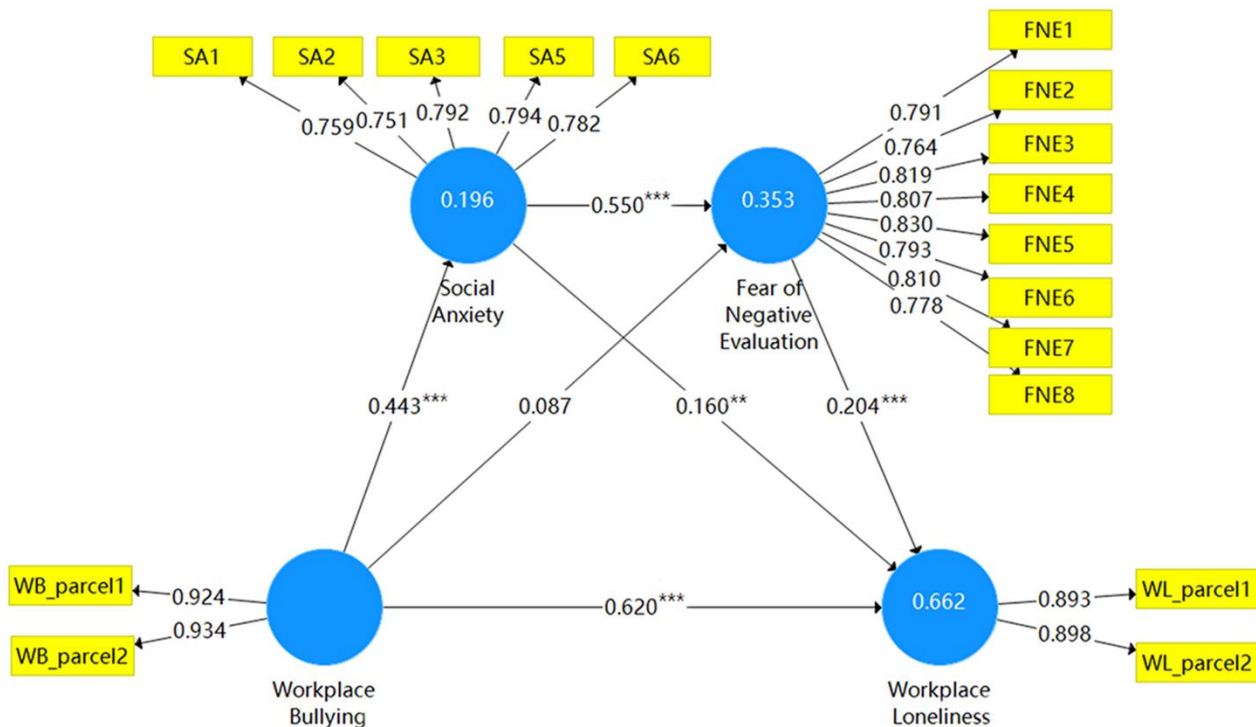
<sup>3</sup> The squares root of AVEs are in diagonal, and correlation coefficients between latent variables are in non-diagonal.

#### 4.3. Assessment of Structural model

Before testing the structural model, we checked the extent of collinearity with variance inflation factor (VIF) considering collinearity would cause unstable estimation in PLS-SEM. The results showed that all VIF values were below 5 (i.e., from 1.000 to 1.712) revealing not a serious problem of collinearity.

The significance of path coefficients calculated by bootstrapping was showed in Figure 2. As showed in

Figure 2, except that the path coefficient of workplace bullying on fear of negative evaluation was not significant ( $\beta=0.087$ ,  $p>0.05$ ), all other path coefficients of direct effect met the significant level ( $p<0.05$ ). In addition,  $R^2$  of workplace loneliness was 0.662 with large effect, which meant that workplace bullying, social anxiety and fear of negative evaluation explained 66.2% variance of workplace loneliness (see Figure 2).



**Figure 2. Path coefficients in the structural model.**

\*\*\* $p < 0.001$ . \*\* $p < 0.01$ . \* $p < 0.05$ . The numbers in the circles represent  $R^2$  of corresponding constructs.

#### 4.4. Mediating effects

Table 4 provided the results of the direct effect, indirect effects and total effect of the variables. The results showed that  $H_1$  (WB → WL) was supported that the positive direct effect of workplace bullying was significant on workplace loneliness ( $\beta = 0.620$ ,  $p = 0.000$ , 95% CI = 0.541 to 0.694). Moreover, the indirect effect

of workplace bullying on workplace loneliness via social anxiety and the indirect effect of serial mediators on workplace loneliness were also significant, indicating  $H_2$  (WB → SA → WL) and  $H_4$  (WB → SA → FNE → WL) were supported. Specifically, the coefficient of  $H_2$  was 0.071 ( $p = 0.002$ , 95% CI = 0.027 to 0.118) and the coefficient of  $H_4$  was 0.050 ( $p < 0.001$ , 95% CI = 0.032 to 0.074). However, the coefficient of  $H_3$  (WB → FNE → WL) was not significant ( $p = 0.171$ , 95% CI = -0.004 to 0.046).

**Table 4.** Significance analysis of the direct, indirect and total effects from general model at SmartPLS.

Hypotheses	Relationships	Effect	β	p-value	95%CILL	Results
					95%CIUL	
H <sub>1</sub>	WB→WL	Direct	0.620	0.000	[0.541 0.694]	supported
H <sub>2</sub>	WB→SA→WL	Indirect	0.071	0.002	[0.027 0.118]	supported
H <sub>3</sub>	WB→FNE→WL	Indirect	0.018	0.171	[-0.004 0.046]	not supported
H <sub>4</sub>	WB→SA→FNE→WL	Indirect	0.050	0.000	[0.032 0.074]	supported
	WB→WL	Total effect	0.758	0.000	[0.692 0.811]	supported

<sup>4</sup>N=361.

#### 5. Discussion

The results of this study showed that interrelationship of workplace bullying, social anxiety, fear of negative

evaluation and workplace loneliness. They were significantly and positively correlated with each other, among which the highest correlation was the relationship between workplace bullying and workplace loneliness ( $r =$



0.757,  $p < 0.01$ ). Workplace bullying has a significant direct effect on workplace loneliness with large effect ( $\beta = 0.620$ ,  $p < 0.01$ ), in addition, the mediating effect of social anxiety ( $\beta = 0.071$ ,  $p = 0.002$ ) and the serial mediating effect of social anxiety and fear of negative evaluation ( $\beta = 0.050$ ,  $p < 0.01$ ) are significant with small effects.

### **5.1. The direct effect of workplace bullying on workplace loneliness**

In support of the first hypothesis  $H_1$ , path coefficient was significantly and positively correlated between workplace bullying and workplace loneliness. This result is similar to the prior researchs [10,27,28]. People have innate desires to interact with others to establish an integrated relationship with the surrounding environment [54]. Therefore, in the workplace, individuals will instinctively desire to establish a good working relationship with colleagues and leaders around them. However, if individuals fail to establish satisfactory social relationships in real social interactions, but suffer from bullying incidents such as oppression, humiliation, indifference and rejection, they will reject the working atmosphere and interpersonal relationships in the workplace. When the actual social relationships in the workplace are below expectations, this inconsistent perception gap leads to the dissatisfaction of the bullied individuals with the actual interpersonal relationships, resulting in workplace loneliness [22,23,25].

## **5.2. Mediating effects of social anxiety and fear of negative evaluation on workplace loneliness**

### **5.2.1. The mediating effect of social anxiety**

As shown in Table 4, the indirect effect of  $H_2$  was supported, that is, workplace bullying can positively predict workplace loneliness through the mediating effect of social anxiety. Namely, employees with higher levels of workplace bullying would have higher levels of social anxiety, and thus experiencing more workplace loneliness. This findings provided more empirical evidence for the conclusion that social anxiety significantly and positively correlated with workplace loneliness [20,32-34]. Just as MacIntosh explained in [29], when individuals were bullied in the workplace, they gradually felt

unable to communicate with others because they feared further misunderstanding and more isolation. Based on this, employees may develop social anxiety and become unable to socialize normally with others and then they became more helpless and depressed, leading to workplace loneliness.

### **5.2.2. Non-significant mediating of fear of negative evaluation**

The results of this study showed that workplace bullying could not predict workplace loneliness through fear of negative evaluation and the indirect effect was not valid, although there was a significant positive correlation with each other among workplace bullying, fear of negative evaluation and workplace loneliness. The reason for this discrepancy may be that the mediating effect of fear of negative evaluation on loneliness was replaced by that of social anxiety. We speculate that this is because social anxiety and fear of negative evaluation may occur at a relatively close time, and the cross-sectional approach adopted in this study does not make clear the exact chronological order. In the future longitudinal research to further clarify the role of fear of negative evaluation and social anxiety in the association between workplace bullying and loneliness is a sustainable research direction.

### **5.2.3. The serial mediating effect of social anxiety and fear of negative evaluation**

Despite  $H_3$  not supported that fear of negative evaluation as a mediating variable between workplace bullying and loneliness, the combined variables of social anxiety and fear of negative evaluation formed a serial mediation effect suggesting that the bullied employees may experience more social anxiety and have further fear of negative evaluation, which ultimately increases the possibility of experiencing workplace loneliness. In fact, an individual's social cognition is strongly influenced by his or her affective states [55,56]. This influence can be explained by affect heuristic which describes a tendency to rely on automatically occurring affective responses to stimuli to guide our judgments and evaluations [56]. Therefore, when staffs are stimulated by bullying in the workplace, they will first develop a kind of affect of social anxiety which will influence

their cognition of negative evaluation, and then produce fear of negative evaluation, thus leading to loneliness.

## 6. Conclusions

### 6.1. Contributions and implications

The current study reveals the mechanism of workplace bullying's impact on workplace loneliness through empirical survey data, and the findings have theoretical and practical implications. From a theoretical perspective, this study proposed a theoretical model including social anxiety and fear of negative evaluation and verified the serial mediating effect of social anxiety and fear of negative evaluation between workplace bullying and loneliness. From a practical perspective, current research confirms that, on the one hand, the whole society should enhance the awareness of workplace bullying, and organizations should prevent the occurrence of bullying behaviors within organizations. On the other hand, organizations should implement intervention projects aimed at improving social relations (such as increasing social support and enhancing social network, etc. [38]) to reduce employees' social anxiety, and take corresponding measures (such as emotional commitment, reciprocal belief, etc. [37]) to reduce employees' fear of negative evaluation. Employees also need to change their internal characteristics (improve interpersonal efficiency, etc. [20]) so as to reduce workplace loneliness.

### 6.2. Limitations

This study demonstrated the mediating effect of workplace bullying on workplace loneliness through social anxiety and fear of negative evaluation. There are several limitations. The primary limitation of this study is the subjects of this study are mainly civil servants of government agencies and employees of state-owned enterprises. Different from ordinary employees of private enterprises, there are certain limitations in the generalization of the conclusions. Furthermore, the cross-sectional study is difficult to present a strict causal relationship between workplace bullying and loneliness. In the future, longitudinal research will be used to further clar-

ify the role of social anxiety and fear of negative evaluation in the relationship between bullying and loneliness, so as to further explain the relationship between workplace bullying and loneliness.

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