Anxiety and Associated Factors Among Chinese Preschool Teachers: A Cross-Sectional Study

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Posted Date: 23 July 2024

doi: 10.20944/preprints202407.1761.v1

Keywords: preschool teachers; anxiety; mental health; work-related stress; interpersonal difficulty; perceived stress; neuroticism; resilience; inner strength

 doi:10.20944/preprints202407.1761.v1

Article

Anxiety and Associated Factors Among Chinese Preschool Teachers: A Cross-Sectional Study

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Abstract: In China, preschool teachers have a significant influence on the development of young children aged 3-6. It is imperative to understand their mental health and the factors associated with it to inform policies, optimize their mental well-being, and support their job performance. This study aimed to investigate the factors contributing to anxiety symptoms among preschool teachers. A sample of 393 Chinese preschool teachers (279 females, 114 males) aged 21-56 completed online questionnaires collecting their socio-demographic and work-related information and assessing anxiety symptoms, interpersonal difficulties, personality traits, perceived stress, resilience, and inner strength. Pearson correlation and multiple linear regression analyses identified significant predictors of anxiety symptoms. The prevalence of anxiety symptoms among the studied cohort was found to be 12.2%. Statistically significant factors positively correlated with anxiety symptoms included objective work-related stress (B=0.149, p<.001), interpersonal difficulties (B=0.921, p<.001), perceived stress (B=0.108, p=.001), and neuroticism (B=0.071, p=.002). The findings highlight the urgent need for measures to reduce work-related stress and anxiety. However, when negative mental health predictors were included, the effect of positive psychological factors became nullified. Positive mental health might have a moderating role in such a negative mental health outcome as anxiety. Therefore, further research is required to understand the impact of positive mental health factors more clearly.

Keywords: preschool teachers; anxiety; mental health; work-related stress; interpersonal difficulty; perceived stress; neuroticism; resilience; inner strength

1. Introduction

Teaching is regarded as a profession that poses significant physical, social, and emotional challenges [1] and is recognized as a career vulnerable to stress and burnout due to the extensive workload [2]. Research has shown that mental health is a crucial but often underestimated component of teachers' professional and personal lives [3,4]. Teachers frequently experience anxiety[5], making workplace mental health a critical public health issue [6]. Teachers may face more mental health issues than other professions due to the high-stress nature of their jobs [7,8]. Notably, it has been acknowledged that there is a strong correlation between teachers' burnout and their efficacy in classroom management [9]. Thus, teachers' workplace well-being may pose a critical public health concern, potentially affecting both the teachers and the overall educational environment involving their students [10].

In China, preschool education, as per the Ministry of Education, refers to the education of children aged 3-6, often called 'kindergarten education'. According to preschool education

 doi:10.20944/preprints202407.1761.v1

guidelines, preschool teachers support and guide children's learning activities [11]. They are required to multitask and play several roles, such as supporters, cooperators, and guides [12]. Studies have indeed indicated that preschool teachers experience significant occupational stress and have a high prevalence of psychosomatic illnesses [13–15]. Nevertheless, there has been an extensive focus on preschool teachers' work norms, professional ethics, and teaching methods rather than their psychological health and well-being [16].

A Chinese study using Symptom Checklist-90 and Eysenck Personality Questionnaire found that the mental health of preschool teachers was underperformed when compared with the national average, and mental health problems were found to be related to the personality characteristics and stress of preschool teachers [17]. In particular, with regard to anxiety symptoms, Wang & Yang found that more than 15% of preschool teachers reported a high level of anxiety [18]. Personal factors, such as interpersonal difficulties, personality traits (neuroticism and extraversion) and perceived stress can be associated with anxiety symptoms[19–22]. Moreover, positive attributes like resilience and inner strengths may have a role in alleviating anxiety symptoms [23,24]. The high cognitive demands, emotional strain, and relatively poor remuneration in early childhood education may make preschool teachers particularly vulnerable to anxiety symptoms [25].

Within these contexts, this study aims to explore the associations, if any, of socio-demographic, work-related and personality factors with anxiety symptoms in Chinese preschool teachers. These findings could help us gain better insight into the associated factors which may form targets for interventions, policies and further research to improve the mental well-being of preschool teachers in China.

2. Materials and Methods

2.1. Study Design

This study was a cross-sectional study.

Targeting the Chinese preschool teachers, a Chinese questionnaire platform (Questionnaire Star) was used to develop the online questionnaires and they were distributed using Chinese social media platforms (WeChat, Weibo). Employing a snowball sampling technique, the first author, a preschool teacher, invited other teachers in their network to complete the online questionnaires. All participants were encouraged to disseminate the questionnaires to other colleagues.

Inclusion criteria of the participants are: 1) must be Chinese preschool teachers; 2) had worked for at least one year; 3) were aged 20-60 at the time of the study; 4) gave consent; 5) worked at least 6 hours per day with the children (as the class teacher). Exclusion criteria are: 1) working part-time; 2) simultaneously teaching at a higher level.

The Chiang Mai University Ethics Committee has reviewed this study, which has the number NO. 037/2024. All the participants gave written consent to participate in this study.

2.2. Outcomes

This primary outcome or dependent variable was anxiety symptoms. The independent variables include socio-demographic factors (age, sex, level of education, income per month, marital status), work-related factors(class of work city, working years, nature of kindergarten, teacher's title, average daily working hours, average daily sleeping hours, class teacher-student ratio, work-related stress), and mental health factors (interpersonal difficulties, resilience, perceived stress, inner strength, extraversion, neuroticism). The objective was to study the prevalence of anxiety symptoms among Chinese preschool teachers and the factors associated with anxiety symptoms.

2.3. Questionnaires and Outcome Measurement Tools

The questionnaire of this study included basic information on socio-demographic data (age, sex, level of education, income per month, marital status), and preschool teachers' work-related factors (class of work city, working years, nature of kindergarten, teacher's title, average daily working hours, average daily sleeping hours, class teacher-student ratio, work-related stress). Distinguishing from perceived stress, work-related stress encompasses specific aspects such as the stress experienced

 doi:10.20944/preprints202407.1761.v1

while teaching children, managing workplace demands, communicating with children's families, creating a conducive learning environment, and planning for future career development.

And other mental health factors (anxiety symptoms, interpersonal difficulties, resilience, perceived stress, inner strength, extraversion, neuroticism) were utilized by the following measurement tools.

The Outcome Inventory was developed as a public domain tool available to researchers and healthcare practitioners without charge. It was a self-report questionnaire consisting of 21 items that assessed levels of anxiety, depression, somatization, and interpersonal difficulty [26]. The Outcome Inventory was used to measure anxiety symptoms and interpersonal difficulties of Chinese preschool teachers This study selected ten items from the OI scale on anxiety and interpersonal difficulties for measurement. In the pilot test of the Chinese version of OI-21, the Cronbach alpha was 0.93. Research on prevalence can be calculated by calculating the six items of anxiety symptoms in OI. The researcher considers "frequently" and "almost always" salient or significant anxiety symptoms.

RI-9 was used to measure the resilience of Chinese preschool teachers. The RI-9 was a psychological assessment tool that measures an individual's resilience, which refers to their ability to cope with adversity, adapt to challenges, and bounce back from setbacks. A higher score indicates a higher level of resilience. The RI-9 demonstrated good reliability and validity[27]. The Cronbach alpha in this study was 0.92.

PSS-10 was used to measure the perceived stress of Chinese preschool teachers. The PSS-10 was a widely used tool in research and clinical settings to evaluate stress levels and to identify individuals who may benefit from stress management interventions. For the Chinese version of the pss10, the test results revealed an overall Cronbach's alpha coefficient of 0.86 [28]. Higher scores indicated higher levels of perceived stress.

An inner strength-based inventory was used to measure the inner strength of Chinese preschool teachers [29]. The score ranges from 5-50. The higher the score, the higher the level of that respective character. The reliability test for the Chinese version of the iSBI showed an excellent reliability coefficient of 0.86 [30].

ZKA-PQ Chinese version was used to measure extraversion and neuroticism in the personality traits of Chinese preschool teachers. The study selected 16 questions on the scale dealing with these two aspects. The alpha internal reliabilities of the five personality scales ranged from 0.61 to 0.81 [31].

2.4. Data Analysis

The data were examined using the statistical software SPSS version 27.

The sample size was estimated based on the prevalence of 53% in a previous study [32], with alpha 0.05 and power of 80, and it yielded 383 sample[33].

Using descriptive analysis, socio-demographic information (including age, sex, level of education, income per month, marital status), work-related information (including the class of work city, working years, nature of kindergarten, teacher title, average daily working hours and sleeping hours, class teacher-student ratio, work-related stress) frequency, percentage of anxiety, means, and standard deviation of mental health characteristics were reported. Pearson correlations analyzed correlations between anxiety and other variables. Multiple linear regression is a model that predicts a single dependent variable based on multiple independent variables. The regression analysis determines whether the remaining variables are associated with anxiety and whether each is associated with the other variables. P-values of <0.05 were considered significant.

Finally, multiple linear regression analysis was used to test significant variables for each outcome. The R^2value was calculated to determine the variance explained by the model. Assumptions of linear regression were tested to ensure the validity and reliability of the model. These tests included linearity, assessed using a scatter plot, and independence, evaluated with the Durbin-Watson Test. Homoscedasticity: Checked using the Breusch-Pagan Test; Normality of Residuals: Examined with a Q-Q Plot, Multicollinearity: This was assessed using the Variance Inflation Factor (VIF), where VIF values greater than 10 indicate high multicollinearity. The collinearity diagnostic was carried out using both the tolerance test and VIF.

3. Results

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3.1. Sociodemographic and Work-Related Variables

This study included 393 Chinese preschool teachers, most of whom are female. The average age is 29.64 (SD =5.8). Table 1 shows the socio-demographic and work-related variables, including age group, sex, level of education, income per month, marital status, class of work city, working years, nature of kindergarten, teacher title, average daily working hours, average daily sleeping hours, class teacher-student ratio, and work stress.

Table 1. Sociodemographic and work-related variables of Chinese preschool teachers

Variable		**n**	**Percent**
Age			
	20-30	270	68.7
	31-40	106	27
	41-60	17	4.3
Sex			
	Male	114	29
	Female	279	71
Level of education			
	High school and below	6	1.5
	Specialist	47	12
	Undergraduate	295	75.1
	Postgraduate and above	45	11.5
Income per month			
	< 6000 RMB	227	57.8
	≥ 6000 RMB	166	42.2
Marital status			
	No	164	41.7
	Yes	229	58.3
Class of work city			
	Tier 1	135	34.4
	Tier 2	132	33.6
	Tier 3 and above	126	32.1
Working years; Mean(SD)		5.88(5.16)	
	< 5 years	186	47.3
	≥ 5 years	207	52.7
Nature of kindergarten			
	Public	258	65.6
	Private	120	30.5
	International	15	3.8
Teacher title			
	Yes	296	75.3
	No	97	24.7

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AD working hours; Mean(SD)		8.58(1.21)	
	< 8 hours	40	10.2
	≥ 8 hours	353	89.8
AD sleeping hours; Mean(SD)		7.44(0.84)	
	< 8 hours	183	46.6
	≥ 8 hours	210	53.4
Class teacher-student ratio			
	1:5 or less	58	14.8
	1:5-1:7	239	60.8
	1:7 or more	96	24.4
Work-related stress; Mean(SD)		15.31(4.15)	
	≤ 6scores	10	2.6
	7 scores-17 scores	254	64.6
	≥ 18scores	129	32.8

AD=Average Daily, RBM = Chinese Yuan, SD = standard deviation

Based on graduation and employment, the age range is 10 years, with 20-30 years being young and 31-40 years being middle-aged. However, due to the relatively small number of elderly people in this study, 41-60 years were grouped. Most preschool teachers collected for this study were in their twenties and thirties, accounting for 68.7% of the total number of teachers collected. Most teachers were female, accounting for 71%. Most teachers had a bachelor's degree or higher, with only 1.5% having a high school diploma or lower. The participants were more evenly distributed in the division based on a monthly income of 6,000 RMB. Regarding marital status, there was also a more even distribution of teachers in a spousal relationship (58.3%) and those who were not (41.7%).

The distribution of work cities where the preschool teachers in this study worked was relatively even, using the Chinese city hierarchy as a criterion. Based on the Chinese urban hierarchy system, the distribution of cities where preschool teachers work in this study is relatively uniform. The distribution of teachers who have worked for less than five years and those who have worked for five years or more is also relatively even. However, regarding the nature of the kindergartens in which they worked, most preschool teachers were in public kindergartens (65.6%). The remaining 30.5% worked in private kindergartens, and only 3.8% of preschool teachers were in international kindergartens. This situation was similar to the percentage of preschool teachers with a teaching title, where public school teachers were more able to apply for a teaching title within the government system, which in this study was 75.3% of teachers with a teaching title.

As for the average working hours of teachers, 89.8% of preschool teachers work more than 8 hours per day, but the percentage of preschool teachers who can sleep more than 8 hours is 53.4%. Regarding the teacher-student ratio, most classes (60.8%) had a teacher-student ratio of 1:5-1:7, and only 14.8% had a teacher-student ratio of 1:5 or less. In comparison, 24.4% of classes had a teacher-student ratio of 1:7 or more, which meant that a teacher had to look after more children. Regarding work-related stress, 32.8% of preschool teachers scored 18 or more out of 25.

3.2. Anxiety Score and Its Prevalence

The mean and standard deviation of the OI anxiety score among the sample was 13.09 ± 4.97. Since there was no cut-off for anxiety symptoms or any anxiety disorder based on the DSM-5, the researchers consider “frequently” and “almost always” salient or significant. By calculating the average of the two sets of data "frequently" and "almost always," we obtain the prevalence rate of anxiety symptoms among Chinese preschool teachers at 12.2%.

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3.3. The Relationship between Anxiety and Sociodemographic and Work-Related Stress

Pearson's correlation of anxiety symptoms with age, level of education, income per month, working years, marital status, average daily working hours, average daily sleeping hours, class teacher-student ratio, and work-related stress was shown in Table 2.

Table 2. Correlation between sociodemographic and work-related variables and anxiety symptom

	Anxiety	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
1. Age	-0.058	-	-	-	-	-	-	-	-	-
2. Level of education	-0.023	0.065	-	-	-	-	-	-	-	-
3. Income per month	-0.109*	0.211***	0.225***	-	-	-	-	-	-	-
4. Working years	-0.042	0.907**	-0.023	0.199***	-	-	-	-	-	-
5. Marital status	-.110*	0.573***	0.012	.223**	.481***	-	-	-	-	-
6. AD working hours	0.104*	-0.057	-0.007	0.041	-0.023	-0.074	-	-	-	-
7. AD sleeping hours	-0.157**	0.008	-0.082	0.002	-0.024	0.107*	-0.158**	-	-	-
8. Class teacher-student ratio	0.027	0.003	0.041	-0.010	-0.047	0.037	-0.041	-0.024	-	-
9. Work-related stress	0.548***	0.023	0.009	0.001	0.033	-0.047	0.097	-0.154**	0.089	-

* p < .05, ** p < .01, *** p<.001, AD=Average Daily; 1= Age; 2= Level of education; 3= Income per month; 4= Working years; 5= Marital status; 6= Average daily working hours; 7= Average daily sleeping hours; 8= Class teacher-student ratio; 9= Work-related stress.

The only variables significantly related to anxiety symptoms were income per month, marital status, average daily working hours, daily sleeping hours, and work stress.

With other psychological variables, anxiety symptoms were significantly related to interpersonal difficulties, resilience, perceived stress, inner strength, extraversion, and neuroticism (Table 5).

Table 3. Correlation between mental health variables and anxiety symptom

	Mean ± SD	**1**	**2**	**3**	**4**	**5**	**6**
1. Anxiety	13.09 ± 4.97	-	-	-	-	-	-
2. Interpersonal difficulties	4.47±3.48	0.856**	-	-	-	-	-
3. Resilience	37.99 ± 7.43	-0.485**	-0.508**	-	-	-	-
4. Perceived stress	17.16±5.02	0.639**	0.592**	-0.451**	-	-	-
5. Inner strength	35.98 ± 6.86	-0.399**	-0.397**	0.496**	-0.461**	-	-

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6. Extraversion	49.55 ± 8.37	- 0.633**	- 0.681**	0.593**	- 0.651**	0.533**	-	
7. Neuroticism	33.50 ± 8.92	0.689**	0.681**	- 0.501**	0.693**	- 0.457**	- 0.697**	

1= Anxiety; 2= Interpersonal difficulties; 3= Resilience; 4= Perceived stress; 5= Inner strength; 6= Extraversion; 7= Neuroticism; **p<.01.

3.4. Multiple Linear Regression between Variables and Anxiety Symptom

We analyzed the association between anxiety and positive mental health variables and between anxiety and negative mental health variables separately. Both models included covariates such as income per month, marital status, average daily working hours, average daily sleeping hours, and work stress. All assumptions for multiple regression were tested and found not to be violated.

Multiple linear regression between positive variables, covariates, and anxiety was shown in Table 4.

Table 4. Multiple linear regression between positive variables and anxiety symptom

Variables	B	SE	β	*t*	*p*-value	95%CI		VIF
Income per month：	-0.347	0.294	-0.042	-1.179	0.239	-0.925	0.231	1.078
Marital status：	0.319	0.361	0.032	0.884	0.377	-0.39	1.027	1.114
AD working hours：	-0.04	0.145	-0.01	-0.275	0.783	-0.325	0.245	1.052
AD sleeping hours：	0.051	0.212	0.009	0.242	0.809	-0.366	0.468	1.089
Work-related stress	0.447	0.045	0.373	10.039	<0.001	0.360	0.535	1.163
Resilience	-0.115	0.03	-0.172	-3.807	<0.001	-0.175	-0.056	1.724
Inner strength	-0.025	0.031	-0.034	-0.794	0.428	-0.085	0.036	1.523
Extraversion	-0.228	0.028	-0.383	-8.005	<0.001	-0.284	-0.172	1.926

AD=Average Daily; B=Unstandardized Coefficients; SE=Standard error; β= Standardized Coefficients, t =t-value; CI= confidence interval; VIF =variance inflation factor.

In the positive mental health model, it was significant, F (8, 382) = 49.36, p < 0.001, explaining 49.80% of the variance in the outcome variable after adjusting for the covariates (R^2 = 0.498). Work stress, resilience, and extraversion personality were significantly related to anxiety (B=0.447, p <.001, B= -0.115, p <.001, B=-0.228, p <.001, respectively) (Table 4).

Along the same line, it was significant in the negative mental health model, F (8, 382) = 162.96, p < 0.001, explaining 76.90% of the variance in the outcome variable after adjusting for the covariates (R^2 = 0.769). work-related stress, interpersonal difficulty, perceived stress, and neuroticism personality were significantly related to anxiety (B=0.937, p <.001, B= 0.100, p =0.002, B= 0.076, p <.001, respectively) (Table 5).

Table 5. Multiple linear regression between negative variables and anxiety symptom

Independent variables	B	SE	β	*t*	*p*-value	95% CI	VIF

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Income per month：	0.014	0.208	0.002	0.07	0.945	-0.394	0.423	1.085
Marital status：	-0.088	0.25	-0.009	-0.35	0.726	-0.58	0.405	1.082
AD working hours：	-0.007	0.103	-0.002	-0.071	0.943	-0.209	0.195	1.063
AD sleeping hours：	0.263	0.15	0.045	1.76	0.079	-0.031	0.557	1.089
Work-related stress	0.143	0.035	0.119	4.122	<0.001	0.075	0.211	1.414
Interpersonal difficulty	0.937	0.051	0.657	18.347	<0.001	0.837	1.037	2.167
Perceived stress	0.100	0.032	0.101	3.167	0.002	0.038	0.163	1.731
Neuroticism	0.076	0.021	0.137	3.638	<0.001	0.035	0.117	2.384

AD=Average Daily; B=Unstandardized Coefficients; SE=Standard error; β= Standardized Coefficients, t =t-value; CI= confidence interval; VIF =variance inflation factor.

When both positive and negative mental health variables were combined in the same model, it was significant, F (11, 379) = 118.581, p < 0.001, explaining 76.80% of the variance in the outcome variable after adjusting for the covariates (R^2 = 0.769). Work-related stress, interpersonal difficulty, perceived stress, and neuroticism personality were significantly related to anxiety (B=0.921, p <0.001, B= 0.108, p <0.001, B= 0.071, p = 0.002, respectively) (Table. 6).

Table 6. Multiple linear regression between total variables and anxiety symptom

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Independent variables	B	SE	β	*t*	*p*-value	95% CI		VIF
Income per month：	0.017	0.208	0.002	0.08	0.937	-0.392	0.426	1.090
Marital status：	-0.025	0.255	-0.003	-0.099	0.921	-0.526	0.476	1.124
AD working hours：	-0.018	0.103	-0.004	-0.178	0.859	-0.221	0.184	1.068
AD sleeping hours：	0.281	0.15	0.048	1.869	0.062	-0.015	0.576	1.101
Work-related stress	0.149	0.035	0.125	4.287	<0.001	0.081	0.218	1.435
Resilience	-0.042	0.022	-0.063	-1.904	0.058	-0.085	0.001	1.836
Inner strength	-0.004	0.022	-0.005	-0.178	0.859	-0.047	0.039	1.568
Extraversion	0.019	0.024	0.033	0.795	0.427	-0.029	0.067	2.859
Interpersonal difficulty	0.921	0.056	0.646	16.594	<0.001	0.812	1.03	2.568
Perceived stress	0.108	0.033	0.109	3.293	0.001	0.044	0.173	1.875
Neuroticism	0.071	0.022	0.128	3.19	0.002	0.027	0.115	2.715

AD=Average Daily; B=Unstandardized Coefficients; SE=Standard error; β= Standardized Coefficients, *t* =t-value; CI = confidence interval; VIF =variance inflation factor.

4. Discussion

This study used the Chinese version of the OI scale to investigate the anxiety symptoms of Chinese preschool teachers. The study found that 12.2% of Chinese preschool teachers showed obvious anxiety symptoms. Compared to the survey on the mental health status of preschool teachers in China in 2005 showed that anxiety was 9.4%[17]. With the COVID-19 pandemic, teachers' anxiety levels have changed significantly in recent years. A study included articles about teacher anxiety from 2019 to 2021 and found that teachers' anxiety level was 17% [34]. Most of the preschool teachers collected in this study are in their twenties and thirties, and the prevalence of anxiety symptoms of 12.2% is similar to these research results. This discrepancy, however, may be attributed to the difference in the tools measuring anxiety symptoms. It is noted that the current study focuses on anxiety symptoms that seem to be high compared to the prevalence of anxiety disorders reported in the 48 reviewed articles that the prevalence of anxiety disorders was 2.5-9.1% among Asians[35].

Regarding factors associated with anxiety symptoms, work-related stress was shown to be a significant predictor, consistent with a related study[36]. Even though working hours and sleeping hours were associated with anxiety, which is supported by other related studies[37], they became non-significant when compared to other predictors.

Second to work-related stress, interpersonal difficulties played an important role in anxiety. This was consistent with the study of Viana & Stevens[38]. It is to be noted that this finding is the first to be explored among preschool teachers. Other psychosocial factors include personality traits such as neuroticism and extroversion. People with high scores of neuroticism are always prone to emotional instability and are more likely to experience negative emotions such as fear and anxiety [39]. An extraversion personality trait means that one tends to focus more on the external environment or be able to derive satisfaction from it. They are usually sociable, enthusiastic, lively, and confident [40]. Low extraversion is closely related to anxiety[41,42]. There is no report on the personality traits and anxiety of preschool teachers. The current study found that both neuroticism and extraversion were

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related to anxiety. However, in analyses of all combined variables, only neuroticism remained a significant predictor, whereas extraversion was not. This could be because neuroticism was more closely related to anxiety than extraversion. The same was true for negative mental health, such as perceived stress[49,50], versus positive mental health factors, such as resilience and inner strength. Despite the fact that resilience predicted mental illness[43], they were overshadowed and became nonsignificant compared to negative factors such as neuroticism and perceived stress. In addition, unlike the current study, other research merely studies the association between resilience and anxiety [32,49] but does not include both positive and negative mental health predictors in the model like the present study.

It is worth noting that the current study is the first to explore the inner strengths of preschool teachers. The inner strength reflects positive psychological characteristics, including generosity, morality, mindfulness/meditation, wisdom, perseverance, patience and endurance, truthfulness, determination, loving-kindness, and equanimity[29]. It is anticipated that inner strength negatively predicted anxiety, consistent with a study of Chinese salespersons[30]. However, like resilience, the inner strength effect became nullified when negative mental health predictors were included. This could be because the relationship between anxiety is more closely related to negative mental health factors than positive mental health factors. Positive mental health might have a moderating role in such a negative mental health outcome as anxiety.

Implication of the study

The research aims to shed light on the prevalence of anxiety as a significant mental health challenge experienced by preschool teachers. It also emphasizes the critical need for targeted workplace interventions and support systems to address teachers' mental health. The findings provide a detailed insight into the specific mental health issues relating to anxiety among preschool teachers, as well as the influencing factors that can assist school administrators in identifying those who may be at risk. This, in turn, enables the provision of timely and targeted interventions. Furthermore, the results offer valuable guidance for policymakers and administrators in devising a selection process that ensures the recruitment of individuals with the most suitable personality traits for the demanding role of preschool teaching.

Limitations and Future Research

Several limitations were encountered in this study. First, this study used convenient sampling, which limits the representativeness of preschool teachers in China, and the imbalance in sex distribution might affect the generalizability of the results. Second, the data relied on participants' self-reports, which can introduce social desirability biases. Third, the cross-sectional design of the study prevents robust conclusions about causal relationships between predictors and outcomes. Therefore, random sampling and longitudinal studies should be encouraged to address these limitations.

5. Conclusions

This study confirms the association between the presence of anxiety symptoms among Chinese preschool teachers and factors such as interpersonal problems, neuroticism, and perceived stress, as shown in other populations. Additionally, work-related stress was particularly highlighted among these studied participants. The results also shed light on the associations with positive mental health factors, including resilience, extraversion, and inner strengths, although these are often overshadowed by other factors. Given its limitations, future research should aim to provide more robust evidence and broader generalizability.

Author Contributions: Conceptualization and methodology, X.W, T.W, P.P, P.C, K.L. software, X.W, T.W; validation, X.W, T.W., formal analysis, X.W, T.W.; investigation, X.W, T.W.; resources, X.W, T.W.; data curation, X.W, T.W.; writing—original draft preparation, X.W, T.W, P.P, P.C, K.L.; writing—review and editing, X.W, T.W, P.P, P.C, K.L.; visualization, X.W, T.W.; supervision, T.W.; project administration, T.W.; funding acquisition, X.W, T.W. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

 doi:10.20944/preprints202407.1761.v1

Institutional Review Board Statement: this study was conducted following the Declaration of Helsinki and approved by the Institutional Review Board (or Ethics Committee) of the Faculty of Medicine, Chiang Mai University (EC: NO.037/2024, approval date: 26 January 2024)

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.
Data Availability Statement: The datasets used and analyzed during the current study are available from the corresponding author upon reasonable request.

Conflicts of Interest: The authors declare no conflicts of interest.

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