

Relationship among affective commitment, occupational stressors, and calling of psychiatrists in Shanghai

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Abstract

The aim of the study is to investigate the levels of affective commitment, occupational stressors and calling in psychiatrists in Shanghai and try to find the relationship among 3 variables in the participants.

We enrolled 81 participants using a survey with a combination of demographic information, affective part of organizational commitment questionnaire, portion of the scale for occupational stressors on clinicians and the calling and vocation questionnaire. Correlation analysis and multiple linear regression analysis were applied to probe into the relationship among the three variables. *t* Test and nonparametric test were utilized to compare the differences between the groups of individuals who were divided according to the demographic information.

The mean score of the affective commitment, occupational stressors and calling of Shanghai psychiatrists were all at a moderate level. The scores in affective commitment had a significantly negative relationship with that of the occupational stressors, especially in the respect of organization and management, occupational interest, and development of work. Whereas the scores of calling revealed a remarkably positive connection with affective commitment. In addition, demographic groups under comparison, individuals who were >35 years' old, male, or have worked for >10 years are more likely to suffer from higher occupational development and interpersonal relationship stress.

We found that the levels of affective commitment, occupational stressors and calling in psychiatrists in Shanghai were all moderate. These people who were men, >35 years' old, and had >10 years of work experiences had suffered from higher levels of occupational stressors, especially occupational development and interpersonal relationship stress. The affective commitment was positively correlated to the calling while negatively associated to the occupational stressors in Shanghai psychiatrists. For stronger bond for the psychiatrists, strengthen the calling and lessen the occupational stressors are required. These results provide some ideas for enhancing the occupational commitment of psychiatrists and conducting psychological interventions in a timely manner henceforth more effectively.

Abbreviations: CVQ = Calling and Vocation Questionnaire, OCQ = organizational commitment questionnaire, SD = standard deviation.

Keywords: affective commitment, calling, occupational stressors, psychiatrist

Editor: Chiedu Eseadi.

CW and FW contributed equally to this work.

Ethical considerations: The present study was approved by the Institutional Ethical Committee for clinical research of Shanghai Changning Mental Health Center, Shanghai, China.

Funding: The work was supported by the Special Project for Clinical Research in Health Industry of Shanghai Municipal Health Commission (20204Y0025), and the National Health System "Good Doctor" Construction Project of Yangpu District (2020–2023). The funding sources had no role in the design of the study, the collection, analysis and interpretation of the data, and the writing of the manuscript.

The authors report no conflicts of interest.

The datasets generated during and/or analyzed during the current study are not publicly available, but are available from the corresponding author on reasonable request.

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How to cite this article: Lin X, Zhu Y, Wang C, Wang F. Relationship among affective commitment, occupational stressors, and calling of psychiatrists in Shanghai. *Medicine* 2021;100:27(e26615).

Received: 18 January 2021 / Received in final form: 17 June 2021 / Accepted: 18 June 2021

<http://dx.doi.org/10.1097/MD.00000000000026615>

1. Introduction

As the development of the society, mental health has been attached great importance for a number of years. There is also a rising number of medication workers in psychiatric area. However, the number of psychiatrists is still far from enough worldwide, especially in China. That is, according to the World Health Organization's Mental Health Atlas 2014, on average globally, there is <1 mental health worker per 10,000 people.^[1] The data showed in China were only 0.215.^[2] The shortage of mental health workers could attribute to many reasons. One of them is the high turnover rate. Moreover, the remaining psychiatrists face low employee motivation, which may lead to decreased mental health professional performance level. It was indicated in the previous researches that voluntary turnover and low employee motivation could be predicted by affective commitment.^[3,4]

Organizational commitment is one of the most widely studied attitudinal antecedents of organizational behavior.^[5] It can facilitate employee effort, participation, and involvement.^[6] The affective component of it, that is, affective commitment, is described as employees' identification with, emotional attachment to, and involvement in an organization. In other words, instead of need to or ought to, the employees themselves want to stay in the institution.^[7] Employees who have higher level of affective commitment are more likely to have positive organizational behavior,^[8] such as working voluntarily and with passion,^[3] leading to the occupational stability.^[9] Whereas lower level of affective commitment may lead to depression or other negative outcomes, even suicide. Since suicidality is described along with mood disorders, stressful life events, interpersonal problems, and feelings of hopelessness.^[10] Meanwhile, some researchers considered that lower registration of sensory input was closely related to higher hopelessness and worse ability to identify feelings; therefore, negative responses of the affective commitment may indicate the unique sensory processing pattern in the depressed group, which can also result in unfavorable outcomes.^[11]

Stressors are described as factors that increase mental or physical stress of an individual. A combination of exposure to internal and environmental stressors can result in burnout, which is characterized by emotional exhaustion, a reduced sense of personal accomplishment and depersonalization.^[12] That is, burnout is demonstrated partly result from the occupational stress.^[13,14] It can lead to somatopathy, decreased concentration, and clinical errors. Enginyurt et al^[3] declared that in healthy professions, affective commitment was a determinant factor of burnout syndrome. Meanwhile, Virtanen et al^[15] studied all kinds of doctors in Finland; they discovered that psychiatric workers had more co-occurrence health problems, such as higher rates of self-reported burnout. A national study from the United States previously observed that more than half of physicians experienced at least 1 symptom of burnout.^[16] Compared to other specialties, psychiatric profession was faced with higher level of stress and burnout.^[17] In addition, some occupational stressors were specific to the mental health workers.^[17] Occupational stressors could limit the maintenance and resilience of values-based resources, such as demoralization.^[18] This can lead to undesired clinical performance. Otherwise, professional burnout may also ruin physicians' calling.^[12]

Calling, one of the intrinsic motivators from work^[19] is regarded as a sense of purpose that makes people satisfied with

the work or get encouraged in making contributions to the society.^[20] The concept of calling has attracted increasing empirical interest recently. Previous studies found that calling could make physicians more engage with their clinical work,^[21–23] experience higher level of career satisfaction,^[19] and lessen the turnover rate.^[21–23] Moreover, physicians with a stronger calling are more likely to endorse a higher^[24–27] and more durable commitment^[19] to their clinical work. They were reported to suffer less negative effects from the occupational stressors,^[28] less possibility of exposing to burnout, and possess better resilience.^[19]

Nevertheless, little work has been done to investigate the affective commitment, occupational stressors, calling and their relationships in psychiatric profession. In this article, close attention is paid to find the present levels of the 3 variables, the association among them, and the differences of the variables in groups of participants within Shanghai psychiatrists. We also tried to recommend the possible solutions to lessen the turnover rate and maintain the motivation in work.

We hypothesize that reducing occupational stressors level and enhancing inner calling may lead to a higher level of affective commitment, thereby forming positive affective commitment. Therefore, on this basis, we designed this study to focus on investigating levels of affective commitment, occupational stressors, and calling of psychiatrists in Shanghai Regional Mental Health Center, as well as analyzing the relationship between these 3 variables, and trying to find effective ways to reduce the turnover rate and maintain work motivation.

2. Methods

2.1. Study design

Cross-sectional correlational study conducted in seven psychiatric hospitals in Shanghai, China. We distributed 210 questionnaires to psychiatrists. Respondents were issued survey links or paper questionnaires. Finally, our study was comprised of 81 participants. The present study was approved by the Institutional Ethical Committee for clinical research of Shanghai Changning Mental Health Center, Shanghai, China. In addition, online-informed consents in line with the Helsinki Declaration were acquired from all the participants.

2.2. Setting

From January to May, 2018, psychiatrists from 7 psychiatric hospitals in Shanghai participated in the research, including Changning, Xuhui, Yangpu, Hongkou, Putuo, Jiading, and Fengxian Districts. Data were collected through a combination of paper questionnaires and online questionnaires via "Questionnaire Star" Application. The questionnaires were anonymous and confidential.

2.3. Participants

A total of 210 psychiatrists were involved, and 81 of them provided completed and valid data. Seven of the psychiatrists did not return the questionnaires because they were too busy or unwilling to. The rest of the 122 questionnaires were not included because of incompleteness. Some of the questions were missed or filled with invalid answers. Ultimately, for the guarantee of data quality, the final rate of adoption was 38.57%.

2.4. Variables

2.4.1. Affective commitment. This study adopted the organizational commitment questionnaire (OCQ) published by Meyer and Allen in 1997,^[29] which is composed of affective commitment, normative commitment and sustained commitment. The sustained and normative commitment are considered as extrinsic controlling motivation, whereas affective commitment as intrinsic spontaneous motivation. Our research mainly studied the correlation among the three internal psychological variables. Furthermore, it is generally considered that affective commitment is the core of organizational commitment.^[30] Thus, the study only selected the 8 questions of affective commitment into the survey scale. Likert 5-point scoring method^[31] was utilized in the scale.

2.4.2. Occupational stressors. "Scale for Occupational Stressors on Clinicians," which was compiled by Chen in 2009,^[32] was applied in the study. Made of 38 items, the scale can be divided into 7 factors, that is organization and management, vocational interest, work load, career development, interpersonal relationship, external environment and doctor-patient relationship. Thirty-four of the items were finally involved to guarantee the stability of the sample. Item 8, 13, 30, 31, which belong to occupational interest were deleted. Item 8, 30, and 31 were removed because of the correlation with organizational commitment and it may cause interference with the content of OCQ scale. Whereas item 13 was also excluded according to the little relevance with occupational interest. Likert 5-point scoring method was also employed in the scale.

2.4.3. Calling. The study adopted the Calling and Vocation Questionnaire (CVQ), which was published by Dik et al^[33] in 2012. Since our study is a measurement study, 12 items in the CVQ scale for existent measurement were selected. Likert 5-point scoring method was used for each item.

2.4.4. Bias. The questionnaire of the study mainly consisted of 3 parts, which were foreword, demographic information, and scales. First of all, the preface explained the purpose of the questionnaire. The survey was conducted to investigate the working state of psychiatrists. Then followed by the demographic information, including sex, age, marriage, education, professional title, position, authorized strength, and working years. At last, the main scale composed of 3 scales, that is, affective commitment, occupational stressors, and sense of mission were presented. Recruited volunteers may have their selective bias.

2.4.5. Study size. The sample size of this study was relatively modest.

2.4.6. Quantitative variables. Normal distribution metering data were represented as mean (standard deviation), whereas skewed distribution measurement data were represented as medians and quartiles (P25-P75).

2.5. Statistical methods

The data were analyzed in SPSS 24.0 (SPSS Inc, Chicago, IL). $P < .05$ (2-tailed) was considered significant. The normality test was conducted first by using Shapiro-Wilk test. Then, correlational analysis (Pearson) was chosen to analyze the correlation in pairs among affective commitment, occupational stressors and calling. According to the correlation results, multiple linear regression analysis (stepwise) was carried out to discover the

Table 1
Characteristics of psychiatrists in psychiatric hospitals in Shanghai (n=81).

Characteristic	No.	Ratio (%)
Age, y		
<35	35	43.21
≥35	46	56.79
Sex		
Male	32	39.51
Female	49	60.49
Marriage		
Married	67	82.72
Unmarried	14	17.28
Education		
Bachelor's degree	59	72.84
Graduate degree or above	22	27.16
Professional title		
Resident doctor	21	25.93
Attending doctor	44	54.32
(Associated) Senior doctor	16	19.75
Position		
Junior doctor	57	70.37
Middle or higher management	24	29.63
Authorized strength		
Yes	75	92.59
No	6	7.41
Working years		
<10	34	41.98
≥10	47	58.02

relationship between affective commitment and occupational stressors, sense of mission, respectively. Furthermore, the participants were divided into groups according to the demographic results (such as age, sex, working years, among others). Two-sample *t* test was utilized to compare the data which obey the normality distribution, whereas nonparametric test was applied in others.

3. Results

3.1. Descriptive statistics

In our study, 81 psychiatrists were finally involved. Demographic information of them is shown in Table 1. On average, they were 35.70 ± 5.76 years' old, and had 10.00 (8.00–13.50) years of experience. 39.51% of the participants were male. As detailed in Table 2, the average scores of affective commitment, occupational stressors, and calling were 27.25 ± 3.82 , 106.23 ± 17.87 , 41.06 ± 5.46 , respectively. That is, the average scores of the single item in the 3 variables were 3.41, 3.12, and 3.42. They were all at a moderate level compared to the full score of 5.

In detail, within all the scales, the items which had the highest average scores were all in the Scale for Occupational Stressors on Clinician. That is, Item 10 "There are too many negative reports about the medical personnel in the media these days" (mean = 4.30), Item 34 "The existing medical security system needs to be improved" (mean = 4.19), Item 9 "There are a lot of risks in my work" (mean = 4.14) and Item 32 "I feel that the existing laws and regulations are difficult to protect the legitimate rights and interests of medical personnel" (mean = 4.00). Interestingly, these 4 items also had the highest proportion of individuals completely agreed. The percentages were 44.44%, 35.80%, 28.40%, and

Table 2
Descriptive statistics of the study variables.

Variable	Mean \pm SD (Median [P25–P75])
Total affective commitment	27.25 \pm 3.82
Total occupational stress	106.23 \pm 17.87
Organization and management	26.06 \pm 6.09
Vocational interest	9.00 (8.00–11.00)
Work load	21.77 \pm 3.83
Career development	20.40 \pm 5.42
Interpersonal relationship	6.00 (5.00–7.00)
External environment	13.00 (11.00–14.00)
Doctor–patient relationship	9.00 (8.00–12.00)
Total calling	41.06 \pm 5.46

SD = standard deviation.

32.10%, separately. Items had the lowest scores were Item 29 “Most colleagues are not friendly or interested in me” (mean = 1.95), Item 14 “I feel that the existing laws and regulations are difficult to protect the legitimate rights and interests of medical personnel” (mean = 2.05), Item 5 “I enjoy to be a doctor so much” (mean = 2.12) and Item 11 “There is kind of difficult to communicate with colleagues” (mean = 2.22). They also had the highest number of participants strongly disagreed (23.46%, 21.00%, 19.75%, 19.75%, respectively). For affective commitment, 21.00% participants completely disagreed that “I do not feel ‘emotionally attached’ to this organization” (Item 6). 17.28% individuals quite agreed that “I enjoy discussing about my organization with people outside it” (Item 2). In the aspect of calling, Item 8 (My work contributes to the common good.) and Item 9 (My career is an important part of my life’s meaning) both had 14.81% of individuals totally agreed with the statement.

3.2. Correlational analysis

Since the 3 variables all met normal distribution, correlational analysis (Pearson) was utilized in pairs to discover the relationship among the affective commitment, occupational stressors, and calling. The affective commitment was positively associated with calling ($P = .001$, $r = 0.496$) and negatively correlated with the level of occupational stressors ($P < .001$, $r = -0.358$). However, there was no significant correlation between the scores of occupational stressors and calling ($P = .074$, $r = -0.200$) (Fig. 1). The 7 factors of the occupational stressors were also taken into consideration. Organization and management ($P < .001$, $r = -0.450$), occupational interest ($P < .001$, $r = -0.528$), and development of work ($P < .001$, $r = -0.383$) revealed significantly association with commitment.

3.3. Multiple linear regression analysis

The regression model, given in Table 3, was conducted by $Y =$ affective commitment, $X_1 =$ occupational interest, $X_2 =$ calling, $X_3 =$ organization and management. Other variables did not enter the model. The regression equation was finally presented as follows:

$$Y = 27.333 - 0.439X_1 + 0.210X_2 - 0.169X_3.$$

3.4. Comparison analysis

All the subjects were divided into different groups according to their demographic properties. The result presented that the male

psychiatrists had significantly higher stress in occupational development ($P = .03$). With respect to age, younger psychiatrists (under 35) had remarkably lower occupational development ($P < .01$) and interpersonal relationship stress ($P = .05$) than the elder ones. Individuals had more working experiences (>10 years) were more likely to have interpersonal relationship problems ($P = .04$).

4. Discussion

For affective commitment, although lack of comparison, it revealed that the psychiatrists in health centers of Shanghai did not have strong bond to the institution, which were paralleled to the anticipation. Highest proportion of participants, only about 1 in 5, totally believed that they felt emotionally attached to the organization. They claimed that they felt like part of family at the organization and were willing to discuss the hospital with people outside it. In terms of occupational stressors, the participants displayed a moderate level of stress, better than the expectation. It was in contrast to a Swiss study which confirmed psychiatrists suffered from the same heavy stress as general physicians did.^[17] It may due to the relatively light work of the specialty in China. As the cause of stress, a majority of doctors put it down to the excessive negative reports. In Chinese society, the exaggerating or even misleading reports have put the medical staff in an embarrassing situation, aggravating the contradiction between doctors and patients. A large proportion of the participants showed the need for improvement of existing medical security, the laws and regulations for medical personnel. In the aspect of calling, about half of the participants asserted that their work was helpful to the society and was a key part of the value in life. In other words, similar to our assumption, there were almost another part of the psychiatrists could not feel much calling for their career.

As the hypothesis before, multiple correlations were found between these 3 variables. The present study presented that the affective commitment scores had a negative correlation ($r = -0.358$) with the occupational stressors scores, especially in the domain of organizational and management, occupational interest, and occupational development. Although lack of previous research specific for affective commitment, our result was parallel to the findings of Green et al,^[34] who declared that stressful organizational climate was negatively related to organizational commitment. Stressful climate, results from the rising burden and demands, is regarded as responses to the overwhelming work environment and may in turn contribute to dropped commitment to the organizations and their goals.^[35] Burnout is considered as the result of constant exposure to stress.^[13] Lin and Tourigny^[36] argued that reduced organizational commitment may due to the organizational effects of burnout. An earlier meta-analytic research also conferred the negative relationship.^[34] In spite of the weak association found between the total affective commitment scores and occupational stressors, the factors of organization and management and occupational interest revealed a moderate correlation (The guide Evans^[37] advised for the absolute value of r was applied for describing the strength of the correlation). Since we provided a more detailed insight into the source of occupational stressors leading to the reduction of commitment, much attention may need to be paid to the specific domains.

Meanwhile, the score of affective commitment was positively associated with calling, at a moderate level. Though there were a few studies concentrated on it. The result was consistent with the

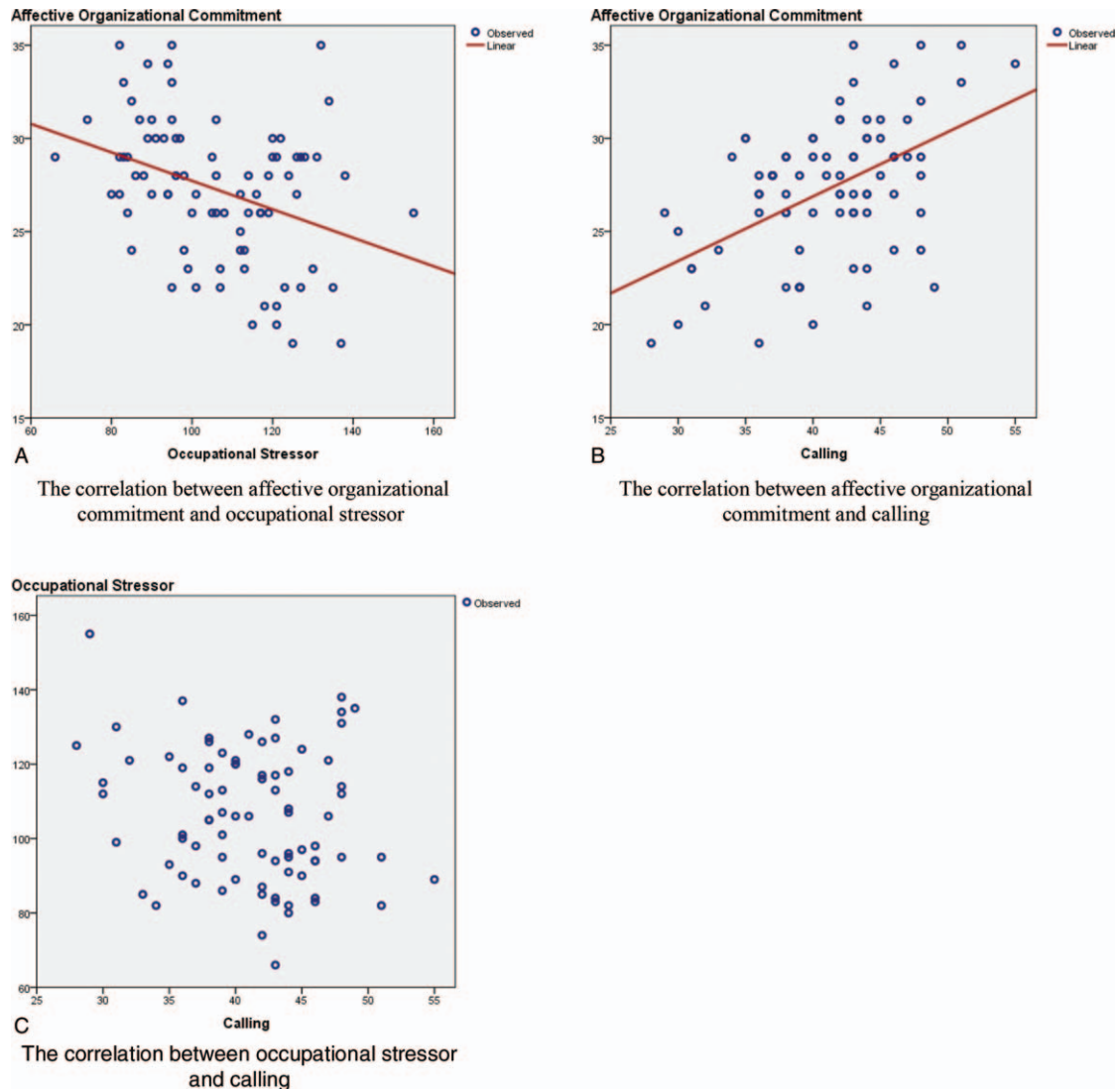


Figure 1. The relationship among affective organizational commitment, occupational stressor, and calling.

previous study by John D. Yoon et al.^[19] They confirmed that the owning of a strong sense of calling was positively associated with clinical commitment. Studies on nurses were also in good agreement with us.^[9,38]

However, in our research, the relationship between calling and occupational stressors was not significant, although there was a trend of negative correlation. In previous studies, Jager AJ’s team found that physicians with higher burnout level were less likely to

process an occupational calling.^[12] In turn, a recent study also revealed that physicians who regarded their profession as a calling suffered less from burnout.^[39] However, none of the studies have mentioned about the direct relationship between calling and occupational stressors. It might be speculated that burnout, one of the consequences of occupational stressors, rather than occupational stressors itself that have remarkable relationship with calling.

Table 3

Linear stepwise regression analysis of occupational interest, organization and management, and calling for affective commitment.

Model	β^*	Standard error	B^\dagger	t	P
Constant	27.333	3.885		7.036	<.001
Occupational Interest	-0.439	0.152	-0.293	-2.881	.005
Calling	0.210	0.068	0.300	3.087	.003
Organization and management	-0.169	0.059	-0.269	-2.881	.005

* Unstandardized coefficients.

† Standardized coefficients.

The regression formula mirrored that calling influenced affective commitment beyond occupational stressors. Although R^2 was relatively low, it could be indicated that besides the negative effect stressor had on affective commitment while calling in reverse, more variables still need to be discovered to predict the emotional bonding with a health care center for a psychiatrist.

Our study discovered that female psychiatrists had less stress on occupational development than their male counterparts. The result was contrast to the previous studies confirming female with higher possibility to report stresses,^[40] burnout, and depression.^[41,42] It maybe because of the different culture that in China, female staff tend to spend more time on family,^[43] leading to their less ambition on the career.

Elder psychiatrists also presented higher stress on occupational development. In spite of few direct reports for psychiatrists or especially on occupational progress, research for cancer care appeared that stress was higher in elder nurses.^[44] In addition, studies found that elder physicians had a higher intention to leave than the younger.^[45] The elder worker reported that they mainly felt lack of space for personal development. It is reasonable because in Chinese society many research applications have age restrictions. Moreover, elder people always have the responsibility of family, the work-family conflict makes them lack of enough opportunities to get further study.

Unexpectedly, psychiatrists older, with long working years, were more likely to have relationship problems, mainly due to the difficulty of communication with colleagues. According to the unification medical education for psychiatrists, elder doctors were always working for a longer time. They were more likely to have a medium-grade professional title and need to harmonize with the junior colleagues, the supervisors, and the peers.

Inferior level of affective commitment to the working place can lead to high quit rate and for those who still on work may cause less passion to provide good service to the patients. Thus, leading to more professional stress and lower inner voice calling among the psychiatrists. Fortunately, the sense of bonding to the working place in our study was at a mediate level. However, joint effort, both from intrinsic and extrinsic, is still eager for the strength of affective commitment. First of all, lessen the occupational stressors in work. Better medical system, medical law and normative media environment are needed to improve the healthcare environment. Otherwise, proper organization and management, abundant resources for employees' occupational development are required in the organization, for instance, proper salary, effective rewarding system, and more participants in the institutional system establishment. Meanwhile, psychiatrists themselves need to develop solid interest for the career. Furthermore, a specific health care workplace to support doctors' well-being can also take into consideration.^[12] Secondly, it is of importance to promote the calling for psychiatrists. As a research for health care professionals pointed out that addressing the spiritual development could facilitate the calling.^[46] Periodically courses or supervision for calling construction may take into account for the organization. In summary, the affective commitment of psychiatrists is affected by occupational stressors and sense of calling. Future studies may focus on the differences of whether use positive approaches to lessen the occupational stressors and strengthen the calling could make effective impression on affective commitment. Then we could expect a more favorable working atmosphere for psychiatrists and more effective clinical service for patients.

4.1. Limitations

Besides the value of the study, the limitations cannot be ignored. First, the sample size of the participants was relatively small. It may because of the low questionnaire availability. In future studies we would try to improve it. Secondly, only psychiatrists in public mental health centers were involved in the research. It would be beneficial if more resources could be utilized to conduct a research with mental health workers from a wider range of institutions, such as private mental health centers as well as general hospitals. Finally, the scale for occupational stressors we adopted was compiled for doctors in all specialties. However, compared to other department, psychiatrists confront several unique problems, such as stigma, inappropriate referrals, safety issues, post-traumatic stress disorder due to the patient suicide, and so on.^[17] Hence, specific scales should be compiled for further study.

4.2. Interpretation and generalizability

In summary, we have presented the relationship among the three variables in psychiatrists of mental health centers in Shanghai. That is, affective commitment was positively correlated to the calling while negatively associated to the occupational stressors. For stronger bond of the health care staff to the institutions, strengthen the inner calling, and lessen the occupational stressors were thirsted. Future work should focus on an expanded range of psychiatrists and more specific problems for this specialty.

Acknowledgments

The authors thank "Questionnaire Star" Application for freely providing the online platform.

Author contributions

Chao Wang: Conceptualization, Methodology, Investigation, Data curation, Writing- Review and Editing.

Fang Wang: Supervision, Conceptualization, Writing- Review and Editing.

Xiao Lin: Conceptualization, Formal analysis, Writing- Original draft preparation.

Yuncheng Zhu: Supervision, Conceptualization, Writing- Review and Editing.

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Investigation: Chao Wang.

Methodology: Chao Wang.

Supervision: Yuncheng Zhu, Fang Wang.

Writing – original draft: Xiao Lin, Fang Wang.

Writing – review & editing: Yuncheng Zhu.

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