

# The Status Quo, Sources and Influencing Factors of Professional Pressure Faced by Preschool Teachers in Rural China: An Empirical Study Based on Multiple Counties in Hubei Province

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**Abstract.** *The professional pressure of preschool teachers in rural China is closely related to the stability of the teaching staff and the development of children. A study of 734 teachers in 155 rural preschools from three national-level poverty-stricken counties and one non-poverty county in Hubei Province showed that current rural preschool teachers are facing greater professional pressure. Approximately 44.47% thought that the pressure is high, but has not yet reached the level of high burn-out; non-poverty county preschool teachers have relatively high pressure. According to the Demand-Control-Support (DCS) model, the main pressure stems from the work requirements of children and parents, especially parents' excessive emphasis on children's safety, knowledge, and skills. The results of the Ordered Probit Model showed that the influencing factors of preschool teachers' professional pressure in rural preschools in China include work factors such as workload and the number of children in difficulty; control factors like perseverance and professional identity; support factors such as staffing status, salary satisfaction, family support, and work support; as well as demographic variables such as age and household registration type (Hukou); and certain inter-county differences exist. Therefore, we recommend that the government, society, and preschools establish effective incentive and restraint mechanisms to reduce the professional pressure of preschool teachers in terms of salary, social status, parental guidance, workload, and stress training, and improve their ability to cope with pressure. Meanwhile, more focus need to be given on teachers who are for the first year preschool, older in age, lacking staffing status, no non-agricultural household registration, and overloading working.*

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**How to Cite:** Gong, X., Niu, C., & Wang, J. (2020). *The status quo, sources and influencing factors of professional pressure faced by preschool teachers in rural China: An empirical study based on multiple counties in Hubei province. Best Evidence in Chinese Education, 6(1):715-738.*

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**Keywords:** Rural China; Preschool Teachers; Professional Pressure; Influencing Factors

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**Funding:** This study was supported by the Humanities and Social Science Research Youth Fund Project of the Ministry of Education "Research on the Source and Flow of Preschool Teachers in Poor Rural Areas in Hubei Province" (16YJCZH022).

**Conflict of Interests:** None.

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## Question

**F**OR the survival and development of rural preschool teachers, it is not only necessary to pay attention to their performance and ability, but also to their mental life and professional pressure. The professional pressure of teachers is also the so-called work pressure of teachers. It is an unpleasant and complex negative emotional experience that occurs to teachers due to the continuous action of various threatening stimuli in the teacher's professional environment, such as tension, frustration and depression (Kyriacou, 1987), and the subsequent psychological and physical discomfort (Yao, 2005). From a global perspective, teachers have always been regarded as one of the most stressful professions (Boyle et al., 1995). The work pressure of university teachers mainly comes from the dual tasks of scientific research and teaching; the pressure of middle school teachers mostly comes from the pressure of students' academic performance, especially the pressure of higher-level entrance examinations; but the safety and behavior are the main sources of pressure for elementary school teachers (Li et al., 2011). Studies have shown that the negative effects of teacher professional pressure are generally greater than the positive effects. Excessive professional pressure can easily lead to emotional instability, affect their physical health and increase negative behaviors. For example, nearly half of university teachers believe that stress affects the quality of research and teaching (Miller et al., 2011); The stress of elementary and middle school teachers not only damages their health and reduces the quality of life, but also leads to absenteeism, resignation, or early retirement (Tsouloupas et al., 2010). In addition, the pressure of teachers is easily transmitted to students (Oberle & Schonert-Reichl, 2016), thus affecting student development (Herman et al., 2018).

Due to the age characteristics of young children and their lack of independence, they are easily influenced by teachers. At this stage, teachers' professional pressure has a greater negative effect, and it is of great practical significance to pay attention to preschool teachers' professional pressure. Preschool teachers are considered one of the most stressful professions (Curbow et al., 2000; Moriarty et al., 2001). Excessive professional pressure affects preschool teachers' professional identity, happiness and health, teacher-child relationship, quality of classroom care and education, and children's development, especially children's social and emotional development (Lu & Han, 2006; Jeon, L., 2018; Pakarinen et al., 2010; Whitaker et al., 2015). Professional pressure affects the stability of the teaching team, and high pressure is often the main reason leading to the resignation of preschool teachers. Excessive work pressure often causes teachers to produce burnout, lose their enthusiasm for work, and even begin to hate and fear preschool education. This may further affect the quality of education and teaching. At the same time, the working atmosphere and status of preschool teachers will also affect teacher cognition (Hur et al., 2016).

Generally speaking, there are abundant researches on professional pressure in the Chinese literature, but there are only ten empirical reports on preschool teachers, and there are fewer articles on professional pressure for rural preschool teachers in poverty-stricken areas. The research in this field mainly covers four aspects: the first is to

study the professional pressure itself and summarize the current situation and sources; the second is to explore the relationship between psychological capital, competence, organizational support, professional pressure and professional happiness from a psychological perspective; the third is to analyze the life state of preschool teachers from the perspective of spiritual life, and takes professional pressure as one of the indicators; the fourth is to study professional pressure from job burnout, taking professional pressure as an influencing factor of its occurrence. From these studies, the professional pressure of Chinese preschool teachers is not low, and the overall level of pressure is higher than that of moderate pressure. For example, a questionnaire survey of 302 preschool teachers in Sichuan, Shanxi, Guangdong, Liaoning, and Anhui indicated that 76.2% of teachers felt they were under work pressure, and 24.9% of the surveyed teachers felt severe or extremely stressed (Lu & Wang, 2008; Wang et al., 2015). Another study based on Shenyang City showed that 20.3% of the respondents felt the pressure was unbearable (Qin & Yan, 2007). This is basically consistent with the research conclusions in Wuhu of Anhui and Beijing (Alatambagen & Liu, 2014; Lai, 2011; Shu & Yao, 2004). A recent study found that from 2002, 2011 to 2016, the professional pressure of basic education teachers (including some preschool teachers) has gradually increased (Xu, 2017). The pressure of key teachers is not necessarily lower than that of other teachers (Li et al., 2013). Limited empirical research shows that teachers in rural preschools are under great pressure. For example, a survey of teachers in rural private kindergartens in Ya'an, Sichuan found that 49.6% of teachers thought they were under a lot of pressure, and 36.3% thought they were under pressure (Guo et al., 2017). Although there is currently no empirical research in China for direct comparison, it is generally believed that preschool teachers face younger children, while taking care of childcare and education work at the same time, and their professional pressure is greater than that of primary and secondary school teachers (Tsai et al., 2006). From the point of view of stress sources, the stressors of preschool teachers are the children and their parents (53.5%) (Jiang et al., 2016; Wang et al., 2015). In terms of influencing factors, there are significant differences in the work pressure of preschool teachers of different teaching age, professional title and school level. With the improvement of job titles, professional pressure shows a V-shaped change that first decreases and then increases. The 1,500-2,000 CNY middle-income teacher group professional pressure score is significantly higher than other income teachers and the income and environmental pressure scores of unmarried teachers are significantly higher than those of married teachers (Lai, 2011). The impact of the nature of preschool has not yet gotten agreement. Other factors include social status, attribution methods and stress coping methods (Lu & Wang, 2008; Zhang et al., 2012). The work pressure of rural preschool teachers also varies with the nature of the preschool, the teacher's marital status, age, teaching age, education level and grade (Wei & Dong, 2010).

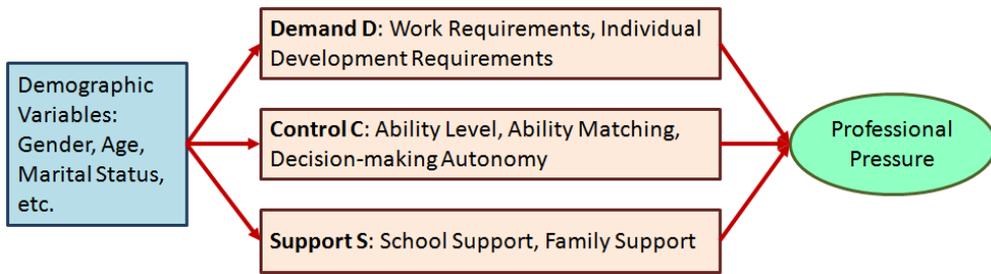
Internationally, the group of preschool teachers in the United States faces high job requirements and lacks psychological resources and control capabilities (Li-Grining et al., 2010). Based on a survey of 150 preschool teachers in Romania, 42.0% were "very stressed" and 86% had intermediate to advanced stress levels (Clipa & Boghean,

2015). More than half of the 429 preschool teachers surveyed by Italian researchers had musculoskeletal diseases (Converson et al., 2018). Researchers mainly analyzed the sources of stress from the environment and individual factors, including: children's problem behaviors, special children in integrated classrooms, large numbers of children in the class, excessive paperwork, handling non-teaching tasks, and persisting in implementing correct early childhood education concepts, poor communication with colleagues and parents, children's separation anxiety, and time pressure (Alison & Berthelsen, 1995; Friedmankrauss et al., 2014).

On the whole, there are few surveys and researches on preschool teachers in rural areas, especially poor rural areas. For regions with different economic development levels, there is no direct comparative study, and the analysis of influencing factors is not thorough enough. Important variables such as child characteristics, teacher family support and work support, perseverance, and salary satisfaction have not been examined. After the completion of the two-term preschool three-year action plan, what is the current situation of the professional pressure of rural preschool teachers? What are the sources and influencing factors of stress? What is the difference between the professional pressure of poor and non-poor rural preschool teachers? We conducted questionnaires and interviews with more than 700 teachers from 155 rural preschools in multiple counties in Hubei Province, China. This paper will use the professional pressure model to analyze the professional pressure of preschool teachers in rural China for the first time, assess the current situation and sources of pressure, use an Ordered Probit Model to examine the influencing factors of pressure, and compare the differences between poverty and non-poverty areas. This supplements the research literature on rural preschool teacher pressure, enriches the unity of empirical methods in existing research, and provides policy inspiration and suggestions for promoting the development of Chinese preschool teachers and rural preschool education.

Psychologically, stress is a cognitive and behavioral experience composed of psychological stressors and stress responses. Professional pressure is the experience and feeling of discomfort when an individual deviates from a normal or desired lifestyle at work (Shi, 2003). In the analytical framework of this article (**Figure 1**), professional pressure is regarded as a mental state. Generally, work pressure has a significant positive predictive effect on job burnout (Zhang et al., 2014), i.e., high professional pressure will lead to higher job burnout (Zhang et al., 2009). According to the classic Demand-Control-Support (DCS) model, professional pressure stems from high work requirements, low control capabilities and insufficient support (Karasek et al., 1988; Johnson et al., 1989).

Needs include work tasks and individual development requirements; control refers to the individual's control over work, including the level of individual abilities, ability and job matching status, and decision-making initiative at work; support mainly refers to school, family and social support. In empirical research, the related variables of the influencing factors of the teacher professional pressure source analysis model usually include demographic variables such as gender, age, marital status, education level, work experience, qualification certificates, etc.; and workplace environmental



**Figure 1. An Analysis Framework of Preschool Teachers' Occupational Stress Based on the DCS Model.**

factors such as workload and teaching resources, Income, relationship with colleagues, etc. These factors may affect teachers' perception of job needs, self-control ability, and support received. This article classifies various factors into three dimensions: demand (D), control (C), and support (S). For example, workload, student behavior problems, parent expectations, etc. are demand factors. Psychological capital such as perseverance, personality characteristics, and the way of coping with stress are controlling factors. Economic benefits and colleague relations are supporting factors. Gender, education level, number of children, etc. are demographic variables that may affect multiple dimensions at the same time. For example, compared with men, women may have lower perceptions of their own work needs and less control, but the family burden is heavier. Since higher education level and professional title may increase teachers' self-development requirements, and also represent stronger individual ability and work decision-making initiative, teachers' education level and professional title are both demand factors and control factors.

## Methods

This research uses a combination of questionnaire surveys and interviews. The sample of rural preschool teachers comes from three national-level poverty-stricken counties and one non-poverty-stricken county in Hubei Province, which are located in the east (Counties A and B) and west (Counties C and D) of Hubei. The enrollment rate of children of the right age in poverty-stricken county is about 80%, and that of non-poverty-stricken county (County C) is slightly higher, and the teachers are not professional enough. After stratified sampling of county-level units, the selection of rural samples adopts a strategy of combining cluster sampling and random sampling, based on the principle of covering representative townships and village-level preschools in the corresponding area, including 78 public, 71 private and 6 publicly-built private preschools. For two of the poverty-stricken counties, cluster sampling was used to let all teachers participate in the questionnaire survey; for the other two preschools and counties with a

large number of teachers, stratified random sampling was used. In each sample preschool, most teachers filled out the questionnaire, the return rate exceeded 90%, the number of valid samples was 734, and the number of samples without missing variable information was 626. At the same time, the research team randomly interviewed at least one teacher in each preschool.

Among the teachers surveyed, 53%, 40%, and 7% of the teachers were from public, private, and publicly-built private preschools, respectively; and more than 60% are from national-level poverty-stricken county. In terms of demographic characteristics, the proportion of male teachers was relatively low (1%), 13% were ethnic minorities, and the average age was 32 years old, with the majority being 20-30 years old (32.83%) and 30-40 years old (50.41%). Seventeen percent of teachers had a non-agricultural household registration, 92% were married, and more than 90% had at least one child. The education level of most teachers was associate degree (28.9%), 6.07% had a bachelor degree, 28% of teachers were majoring in preschool education, and 15% had preschool education qualification certificates. It can be seen that the overall educational background and professional level of rural preschool teachers were relatively low. In addition, the average teacher-student ratio of the classes led by these teachers was 0.06, which is approximately 1:17. These teachers worked an average of 9.12 hours a day, which was more than one hour over the eight-hour work system. The proportion of teachers signing contracts was 60%, and the proportion of those with institutional staffing status was only 11%. The average monthly salary was 1,563 CNY. About 16% of teachers had received preschool help when personally experiencing financial difficulties.

The survey used self-compiled questionnaires, and drew on related research on teachers' professional pressure and the quality of rural preschool teachers. Among them, related variables of professional pressure referred to the DCS model and the study of Jiang (Jiang et al., 2016). There are 92 questions in total. The current pressure was mainly measured by two indicators. The first was the question of the degree of stress, from 1 to 4 represents the degree of increase gradually. The second was a five-point scale adapted by researchers based on the MBI-ES for Educational Practitioners' Burnout Scale, which included 15 items like "feeling exhausted at the end of work", "work all day is really stressful for me", and "I have difficulty to concentrate", etc. The standardized job burnout index is synthesized through factor analysis, which approximately obeys a standard normal distribution with a mean of 0 and a standard deviation of 1. The scale has been widely used in the research of individual job burnout. Through the test, the Cronbach's  $\alpha$  of the scale is 0.801, and the internal consistency is highly reliable. At the same time, the questionnaire also asked about the largest source of the stress of the teachers surveyed. According to the DCS model, part of the professional pressure of teachers came from work needs. In the professional situation of preschool teachers, work pressure mainly came from children, parents, preschool principals, colleagues and the society; the other part came from self-development needs and self-control. Therefore, the professional pressure of preschool teachers may also come from themselves. Therefore, the most stressor question was set as a multiple-choice question, with a total of 4 options: children and parents, preschool internal, self and society.

Regarding the quantitative analysis of the influencing factors of professional pressure, the questionnaire also designed related questions. According to the DCS model, many factors affect professional pressure. Generally, professional pressure stems from high job requirements, low control capabilities, and insufficient support. If the individual feels, the higher the work requirements, the lower the self-control ability, and the less support he receives, the greater the pressure he feels. Therefore, the questionnaire asked about the content of the job requirements of the surveyed teachers. For example, workload and the number of children with difficulties in class; ability and psychology that reflect control dimensions, such as education level, perseverance, and professional identity, some of which also demand dimensions; problems that reflect support dimensions, such as contract signing, salary, satisfaction with salary, relationship with colleagues. Besides, the questionnaire also contains demographic variables that affect the three dimensions together. Among them, perseverance character is a kind of psychological capital, a perceptual evaluation, and control factor, and indicators such as depression and lack of confidence in the management of behavioral relationships. The measurement method comes from the Chinese version of the grit scale developed by psychologist Angela Duckworth. It is a five-point scale, including eight items such as “New ideas and projects sometimes distract me” and “Setbacks cannot make me discouraged.” Its Cronbach coefficient is 0.607. The professional identity index’s measurement tool comes from the research of Tang et al. is a four-point scale, including 18 items such as “I very much agree with the profession of preschool teachers,” and the Cronbach coefficient is 0.803. Both indices have undergone factor analysis and standardization. The family support index is a composite of the support level of family members, including five items. The job support variable is measured by the degree to which “preschool has helped solve personal financial difficulties.”

The questionnaire was distributed at noon and was filled out by the teacher or an assistant. The questionnaire data is analyzed by descriptive statistics and systematic quantitative model analysis through STATA 14.0 software. Since the main dependent variable stress degree is an ordered discrete variable with a value of 1-4, and does not obey a normal distribution, the researcher chose an Ordered Probit Model and used the oprobit command to estimate. The model is as follows:

$$y^* = \psi(\beta_1 \text{individual} + \beta_2 \text{demand} + \beta_3 \text{control} + \beta_4 \text{support} + \text{county} + e) \quad e|X \sim N(0,1)$$

Among them,  $y$  is the ordered categorical variable “pressure degree”.

If  $y^* \leq c_1$ ,  $y=1$ , it means “no pressure”

If  $c_1 < y^* \leq c_2$ ,  $y=2$ , it means “less pressure”

If  $c_2 < y^* \leq c_3$ ,  $y=3$ , it means “high pressure”

If  $y^* > c_3$ ,  $y=4$ , it means “huge pressure”

$c_j$  ( $j=1, 2, 3$ ) is the critical value of the professional pressure index in ascending order from one degree to the next. The coefficient of  $c$  and the independent variable can be estimated by the maximum likelihood estimation method. As mentioned earlier, the influencing factors in the model mainly include: (1) demographic variables such as gender, age, ethnicity, education, and household registration; (2) education level, professional match degree, qualification certificate holding status, perseverance character, Control factors such as professional identity, some of which are also demand factors; (3) Demand factors such as the number of working hours per day, the type of class, the teacher-student ratio, the number of children with difficulties in the class, etc.; (4) Supporting factors include contract signing, Staffing status, salary, satisfaction with salary, colleague relations, school support, etc. In addition, there are school types and county-level virtual variables to control the differences between campuses and counties.

In the interview method, a semi-structured interview outline was used, which focused on content such as the degree of preference for the current job, the degree of stress, the reasons for the stress, the way of dealing with stress, the size of the class, and whether the children were difficult to teach. The choice of interview time was flexible, usually during interclass, lunch break or after get off work. In addition to on-site notes, interviews were recorded through audio recording after consent was obtained. The qualitative data collected was analyzed by classification method. Before issuing the questionnaire and starting the interview, the team members who received uniform training introduced the identity of the researcher and the research theme, obtained the consent and trust of the interviewees, and tried to ensure that the data and information were true and effective.

## Results and Analysis

### The Status Quo of Professional Pressure of Preschool Teachers in Rural China

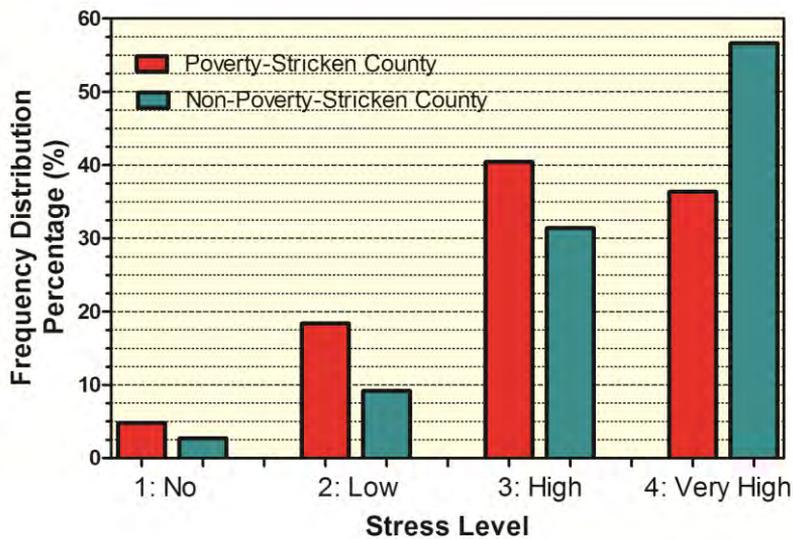
In **Table 1**, the surveyed rural preschool teachers faced greater professional pressure, 36.83% of the teachers believed that they were under pressure at work, and 44.47% believed that the pressure was high. Among them, 40% of teachers worked for 10 hours or more per day, 2 hours more than normal working hours. During the survey, many teachers said, "I don't have enough time to rest at noon every day." On the other hand, the job burnout level of the sample teachers was not very high. The maximum personal index is only 3.87 (the theoretical maximum level is 5). Only 4.91% of the teachers chose the high levels of 4 and 5, no collapse appeared. This was lower than the level (22.17% of burnout type) found by Li et al. in the survey of preschool teachers in Beijing and Tianjin (Li et al., 2019). At the same time, there were still 43.24% of the teachers surveyed chose to "feel exhausted when off work", which was worthy of the attention of policy makers. A teacher pointed out in an interview, "I feel very tired and stressed, there are too many children in the class and they are noisy, and my voice is uncomfortable." Compare Guo et al.'s (2017) (49.6% has high pressure, 36.3% has

**Table 1. Distribution of Stress Status and Job Burnout of Pre-school Teachers in the Surveyed Rural Areas.**

County	Frequency Distribution Percentage of Pressure (%)				Mean of Pressure (1-4)	Mean of Job Burnout (1-5)	Sample #	
	1: No	2: Low	3: High	4: Huge				
Total	3.96	14.73	36.83	44.47	3.22	2.43	733	
A	6.67	20.00	39.05	34.29	3.01	1.96	105	
PSC	B	9.09	15.91	25.00	50.00	3.16	2.13	44
	D	3.44	18.21	43.3	35.05	3.10	2.44	291
Non-PSC	C	2.73	9.22	31.4	56.66	3.42	2.62	293

*Note: Because one of the 734 total samples is missing pressure information, the number of samples here is 733. The total number of samples 733 is also used in the statistics of pressure information below.*

*PSC: Poverty-stricken County; Non-PSC: Non-Poverty-stricken County. 4:Huge = Very High.*



**Figure 2. Comparison of Frequency Distribution of Stress Levels between Poverty-Stricken Counties and Non-Poverty-Stricken Counties.**

huge or very high pressure), Zhang's pressure on preschool teachers in Wuhan City (48% expressed huge or very high (Zhang, 2016) and Jiang et al.'s pressure on rural preschool teachers in 2016 (35.0% showed the pressure was very high, 32.7% was under high pressure), as well as Wang & Gan's survey of the professional pressure situation of rural elementary school teachers in Shaoguan City, Guangdong Province close to the same period (53.4% were under high pressure, 7.77% under very high pressure) (Wang & Gan, 2018), this study found Rural preschool teachers have a higher level of professional pressure.

There were certain regional differences in the level of professional pressure of teachers. As shown in **Figure 2**, preschool teachers in non-poverty-stricken counties faced greater pressure compared to poverty-stricken counties. The level of job burnout of teachers in both poverty- and non-poverty-stricken county was roughly the same, and the level of job burnout of teachers in eastern counties was significantly higher than that of western counties.

From the perspective of demographic variables, the professional pressure levels of male and female teachers were not different. There were certain differences in the professional pressure of teachers of different ages. Among them, teachers in the 40-50 years old had the highest professional pressure (Mean: 3.37). The professional pressure of teachers with rural household registration is higher (3.25 vs. 3.10). The average professional pressure of married teachers was higher (3.24 vs. 2.97), and the professional pressure of minority teachers was slightly lower (3.05 vs. 3.25), but these differences did not pass the significance test in the influencing factor model.

## **The Sources of Professional Pressure for Preschool Teachers in Rural China**

In the preschools surveyed, the professional pressure of teachers mainly came from children and parents. As shown in **Table 2**, among the sample teachers, 63.74% thought that the pressure comes from children and parents, 10.54% from preschool, 15.81% from themselves, and 9.90% from the society.

Combining the DCS model and various survey data, it is found that external job requirements are the main source of pressure for preschool teachers in rural China. Many teachers interviewed also believe that children's safety in the kindergarten and communication with parents are the biggest source of stress. On the one hand, safety issues have always been their biggest concern, because once a child has any problems in preschool, even if it is very small, it is easy to be complained or embarrassed by parents. Moreover, the mentality of rural preschool parents eager to see the effects of preschool education can easily increase the pressure on teachers. Teachers are faced with the ever-increasing requirements of the new generation of parents, and the pressure of the parents' expectation of literacy and mathematics education. This is in great conflict with China authority's idea of preventing "elementary schooling in pre-school education" and has increased the difficulty of teachers' work.

As a teacher in County C said, "Some parents do not understand their work (children pee in their pants, scratch their face, and fail to learn knowledge), and they

**Table 2. Distribution of Sources of Professional Stress for Rural Preschool Teachers.**

Source	Total Sample		Sub-Sample					
	F	%	Male	Female	< 50 yr	≥ 50 yr	AHR	Non-AHR
Children & Parents	399	63.74	42.86	63.72	64.39	20.00	65.76	53.85
Preschool	66.0	10.54	0	10.34	10.01	26.67	10.00	11.89
Self	99.0	15.81	0	16.28	16.27	6.67	16.44	14.69
Society	62.0	9.90	57.14	9.66	9.32	46.67	7.80	19.58
Total	626	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: F: Frequency; AHR: Agricultural Household Registration; Non-AHR: Non- Agricultural Household Registration.

**Table 3. Types of Classes Brought by Preschool Teachers and Professional Stress.**

Class	Percentage (%)	Professional Pressure			
		Mean	SD	Min	Max
2-3 yr	2.15	3.33	0.62	2	4
3-4 yr	28.26	3.29	0.83	1	4
4-5 yr	27.12	3.23	0.84	1	4
5-6 yr	28.26	3.09	0.88	1	4
6-7 yr	14.20	3.23	0.81	1	4

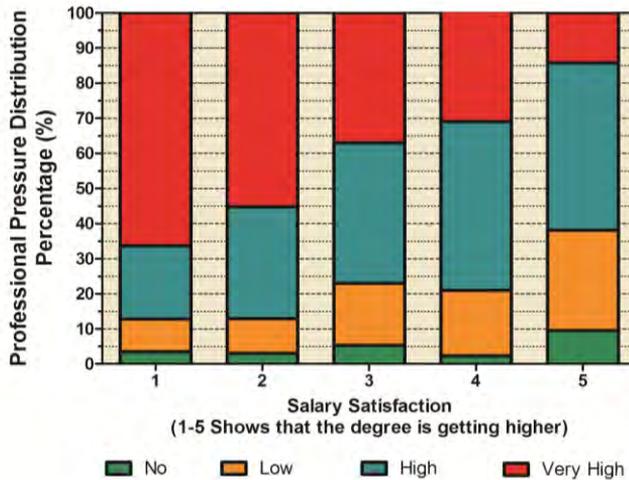
have not considered how many children a teacher has to bring and do not give themselves the opportunity to explain.” A teacher in County B mentioned, “The work pressure is high, and every day I must be nervous and pay attention to the behavior of each child, worrying about safety issues and not explaining to my parents.” A teacher in County D has similar feelings, “Sometimes parents feel that their children have not learned anything at school, so they feel stressed.” In addition, many teachers pointed out, “The pressure of work comes from more children, and the children have different personalities, some are naughty, and some are obedient”; “Work is also very tiring, there are many children in the class, it is very noisy, and many children like to report but don’t like to listen to the teacher’s words. I have to emphasize a sentence many times.”

Specifically, the pressure from children and parents and the work requirements of preschool have increased the workload of teachers. For example, “There are monthly activities in the park, such as outdoor open classes, reading competitions (inter-class appraisal), and children’s activities on Children’s Day, all of which require teachers’

design plans, which are relatively difficult.” The descriptive statistics show that professional pressure and working hours are a significant factor. It is directly proportional (Spearman rank correlation coefficient is 0.11), and is significantly correlated at the level of  $p = 0.01$ . At the same time, the professional pressure of a teacher is related to the class type. **Table 3** shows that the average professional pressure scores of 2-3yr childcare teachers and 3-4 preschool teachers are higher than those of 3-4yr, 4-5yr and 5-6yr classes. More accurate results need to be verified by the ordered probability selection model. The heavy workload is even more serious for small-scale private preschools with only one teacher per class. As one interviewed teacher said, “some parents will pick up their children home for lunch breaks, but some children will stay in the class to play. We need to feed, receive parents, give homework, and take care of some of the children who are not sleeping. So every day it is very common to work over 12 hours.”

Relatively speaking, the self-control ability they felt has a certain effect. For example, in the way of coping with stress, most of the teachers with greater stress did not know how to deal with such stress. Many teachers mentioned, “What else can I do, I can only rest more on my own”, “Every day I work under a lot of pressure, and I am already stunned when I get home, and I can only transmit my pressure to my children.” In addition, the professional pressure of teachers is closely related to security factors such as staffing status and salary, indicating the effect of control and support factors on pressure perception. For teachers with institutional staffing status, only 33.72% felt “high pressure”, but for teachers without the staffing status, the proportion increased to 45.9%. Teacher professional pressure was negatively correlated with the salary satisfaction (Spearman’s rank correlation coefficient is -0.2416), and it is significant at the level of  $p=0.01$ . This means that the higher the teacher’s satisfaction with the salary, the lower the professional pressure. As shown in **Figure 3**, for the teachers with the highest salary satisfaction, only 14.29% of the teachers expressed a high pressure; for those teachers with the lowest salary satisfaction, 66.28% expressed a high pressure. In addition, none of the interviewed teachers mentioned that they received insufficient family support; a few teachers pointed out that “the burden is heavier at home”, but “in many cases, it is better to go back home despite the pressure.” At the same time, some teachers mentioned the disadvantages of school support, such as “the principal is too strict, does not respect the teacher, has a low status in the school, and parents have prejudice against them, and there is no promotion opportunity and qualifications”, so “there is no hope for work.”

In terms of sub-samples, 16.72% of preschool teachers in non-poverty areas believed that the biggest source of pressure was preschool. In contrast, the proportion of preschool teachers in poverty-stricken areas was only 6.12%, and the proportion of choosing children and parents as the biggest stressor was also significantly higher (67.12% vs. 58.02%). From the perspective of demographic variables, different groups of teachers had different sources of professional pressure. As shown in **Table 3**, for male teachers, a large part of the stressor came from the society (57.14%), surpassing “children and parents”, which is only 9.66% for female teachers. For preschool teachers who are older than 50 years old, the biggest stressor was not only children and parents



**Figure 3. The Relationship between Professional Stress and Salary Satisfaction.**

(20.00%), but society (46.67%). For rural preschool teachers with non-agricultural household registration, the pressure from the society was also higher (19.58% vs. 7.80%).

### **Analysis of the Ordered Probit Model of Influencing Factors of Professional Pressure**

The results of the Ordered Probit Model of the factors affecting the degree of professional pressure are shown in **Table 4**. In terms of demographic variables, age had a positive effect on the professional pressure of teachers. The older you are, the more likely you are to feel “high pressure.” In addition, if rural preschool teachers have a rural household registration, the more likely they were to feel “high pressure.” The number of years in school had a positive effect on teacher pressure. Other demographic variables related to ability, such as education level and qualification certificate holding status, did not show a significant impact.

Consistent with the source analysis, most of the variables that reflect job requirements had significant effects. Among them, the number of working hours per day was positively correlated with the degree of work stress. Rural preschool teachers often spent a lot of time on daily management tasks, including taking care of children, preparing lessons, communicating with parents, organizing texts, and participating in training. The professional pressure level of teachers who care the 3-4 yr old children was significantly higher than that of other classes, which was consistent with the results of descrip-

**Table 4. Model Results of Factors Affecting Professional Pressure.**

Variable		Model 1: No Missing Value Processed	Model 2: Mean Replacement of Missing Values and Missing Labeling Method
Demographic Characteristics	Gender: Male	-0.261 (0.640)	0.268 (0.490)
	Nationality: Minority	0.277 (0.215)	0.128 (0.190)
	Age	0.024** (0.009)	0.015* (0.009)
	AHR	0.301** (0.138)	0.326*** (0.124)
	Married	0.364 (0.311)	0.304 (0.270)
	No Child	0.157 (0.290)	0.019 (0.256)
Capability Characteristics: Demand and Control	CCP Member	0.078 (0.192)	0.148 (0.174)
	Education Level	-0.008 (0.047)	-0.007 (0.043)
	Major in Preschool	0.041 (0.111)	0.070 (0.104)
	Preschool Qualification	0.165 (0.144)	0.197 (0.132)
	Teaching Years	0.029 (0.020)	0.032* (0.018)
Work Characteristic 1: Demand	Daily work Hours	0.092** (0.045)	0.091** (0.042)
	3-4 yr Old Children	0.223** (0.108)	0.212** (0.103)
	2-3 yr Old Children	0.273 (0.333)	0.237 (0.309)
	Teacher/Child Ratio	2.384 (1.870)	2.880* (1.726)
	No. of Difficult Children	0.012*** (0.005)	0.011** (0.005)
Work Characteristic 2: Demand And Control	Transfer Teacher	-0.116 (0.206)	-0.090 (0.185)
	Professional Title	0.155 (0.113)	0.126 (0.105)
Work Characteristic 3: Support	Contracted	-0.033 (0.107)	-0.041 (0.101)
	Institutional Staff	-0.538** (0.211)	-0.529*** (0.194)
	Salary	0.0001 (0.0001)	0.0001 (0.0001)
Psychological Characteristics: Control	Salary Satisfaction	-0.162*** (0.057)	-0.174*** (0.052)
	Perseverance	-0.099* (0.057)	-0.076* (0.050)
	Professional Identity	-0.142*** (0.055)	-0.079 (0.049)
Social Support: Control	Family Support	-0.178** (0.079)	-0.174** (0.074)
	School Helped Personal Financial Difficulties Ever	-0.366*** (0.125)	-0.326*** (0.119)
Preschool Type: Demand	Public Preschool	0.128 (0.116)	0.113 (0.107)
	Public-Built Private	0.206 (0.220)	0.342 (0.209)
County Virtual Variable (County A as the Reference)	B	0.239 (0.290)	0.378 (0.237)
	C	0.487** (0.229)	0.559*** (0.211)
	D	0.363 (0.229)	0.345 (0.210)
N		626	733

Note: \*, \*\*, \*\*\* represent the significance level of 10%, 5% and 1% respectively.

ARH: Agricultural household registration; CCP: Chinese Communist Party.

tive statistical analysis. The sample number of teachers for 2-3 yr children was limited, and there was no significant difference, but the coefficient was also positive. In addition, the greater the number of difficult children in the class (including left-behind children, children with family financial difficulties and children in need of special education), the greater the work pressure of teachers.

There was a negative correlation between the perseverance character that reflects the controlling factors and professional pressure, indicating that the teacher's own psychological capital will affect their perception and response to pressure. Positive individual adjustment factors in classic research include tolerance to change, self-esteem, non-individualism, persistence, strong personality, and non-A-type personality (Shi, 2003). In addition, teachers with high professional identity were less stressed.

The pressure-relieving effect of institutional staffing status is extremely significant, reflecting the importance of the support factors of welfare and job security to rural preschool teachers in China. The stress of teachers without staffing status was significantly greater than that of teachers with staffing status. Approximately 45.90% of teachers without staffing status expressed high pressure. Among teachers with staffing status, the proportion was only 33.72%, a difference of 12.28 percentage points. Salary had no significant effect, but satisfaction with salary can significantly reduce the degree of stress, which is consistent with the DCS model and the pay-back model (Luo et al., 2011). In addition, the other two indicators of the support dimension in the DCS model showed significant effects: first, the degree of family support was significantly negatively correlated with the professional pressure of rural preschool teachers; second, if preschool had helped teachers solve personal financial difficulties, and the probability of the teacher "feeling high pressure" is significantly lower.

## **Discussion**

The professional pressure status of rural preschool teachers is related to the stability of teacher resources, the quality of preschool education and the development of children. Existing studies rarely involve the professional pressure of preschool teachers in poor rural areas, and lack systematic and strict quantitative model analysis. Based on the survey data in the rural areas of Hubei and the demand-control-support model in the professional pressure theory, this article empirically analyzes the current situation, sources and influencing factors of the professional pressure of teachers in rural preschools. The main conclusions and discussions are as follows:

First, the current preschool teachers in rural China are facing greater professional pressure. Among the teachers surveyed, 44.47% thought the pressure was extremely high, and 36.83% thought the pressure was high. This level is relatively high compared with previous studies on the pressure of rural preschool teachers. Meanwhile, the teacher's job burnout is within a tolerable range and there is no large-scale collapse, so it should be viewed in a comprehensive and objective manner; 43.24% of the teachers surveyed still felt exhausted when they were off work. In view of the negative effect of excessive work pressure, the professional pressure of rural preschool teachers deserves attention and further exploration.

Second, in general, the professional pressure of preschool teachers in rural China mainly comes from children and parents. From the perspective of the DCS model, the main reason for the high professional pressure of rural preschool teachers was the high job demand, and this demand mainly came from the job requirements of others. Approximately 63.74% believed that the greatest pressure came from children and parents, 10.54% thought it was mainly from preschool, 15.81% thought the pressure was mainly from themselves, and 9.90% of teachers thought it was mainly from society. The interviewed teachers were worried about the safety of their children, and at the same time, they often found it difficult to deal with elementary problems such as parents' over-concern with their children's pronunciation and arithmetic. This level is consistent with Jiang et al.'s findings on 7 national-level poverty alleviation counties in 6 provinces and cities in central, western, southern, and northern China, and Wang et al.'s research on Changchun preschool teachers, and the proportion is higher (63.74% vs. 42.4% vs. 53.5%); but from the source of the pressure of teachers themselves, it is lower than the study by Jiang et al. (15.81% vs. 27.0%). Descriptive statistical analysis also found that professional pressure is related to work requirements and control factors such as working hours, class type, staffing status, and salary satisfaction.

Third, based on the results of the Ordered Probit Model, the influencing factors of the professional pressure of rural preschool teachers include age, household registration, number of years in school, workload, class characteristics, number of children in difficulty, perseverance, professional identity, staffing status, salary satisfaction Degree, family support, work support and inter-county differences. According to the DCS model, the positive effect of age may be due to the fact that older teachers are already at the mature stage of their careers, playing a more important role in preschool, and having a stronger need for self-development. Moreover, due to the relatively low level of education of older preschool teachers, poor health, lower acceptance of new knowledge, and weak control over work content, work pressure is naturally greater. Household registration status largely reflects the socio-economic status and social resources of teachers and their families. If teachers working in rural areas have urban household registration, the resources from their families may be better, and then the preschool environment may be better. The ability to withstand pressure is stronger with stronger control over the work, and the perception of stress is weaker. The longer of years the teachers taught in school, the richer the work experience they would get, and then the stronger the ability and the higher the degree of stress resistance would be. Of particular importance is the fact that workload has a positive effect on professional pressure and burnout, which again verifies the discovery that the largest source of stress comes from work requirements. The work pressure of teachers is positively correlated with the number of children with difficulties in class, which is in line with the reality of preschools in rural China. In the interview, a teacher pointed out, "There are more left-behind children in my class. Two children are brought by their parents and the others are brought by grandparents. It is more difficult to communicate, especially when the children are injured because of collisions. During the activities, teaching children to dance and sing is difficult, and he will ignore you." Although the teacher-student ratio in rural preschools

is also problematic, basically it has not achieved “two teachers and one childcare worker” (in many cases there is only one teacher in a class), but due to the lack of internal differences, almost all teachers face this problem, the model found no significant results. Under the premise of controlling other factors, factors such as perseverance, professional identity and family support can also reduce professional pressure. Existing literature shows that self-esteem, self-motivated and perseverance are good predictors of professional pressure (Yang & Wu, 2013; Li et al., 2013). The effect of professional identity in reducing stress is consistent with a study from the United States (Buetne et al., 2016). As a teacher in County D mentioned in an interview, “Work pressure is okay, because I like this job, so I feel a little more relaxed.” Salary satisfaction can significantly reduce the degree of stress, while the relationship between salary itself and work pressure is not significant. It shows that teachers’ psychological feelings about wages are more important, that is, under greater work intensity, the low wages perceived by preschool teachers are likely to cause psychological imbalance, low professional accomplishment, and higher professional pressure. It can be seen from the survey and model results that teachers’ recognition of their salary is a key factor. Some teachers have lower absolute salaries, but they are relatively acceptable in poor rural areas. They also believe that their academic background is consistent with the salary they receive, and their satisfaction with salary is not necessarily low, and vice versa. Family and school support are substantially negatively correlated with the professional pressure of rural preschool teachers, indicating that effective social support is an important guarantee for individuals to cope with stress.

Fourth, the professional pressure of preschool teachers in non-poor rural areas is higher than that in poor rural areas, and their sense of job burnout is roughly the same. This seems to go against the general expectation, but according to our research, we found that there are more preschools in rural areas in non-poverty-stricken counties. The competition among preschools is fierce. More workloads and work requirements can easily lead to greater professional pressure. Other reasons may lie in: rural preschool teachers in non-poverty areas have relatively high levels of education (47.44% and 27.67% of associate degree and above), and higher requirements for their own development; preschools in developed rural areas have a higher level of teacher management and the requirements may be higher. From the perspective of pressure sources, 16.72% of preschool teachers in non-poverty areas believe that their biggest source of stress is preschool, which is nearly 11 percentage points higher than that in poverty-stricken areas, and the proportion of choosing children and parents as the biggest source of stress is also lower. In addition, the levels of professional pressure and burnout of rural teachers in the eastern region were higher than those in the western region. According to the analysis of the survey, this may be because there are more preschools in the low-mountain plains in the eastern region, and the competition is more intense than in the high-mountainous regions of the western Hubei.

## **Recommendations**

The results of this empirical study provide important policy inspiration for adjusting the professional pressure of preschool teachers in rural China and better guaranteeing the core quality of rural preschool education. For preschool teachers, moderate professional pressure helps to enhance their work motivation, but long-term excessive pressure can cause teachers' bad mood, negative slack, high resignation rate and absenteeism, which is not conducive to the development of preschool education (Xu, 2003). Considering that the overall pressure of teachers in rural preschools is relatively high, the government and schools should establish effective incentive and restraint mechanisms to effectively help teachers reduce work pressure in terms of wages and benefits, social status, parental guidance, and workload; teachers should also actively respond to professional pressure, improve emotional management and control ability, reasonably regulate pressure, and turn it into development motivation. Specifically, we recommend the following points.

First, the government and schools should introduce corresponding policies and measures to reduce the workload of teachers in rural preschools, so as to appropriately ease the pressure on teachers. For example, increase the allocation of rural preschool teachers, rationally and effectively arrange and allocate workload, and reduce their non-teaching workload. At the same time, the government and society should take measures to improve and protect the social and economic status of rural preschool teachers. Preschool leaders should try their best to create an optimal educational environment and working atmosphere for teachers to reduce the stressors.

Second, given that the source of pressure mainly comes from children and parents, the government and schools need to provide more parent education and propaganda to improve parents' awareness, so that they can learn more about the nature and complexity of preschool teachers' work. At the same time, actively guide preschool teachers to conduct home-school cooperation and communication to reduce the pressure from parents. Due to the low-age characteristics of children and the fact that rural parents have not yet formed a scientific preschool education concept that conforms to the law of children's growth and national guidelines, it is particularly important for teachers to gain the understanding and cooperation of parents in preschool education for their professional happiness.

Third, since professional pressure has not caused excessive job burnout, it is necessary to increase the stress resistance of rural preschool teachers, rather than simply alleviate the pressure. Psychologically, not all stress is bad. Yerkes and Dodson first studied the different effects of stress and proposed the famous "Yerkes-Dodson Law", that is, before reaching a certain point, as the level of stress and arousal increases, work performance also improves; After this point is exceeded, work performance begins to decline. Moderate pressure can not only stimulate the engine and improve work efficiency; it also has the functions of arousing, adjusting, and strengthening, which are the basic conditions for individuals to cope with life events (Yerkes & Dodson, 1908). A variety of ways can improve teachers' self-stress management and control ability, so that they can devote themselves to the work of preschool education. Preschool teachers should recognize the importance of their work for themselves, students, parents and

society, and constantly remind and improve themselves. In addition, society and schools should increase social, economic and psychological support for rural preschool teachers. Active support is a protective factor, which can protect teachers' enthusiasm for work, enhance professional identity, and improve their ability to resist stress, so as to play a positive role in professional pressure. Whereas empirical studies have found that relative wages have a greater support and protection effect, and wage satisfaction is highly correlated with their relative wage levels among those around them. Therefore, the government should provide satisfactory salaries for teachers in public preschools, and private preschools should also consider market demand and the long-term development of schools to provide teachers with reasonable salaries.

Fourth, the study found that under the same county, age, workload, staffing status, etc., rural preschool teachers with perseverance and a high sense of professional identity have less pressure to report, indicating that these teachers can better deal with professional pressure. Therefore, psychological capital training courses can be added to the aforementioned training to improve teachers' social and emotional skills and perseverance character, thereby reducing the transmission of teacher pressure to children. Teachers who are under pressure should be provided with timely mentor guidance and psychological counseling opportunities, and consideration should be given to appropriately adding anti-stress content in business training, and innovating teacher education and training methods according to needs. For example, increase meditation training. Considering that the number of years of teaching has a significant impact on alleviating stress, the government and preschools should increase training opportunities, use senior teachers to supervise and instruct junior teachers, improve new teachers' work ability and professional identity, and strengthen their ability to resist stress.

In conclusion, coping with the professional pressure of preschool teachers requires the concerted efforts of the government, society, schools, and teachers to form a joint force. Our research results also demonstrated that while focusing on preschool teachers as a whole, we should also focus on rural preschool teachers for the child group of 3-4 year olds, and teachers who are older, lack staffing status, have no non-agricultural household registration, and overloading working. In view of the fact that the pressure on teachers in national-level poverty-stricken county preschools is not necessarily higher than that in non-poverty-stricken counties, relevant policies and measures to reduce pressure should cover the wider rural areas.

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Received: 11 May 2020

Revised: 12 June 2020

Accepted: 22 June 2020

*The Chinese version of this article has been published in Xueqian Jiaoyu Yanjiu, 2020; 2020(2):18-31. The English version has been authorized for being publication in BECE by the author(s) and the Chinese journal.*

龚欣, 牛彩星, 王鹁. (2020). 农村幼儿园教师职业压力现状, 来源及影响因素. *学前教育研究*, 2020(2):18-31.