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Be Called and Be Healthier: How Does Calling Influence Employees' Anxiety and Depression in the Workplace?

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ABSTRACT

Despite limited studies have found the negative relationships between calling and mental health symptoms, its underlying mechanism is still unknown. Drawing on the conservation of resources theory (COR), this study developed the resources model that explains the relationships between career calling, anxiety and depression, and the underlying mechanism. With a sample of 628 employees from the two-wave survey, the theorized model was tested. The results showed that career calling was able to decrease the levels of employees' anxiety and depression, and two important resources (i.e., personal growth, and meaningful work) provided explanatory mechanisms for the relationships. The findings highlight the importance of spirituality in the workplace. Theoretical and practical implications are discussed.

1 Introduction

As a result of a rapidly changing environment characterized by intensified competition and escalating demands, employees have to cope with great work pressure and job insecurity [1]. Consequently, employees' mental health problems are emergent and salient in the workplace. Especially, employees increasingly experience anxiety and depression symptoms [2,3]. High levels of anxiety and depression results in detrimental effects on employees' the quality of work and life [4–7], and organizations bear huge economic losses. A study in the UK illustrated that mental health problems such as anxiety and depression symptoms cost around £70 billion every year, or roughly 4.5% of GDP, because of medical expenses and absenteeism [8]. Therefore, how to decrease employees' anxiety and depression are becoming the important issues for organizations and managers. From the perspectives, researchers pay more attention to the stable personality characteristics [9,10], psychological capital [11–14], and contextual factors such as social and organizational support [12,15–17]. However, human being is an animal that pursues meaning and growth. The job characteristics model and self-determination theory also posit that the meaningfulness and growth experienced by employees at work are the key psychological states to obtain optimal psychological functioning [18,19]. Other researchers further state that a lack of

meaning and growth at work are becoming the risk factors that are impairing individuals' enthusiasm for work and happiness [20–22].

Recently, researchers begin to emphasize the role of spirituality in promoting individuals' well-being [23–25]. Career calling is one of important facets of work spirituality, and widely defined as "a transcendental summons from outside of the self, to approach a specific role in life in a way that tends to demonstrate or derive a sense of purpose and meaningfulness, and taking other-oriented values or goals as the main sources of motivation" [26] (p. 427). Researchers believe that a sense of calling is "the strongest, most extreme, or the deepest route to realize the meaning of work" [27] (p. 323), and plays a key role in lessening the stress and improving individual's well-being.

To date, although the negative relationships between calling and mental health symptoms were observed in the Western culture [20,28], the psychological mechanism was not known. Meanwhile, the early research was inductive in nature, without a clearly overarching theoretical framework. A theory is needed to explain the links between calling and well-being [29]. To address the important theoretical gaps, this study attempts to investigate the relationships between calling and mental health symptoms (i.e., anxiety, and depression). Specifically, based on the conservation of resources theory (COR), we propose that calling can lessen the levels of individuals' anxiety and depression. This is because career calling contributes to meaningful work and personal growth, which in turn decrease the levels of individuals' anxiety and depression. The theoretical model is shown in Fig. 1.
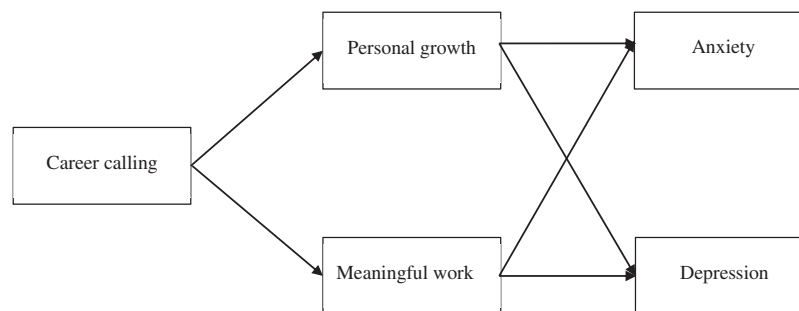

Figure 1: Research model

2 Theory Background and Hypothesis Development

2.1 The Conservation of Resources Theory

The conservation of resources theory was proposed by Hobfoll [30]. The basic tenet of COR theory is that "individuals strive to obtain, retain, protect, and foster those things that they value" [31] (p. 341). Within the COR theory, resources are defined as "those objects, personal characteristics, conditions, or energies that are valued in their own right, or that are valued because they act as conduits to the achievement or protection of valued resources" [31] (p. 339), and include 74 COR resources. To explain the conservation of resource caravans, the COR theory puts forward loss and gain spirals. The resource loss spiral is that individuals who lack resources are not only more susceptible to resource loss, but also that initial loss results in future loss; the resource gain spiral is that individuals with more resources are less susceptible to resource loss, more capable of obtaining resources, and that initial resources gain results in further gain [31]. Studies on COR theory consistently demonstrate that mental health symptoms will occur when resources are threatened and lost, and psychological functioning will obtain when resources are gained [32–36].

2.2 Hypothesis Development

Career calling as an important spiritual force is an important personal resource that is able to help individuals avoid resources loss and drive them to make great efforts to obtain other valued resources [37–39]. According to COR theory, we expect that calling is conducive to alleviating an individual's levels of anxiety and depression. First, individuals with a sense of calling have a strong sense of clarity of purpose and personal mission [26]. Generally, employees with clear personal purpose are able to cope with obstacles from a positive perspective [40], and effectively alleviate the pressure caused by high job demands [41]. Within the resource loss spiral of the COR theory, individuals with a calling are less susceptible to resource loss, and more likely to have optimal psychological functioning, and experience less levels of anxiety and depression. Second, individuals with a calling have strong action orientation, that is, they emphasize on doing rather than simply being [42]. At the same time, individuals with a calling have strong passion for work and are willing to make great efforts to obtain new resources such as meaning and growth [37,38]. According to the resource gain spiral of the COR theory, we argue that calling is conducive to decreasing the levels of anxiety and depression. Taken together, we hypothesized that:

Hypothesis 1. *Calling is negatively related to anxiety (1a) and depression (1b).*

COR theory argues that "those with greater resources are more capable of orchestrating resource gain" [35] (p. 117). According to the gain spirals of COR theory, we argue that a calling is negatively related to anxiety and depression. This is because a calling is capable of helping the individual gain other valued resources in the workplace, such as personal growth. Personal growth refers to the positive self-change reflected from the past to the future compared with the present, and is considered to be an important personal resource [35]. First, calling always suggests being called to action, which emphasizes on doing rather than simply being. Individuals with action orientation will make great efforts to acting rather than making plans. When individuals actively take actions rather than make plans, they are more likely to experience personal growth in the workplace [43]. Secondly, as we mentioned early, calling is characterized by a sense of clarity of purpose [26]. The clear purpose will enable individuals to make great efforts to complete the activities closely related to the goal and be away from the activities unrelated to the goal [44,45], which makes individuals continuously be on the road of achieving goals and experience positive changes. Consequently, individuals will experience personal growth. The COR theory posits that when personal growth is obtained, individuals' stress will be alleviated and their levels of anxiety and depression will decrease [35]. Applying this theory, we propose that:

Hypothesis 2. *Personal growth plays a mediating role in the relationships between calling and anxiety (2a), and depression (2b).*

Meaningful work is broadly defined as "work experienced as particularly significant and holding more positive meaning for individuals." [46] (p. 95), and reflects the personal significance of one of the most salient social activities [47] (p. 375). Meaningful work is one of important resources that individuals cherish and attempt to obtain [31]. According to the gain spirals of COR theory, we argue that calling is negatively related to anxiety and depression because calling contributes to meaningful work. First, individuals with a sense of calling have strong and meaningful passion for work [48]. Passion for work is one of the important factors that make work more meaningful [49]. This is because individuals with passion for work have a strong desire to invest time and energy in the work they love, which makes them experience personally significant and worthwhile [49,50]. Second, individuals with a calling are characterized by pro-social intention [42]; that is, a desire to make the world a better place. When individuals are willing to serve others and perceive contributions to common good, they will be more likely to experience meaningfulness in the work [46,51]. Empirically, two studies showed that calling was positively related to meaningful work [52,53]. As an important resource, the COR theory states that a sense of meaning can help individual cope with demands and promote well-being. Some studies also

found that the sense of meaning could reduce the levels of individuals' anxiety and depression [35,54,55]. Taken together, we hypothesize that:

Hypothesis 3. Meaningful work plays a mediating role in the relationships between calling and anxiety (3a), and depression (3b).

3 Method

3.1 Participants

The current data was a part of a large-scale survey [38]. This study was aimed at the full-time employees of a large state-owned bank in China. With the assistance of the human resources director, we sent out the survey to employees via e-mail. In the e-mail, we explained the purpose of our research and emphasized the confidentiality and anonymity of the survey. Employees who were interested in participating could reply via e-mail.

To reduce the concern about common method bias [56], a time-lagged technique was used. Specifically, calling, personal growth and meaningful work were measured at Time 1 (T1). Three weeks later (at Time 2), anxiety and depression were assessed. A total of 1355 questionnaires were distributed, and 832 responses were received. Informed consent was obtained from all subjects involved in the study. Of these, 204 cases were deleted due to a large amount of missing data, fake responses and irregular answers, resulting in 628 valid cases. The effective rate of retention was therefore 75.48%. The average age of the sample was 31.63 years ($SD = 5.54$), and the average organizational tenure was 5.23 years ($SD = 4.23$). Among the sample, 47.70% were female, and 85.00% had a bachelor's degree or above.

Based on Goodman et al. [57], we carried out independent sample *t*-test to examine attrition bias. The results showed that there was no significant difference between the two groups in age, tenure and work year, and there was significant difference between gender and education. Females and lower educated individuals were less likely to participate in the second wave. While this does indicate systematic dropout at Time 2, it is important to note that this dropout is only related to control variables, and does not depend on calling or well-being. Therefore, there was no attrition bias [58].

3.2 Instruments

Calling. Calling was measured with the 12-item presence of calling scale from the calling and vocation questionnaire (CVQ) [59] at Time 1. The scale has three dimensions: transcendent summons, purposeful work, and pro-social orientation. The responses were based on a six-point Likert scale, ranging from 1 (*not at all true of me*) to 6 (*totally true of me*). Sample items are: "I am pursuing my current line of work because I believe I have been called to do so" (transcendent summons), "I see my career as a path to purpose in life" (purposeful work), and "I am always trying to evaluate how beneficial my work is to others" (pro-social orientation). The internal consistency of the total CVQ score was α = 0.83. Higher scores on this scale indicate higher levels of calling.

Personal growth. The personal growth scale used was the personal growth sub-scale of Ryff's psychological well-being scale [60], which was measured at Time 1. The participants were asked to respond on a 6-point Likert scale, ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). The scale has three items: "I think it is important to have new experiences that challenge how you think about the world", "I have the sense that I have developed a lot as a person over time", and "I am not interested in activities that will expand my horizons". The internal consistency of the personal growth scale was α = 0.70. Higher scores on this scale indicate higher levels of personal growth.

Meaningful work. The sense of meaningful work was measured with the three items for the dimension of "meaning" from the 12 scales given by Spreitzer [61] at Time 1. The responses were given using a five-point Likert scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The items were "The work I do is very important to me", "My job activities are personally meaningful to me", and "The work I do is

meaningful to me". The internal consistency of this scale was α = 0.76. Higher scores on this scale indicate higher levels of work meaningfulness.

Anxiety. Anxiety was measured at Time 2 using the Symptom Check List-90 (SCL-90) developed by Derogatis [62]. We chose the dimensions of "anxiety", which has 10 items. The respondents were asked to answer the scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The internal consistency of the scale was α = 0.95. Higher scores on this scale indicate higher levels of anxiety.

Depression. Depression was one dimension of the Symptom Check List-90 (SCL-90) developed by Derogatis [62]. The scale has 13 items and was measured at Time 2. The participants were asked to respond on a 5-point Likert scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The internal consistency of the scale was α = 0.92. Higher scores on this scale indicate higher levels of depression.

Control variables. Previous studies have shown that anxiety and depression are affected by socio-demographic variables [63–66]. Thus, the participants' age, organizational tenure, gender (*0 = female, 1 = male*) and education (*1 = associate and below, 2 = bachelor, 3 = master and above*) were controlled for in the current study.

3.3 Preliminary Analyses

We used Mplus 8.0 to perform confirmatory factor analysis (CFA) to test the discriminative validity of the five constructs in the study. In the CFA, we evaluated our measurement model against competing plausible models. The results showed that the five-factor model fitted well ($\chi^2 = 325.62$; $df = 80$; $TLI = 0.93$; $CFI = 0.95$; $SRMR = 0.05$; $RMSEA = 0.07$) and better than alternative models (see Table 1). The factor loadings for five variables ranged from 0.51 to 0.91, which were greater than the standard value of 0.5 [67], and the AVE corresponding to each variable were 0.88, 0.83, 0.88, 0.95 and 0.96, which were greater than 0.5. Moreover, the mean square root of AVE was greater than the correlations among variables. Therefore, our measurement model had good construct and discriminant validity.

Table 1: Alternative models

Model	χ^2/df	TLI	CFI	SRMR	RMSEA
M1: a four-factor model	5.35	0.90	0.92	0.06	0.08
M2: a three-factor model	5.16	0.91	0.92	0.06	0.08
M3: a two-factor model	5.67	0.89	0.91	0.06	0.09
M4: a one-factor model	22.63	0.52	0.59	0.18	0.19

Note: M1: personal growth and meaningful work were loaded in one factor; M2: anxiety and depression were loaded in one factor and personal growth and meaningful work were loaded in one factor; M3: calling, personal growth and meaningful work were added into one factor and anxiety and depression were loaded in one factor; M4: all the factors were loaded on a single factor.

Second, we conducted Harman's single-factor test to detect common method variance. The results showed that the first factor explained 27.95% of the total variance, which did not exceed 40% [68], so there was no serious common method variance in this study.

Then, following the guidance of Bernerth et al. [69], we analyzed whether it was necessary to control for social-demographic variables. By removing the control variables that are not related to the dependent variables, it is possible to avoid the potential false effects that appear when the control variables are significantly related to the predictive variables but not the criterion variables [70]. The results showed that gender, tenure and education were not significant predictors of the dependent variables, so we did not control for these demographic variables when testing the hypotheses.

4 Results

4.1 Descriptive Statistics

The descriptive results were shown in Table 2. The results showed that calling was positively correlated with personal growth ($r = 0.47$, $p < 0.001$) and meaningful work ($r = 0.65$, $p < 0.001$), and negatively correlated with anxiety ($r = -0.23$, $p < 0.001$) and depression ($r = -0.25$, $p < 0.001$). There were negative correlations between personal growth and anxiety ($r = -0.21$, $p < 0.001$) and depression ($r = -0.25$, $p < 0.001$). The results also showed that there were negative correlations between meaningful work and anxiety ($r = -0.23$, $p < 0.001$) and depression ($r = -0.26$, $p < 0.001$). In the expected direction, these results supported the positive impact of calling on personal growth and meaningful work, as well as the negative effects of calling, personal growth and meaningful work on anxiety and depression.

Table 2: Means, standard deviations and correlation coefficients

Variables	M	SD	1	2	3	4
1. Calling	4.37	0.54				
2. Personal growth	4.72	0.71	0.47***			
3. Meaningful work	4.06	0.56	0.65***	0.46***		
4. Anxiety	1.49	0.53	−0.23***	−0.21***	−0.23***	
5. Depression	1.50	0.58	−0.25***	−0.25***	−0.26***	0.90***

Note: $N = 628$. ***$p < 0.001$.

4.2 Hypothesis Testing

We used Structural Equation Modeling (SEM) to test our hypotheses. The unstandardized regression coefficients of each path in the structural equation model were shown in Fig. 2.
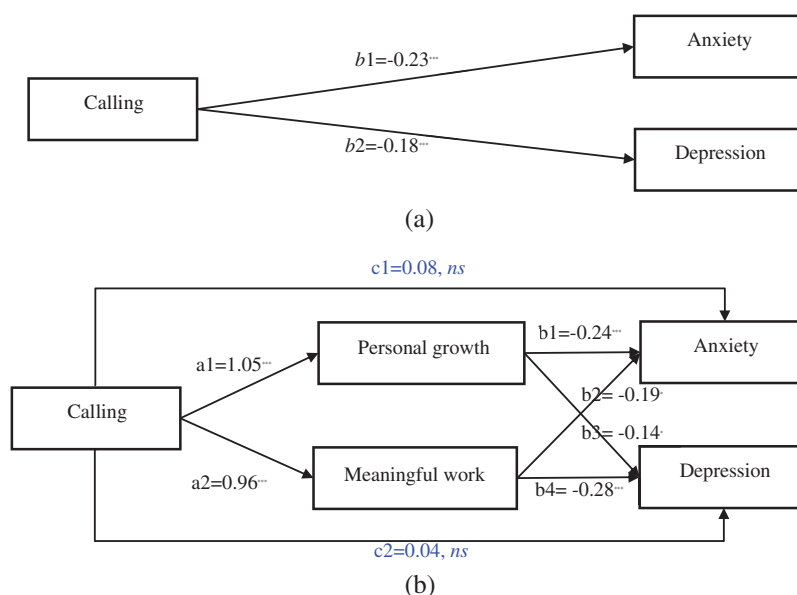

Figure 2: Results of the structural model assessment. (a) Direct pathway and (b) indirect pathway
Note: Standardized path coefficients are reported; *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$. ns = not significant

Hypotheses 1 stated that calling is negatively related to anxiety and depression. Fig. 2 showed that calling is negatively related to anxiety ($b1 = -0.17$, $SE = 0.04$, $p < 0.001$; $\Delta R^2 = 0.11$, $p < 0.001$) and depression ($b2 = -0.20$, $SE = 0.05$, $p < 0.001$; $\Delta R^2 = 0.11$, $p < 0.001$). Thus, hypothesis 1a and hypothesis 1b were supported.

Hypothesis 2 and Hypothesis 3 stated that calling is indirectly related to anxiety and depression via personal growth and meaningful work. As shown in Fig. 2, calling had a positive impact on the employee's personal growth ($a1 = 1.05$, $SE = 0.09$, $p < 0.001$), which in turn was negatively related to anxiety ($b1 = -0.24$, $SE = 0.08$, $p < 0.01$) and depression ($b3 = -0.14$, $SE = 0.07$, $p < 0.05$). The RMediation program [71] was used to estimate indirect effects and their 95% confidence intervals. The results showed that personal growth mediates the associations between calling and anxiety (indirect effect $= -0.25$, 95% CI $= -0.42$ to -0.09), and depression (indirect effect $= -0.15$, 95% CI $= -0.29$ to -0.002). Thus, hypothesis 2 was supported. Similarly, calling was positively related to meaningful work ($a2 = 0.96$, $SE = 0.08$, $p < 0.001$), which in turn negatively linked to anxiety ($b2 = -0.19$, $SE = 0.09$, $p < 0.05$) and depression ($b4 = -0.28$, $SE = 0.09$, $p = 0.001$). Meaningful work played mediating role in the relationship between calling and anxiety (indirect effect $= -0.18$, 95% CI $= -0.35$ to -0.01), and depression (indirect effect $= -0.27$, 95% CI $= -0.43$ to -0.11). Thus, hypothesis 3 was supported. In addition, after adding personal growth and meaningful work to the model, the direct effects became insignificant ($c1 = 0.08$; $p = 0.70$; $c2 = 0.04$; $p = 0.82$). Therefore, it could be inferred that the model was a full mediation model [72]. That is, personal growth and meaningful work completely mediated the relationships between calling and anxiety, and depression.

5 Discussion

On the basis of the conservation of resources theory, this study investigated whether and why calling helps employees relieve anxiety and depression. The study showed that calling is able to lessen the levels of individuals' anxiety and depression. Two important resources (i.e., personal growth, and meaningful work) explained the underlying mechanism of the relationship between calling and anxiety, and depression. Put simply, calling promotes personal growth and meaningful work, which in turn contributes to alleviating individuals' anxiety and depression. The findings have a number of theoretical and practical implications.

5.1 Theoretical Implications

First, the findings provide new theoretical insights into the relationship between calling and mental health and well-being. Previous studies have studied the direct relationship between calling and individuals' mental health problems [20,73]. However, these studies did not investigate why calling can decrease the levels of anxiety and depression. There was no knowledge about the "black box" of the relationship between calling and anxiety and depression. This study, based on the conservation of resources theory, is the first to examine the underlying mechanism for the relationship between calling and mental health problems, and it finds that the COR theory can provide a good theoretical explanation for the relationship. Specifically, the study found that, as proposed by the COR theory, two important resources (i.e., personal growth, and meaningfulness in the work) can provide a good explanation for the relationship between calling and mental health problems (i.e., anxiety and depression) [35].

Second, the study provides new support for the calling model of psychological career success. The calling model of psychological career success argues that calling can facilitate goal achievement and career effort, which in turn results in objective and psychological career success [37]. To date, the calling model of psychological career success has only been supported by one study conducted among young Australian adults [74]. From the perspective of career success theory, meaningful work and personal growth are two important facets of psychological career success [75]. This study found that, for Chinese

adults, calling was positively related to meaningfulness and personal growth at work, and provided new evidence for supporting the calling model of psychological career success.

5.2 Practical Implications

In addition to these theoretical contributions, our results have some practical implications for organization managers. First, the results of this study show that improving employees' sense of calling can provide an important way to solve the mental health problems such as anxiety and depression. Therefore, organization managers can adopt organizational development strategies to improve each individual's sense of a calling, such as encouraging individuals to explore work-related interests, values and skills and to link their current work to common good [29]. In these ways, managers can improve individuals' sense of calling, which contributes to the relief of symptoms of anxiety and depression.

Second, the study finds that personal resources (i.e., personal growth and meaningful work) plays a mediating role in the relationship between calling and mental health problems. Therefore, in order to relieve anxiety and depression of employees, it is necessary to facilitate their personal growth and meaningful work. Specifically, on the one hand, managers can help employees to achieve a balance between work and family by improving their working environment, providing training and career development opportunities, and implementing flexible working hours. Through these ways, employees can feel that they are valued and supported by the organization, which makes them feel that their work is significant and worthwhile [76,77]. On the other hand, organization managers can increase individuals' positive emotions and help individuals perceive personal growth by taking psychological intervention measures such as improving their self-awareness and emotion management, exploring their influence and their life significance [78].

5.3 Limitations and Future Directions

Although the data for this research was collected at two time points, the research was cross-sectional in nature [79]. Especially, this study did not measure the well-being at Time 1. Therefore, this study was not be able to rigorously build the casual inference. Future research can use a rigorous longitudinal design to replicate our results and take advantage of autoregressive control to improve the rigorousness of the modeling. Another limitation is that the causal order between calling and meaningful work cannot be definitively verified. Based on the COR theory, we infer that calling has a positive impact on meaningful work. Our findings could be supported by previous theoretical and empirical studies [52,53], but there might be other explanations. For example, another study argued that meaningful work is an important antecedent of career calling [26]. Accordingly, we cannot rule out the possibility of reverse relationship between the two variables. Future research can examine the possible relationship between calling and meaningful work. Thirdly, this paper does not explore the boundary conditions of the underlying mechanism for the relationship between calling and anxiety and depression. In order to obtain resources, individuals not only need to make efforts themselves, but also need to be supported by organizations. For example, the lack of leader support will make the individuals difficult to obtain the required resources, which may lead them being trapped in a stressful environment. Consequently, they will experience the emotional anxiety, psychological distress or physical injury. Therefore, we predict that leadership support may play the moderating roles in the underlying mechanisms for the relationship between calling and anxiety, and depression. It is plausible to examine the moderating variables such as leader support to obtain a better explanation of the relationships between calling and individuals' mental health or well-being in the workplace.

Conflicts of Interest: The authors declare that they have no conflicts of interest to report regarding the present study.

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