

ORIGINAL ARTICLE

A Structural Equation Modeling of Associated Factors on Job Stress Among Primary School Teachers in Kota Bharu, Kelantan

*Nur Syahmina Rasudin, Noraini Abdul Ghafar, Wan Amir Nizam Wan Ahmad, Rohani Ismail, Azlina Yusuf

School of Health Sciences, Universiti Sains Malaysia, 161650, Kubang Kerian, Kelantan.

ABSTRACT

Introduction: Job stress can harm the physical, psychological, and behavioral, impacting job performance and organizations. Teachers are believed to be a profession with high job stress levels. Yet, there is limited data on the environmental factor in relation to teachers' job stress, especially in Malaysia. Thus, this study aims to determine the prevalence of job stress among primary school teachers in Kota Bharu, Kelantan, Malaysia, and to identify the sociodemographic factors (age, gender, years of teaching, monthly salary), school size, school environment, and teachers' career commitment as associated factors on teachers' job stress. **Methods:** This study involved teachers (n=273) from 28 primary schools in the Kota Bharu district. The data was collected by simple random sampling. Structural equation modeling was performed as the primary analysis using STATA software. **Results:** The prevalence of job stress among teachers was 19.1%. Years of teaching and school environment was identified as a significant factor in teachers' job stress among primary school teachers in Kota Bharu, Kelantan ($p < 0.05$). **Conclusion:** Primary school teachers experienced moderate levels of job stress, with years of teaching and school environment contributing as significant factors for job stress in Kota Bharu, Kelantan. Additional research is needed to explore the external factors that may contribute to job stress, and immediate action should be taken to reduce job stress among school teachers.

Keywords: Teachers; Primary schools; Job stress; School environment

Corresponding Author:

Nur Syahmina Rasudin, PhD

Email: syahmina@usm.my

Tel: +6097677553

INTRODUCTION

Job stress is a serious worldwide health problem attracting widespread attention. In extreme cases, job stress can lead to various physiological and psychological problems such as cardiovascular diseases, depression, back pain, headache, bloated stomach, constipation, anxiety, fatigue, and cancer (1,2). Job stress occurs when the demands of the job do not match the workers' abilities as a response to a harmful physical and emotional condition (3). Job stress not only influences the individual's personal life but also affects an individual's performance at the workplace. Globally, the effectiveness of an organization is affected when the employees are unable to perform well due to the stress at the workplace. The impact caused by job stress, such as sick leave, loss of productivity, and a downturn in job performance, can also affect the quality of an employee's life (4,5).

Various associated factors such as a role in the organization, career development, relationships at work, and low salary have contributed to the rising job stress (6). One of the professions most affected by the job stress problem is teaching (7). Demands from the students, parents and school organizations for teachers to always consistently provide quality performance along with their workload are some of the associated factors that contribute to job stress. Teachers are affected more by psychological and psychosomatic complaints, with 30% reporting that the teaching profession is 'very stressful' or 'extremely stressful, which can lead to burnout (8,9).

Some studies have been done in Malaysia regarding teachers' job stress; however, those studies mainly focused on urban conglomeration areas located on West Coast. For example, 32% of teachers in the Klang Valley were reported to experience high job stress and 305 teachers from 15 schools in Petaling Jaya experienced moderate stress (10,11). Moreover, there is limited information regarding the environmental factors in relation to job stress (12). Thus, the present study aimed to determine job stress prevalence among primary school teachers in

Kota Bharu Kelantan, Malaysia, located on the East Coast of Peninsular Malaysia with low population density, and to identify the significant associated factors involving the environmental factors (school size and school environment) on teachers' job stress. Six associated factors were determined in this study which were gender, age, monthly salary, years of teaching, school size, career commitment, and school environment.

MATERIALS AND METHODS

This cross-sectional study design has been carried out among 273 teachers from 28 primary schools in the Kota Bharu district. The primary school teachers in Malaysia are used as a reference population. The respondents were selected through simple random sampling based on teachers' list names using SPSS software. This study involved permanent teachers who have been in service for more than six months. Contract teachers with less than six months of service and teachers who received treatment for depression and stress were excluded from the study. The sample size was calculated so that the prevalence rate achieved within five percentage points of true value with 95% confidence with the proportion of 0.72 and 5% drop-out: $[(1.96/0.05)^2 (0.72)(1-0.72)]$, thus = 323 respondents was needed in this study based on sample size calculation. Questionnaires were answered by the respondents through self-administered.

The validated career commitment questionnaire (CCQ) was used to assess the level of career commitment and consisted of 19 items that were scored as "5", "4", "3", "2", "and 1" for "strongly agree," "agree," "not sure," "disagree" and "strongly disagree," respectively (13). School Level Environment Questionnaire (SLEQ) consisted of 13 items, scaled

from "5", "4", "3", "2", and "1" for "strongly agree," "agree," "not sure," "disagree" and "strongly disagree," respectively was used to measure the school environment. The validated Job Stress Level Inventory (JSLI) consists of 20 items was used to measure the level of job stress, using a 5-item scale ranging from "5", "4", "3", "2", "1" for "always," "often," "sometimes," "seldom" and "never," respectively (14,15). Scores of 17-39 were categorized into a low level of job stress, scores of 40-61 were grouped under moderate levels of job stress, and scores between 62-85 were classified under a high level of job stress. All the total scores for each instrument were analyzed quantitatively using STATA software version 17. Structural equation modeling (SEM) was performed to identify the significant associated factors of job stress. The study was approved by Research Ethic Committee, Universiti Sains Malaysia (USM) Code: USM/JEPEM/18020108.

RESULTS

The total number of respondents answering the questionnaire was 273, giving a response rate of 84%. The number of female teachers involved in this study was 203 (74.4%), while male teachers were 70 (25.6%) (Table I). Most teachers had a bachelor's degree (80.6%), followed by Diploma (12.8%) and a master's degree (6.6%). The mean age of respondents was 44.62. The average monthly income was RM 5230.93, and the mean years of teaching were 18 years. The mean for school size was 621. The mean teachers' career commitment score was 63.42 and the mean score for school environment was 48.24. The mean for the job stress score was 32.09. About 81% of respondents had low job stress, 18.7% had moderate job stress, and 0.4% had high job stress. The prevalence of job stress among primary school teachers in Kota Bharu was 19.1%

Table I : Descriptive statistics of primary school teachers in Kota Bharu District (n=273)

Variables	Mean (SD) ^a	Frequency (%) ^b
Age	44.62 (6.59)	
Monthly income	5230.93 (958.35)	
Years of teaching	18 (7.50)	
Gender		
Female		203 (74.4)
Male		70 (25.6)
Career Commitment	63.42 (4.96)	
Job stress	32.09 (9.42)	
Low		221(81)
Moderate		51 (18.7)
High		1 (0.4)
School size	621.88 (310.78)	
School environment	48.24 (4.44)	

a: Standard deviation, b: percentage

Based on the analysis of structural equation modeling, only two variables were found to be statistically significant (p -value <0.05) (Table II)(Fig.1). The two variables were years of teaching and the school environment. One year in teaching will increase the job stress score by 0.329 (p -value=0.032), and one score increase in the school environment will decrease the job stress score by 0.46 units ($p=0.001$). The school environment was categorized as low and good quality of school environment by teachers. The highest score indicates a good environment; thus, increasing the school environment will decrease job stress among teachers. Meanwhile, age, gender, monthly income, career commitment, and school size were not significantly associated with job stress among teachers in Kota Bharu, Kelantan.

Valley, where 32% of teachers had experienced a high-stress level (10). Teachers in Kota Bharu have less job stress due to the daily life in rural areas, which is less stressful than those in urban areas in terms of traffic congestion, time demands, student behavioral problems, and standard of living (16). However, despite the low percentage of teachers experiencing job stress in Kota Bharu, immediate action should be taken to decrease the percentage of medium-stress to low-stress levels among primary school teachers in Kota Bharu.

Years of teaching became a significant factor that influenced job stress in this study. The average for years of teaching among teachers is 18 years. The previous research supports this result that more

Table II : Associated factors on job stress among primary school teachers in Kota Bharu District (n=273)

Variables	β^a	p-value ^b	95% CI ^c	
Age	-0.186	0.277	-0.522	0.149
Monthly income	-0.00086	0.172	-0.002	0.0003
Years of teaching	0.329	0.032	0.027	0.631
Gender	0.565	0.655	-1.915	3.046
Career Commitment	0.215	0.073	-0.020	0.450
School size	-0.0004	0.819	-0.0039	0.003
School environment	-0.464	0.001	-0.727	-0.201

a: Regression coefficient, b: significant at p -value <0.05 , c: Confidence Interval

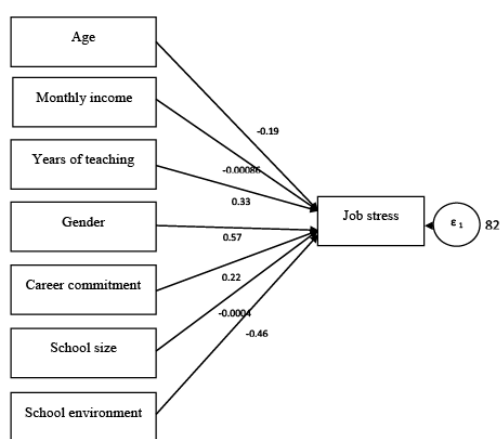


Fig. 1 : The structural equation modeling of associated factors for job stress (n=273).

DISCUSSION

The prevalence of primary school teachers in Kota Bharu was 19.1%. This prevalence is low compared to a previous study among primary teachers in Klang

experienced teachers cause an increase in job stress than less experienced teachers (17). Teachers with more years of teaching tend to feel stress due to the student’s attitudes and changes in the educational policy. Teachers with 11-20 years of teaching are also identified to experience high job stress from the psychosocial work environment (18). With the workload increase over time, the increase in the years of teaching will increase the job stress score. However, the finding also contradicts the output from previous research where years of teaching had a significant negative relationship with job stress (19). In terms of gender, despite the number of female teachers being higher than male teachers, this gender proportion has no influence since the relationship between gender and job stress is not statistically significant.

The concept of school environment encompasses all the relationships that occur among members of a school community that are influenced by structural, personal, and functional aspects of educational systems, which contribute to the school’s uniqueness (20). The school environment is also defined as school organizational health. Moreover, organizational

health is commonly used to explain the relationship between job stress and teachers' well-being as well as the quality of the school environment (21). In this study, the school environment became a significant factor that influenced teachers' job stress. Teachers who perceived that their school had a good school environment experienced less job stress compared to those who felt that their school environment had a low quality of the environment. A good school environment indicates that the school has good quality in the aspects of student relationships, teacher collaboration, teaching innovations, and decision-making. Thus, when the score for the school environment increases, it will decrease the job stress score among teachers. A similar finding was reported when a researcher concluded that there was a significant relationship between school environment and stress among primary school teachers in Kenya (22).

CONCLUSION

In summary, the prevalence of job stress among primary school teachers in the Kota Bharu District was 19.1%. The significant associated factors of teachers' job stress were years of teaching and the school environment. The study's limitation is related to the study design, as this is a cross-sectional study, the outcome can only be predicted and no causal relationship can be established. More research is needed in the future to identify more associated factors that may influence teachers' job stress, with the aim of reducing the prevalence of job stress among primary school teachers.

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