PSYCHOLOGICAL MEDICINE

Depression, Anxiety, and Stress among Secondary School Teachers in Klang, Malaysia

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ABSTRACT

Background: **Teaching has been identified as a highly stressful job. Recent changes such as the increasing use of information technology and diversity of teacher's role potentially increase the stress even further.**

Objectives: **This study aimed to determine the prevalence of psychological distress of depression, anxiety, and stress among secondary school teachers in Klang zone, Malaysia.**

Methods: **A total of 356 teachers from 6 randomly selected secondary schools in Klang zone were recruited into the study. The Malay Depression Anxiety Stress Scales (DASS) was employed to measure the psychological distress depression, anxiety, and stress.**

Results: **The teachers had a high prevalence of depressive (43.0%), anxiety (68.0%) and stress (32.3%) symptoms. While severe to extremely severe depression, anxiety and stress were reported by 9.9%, 23.3% and 7.0% of subjects, respectively. Depression, anxiety, and stress were consistently more common among teachers with socio-demographic and work-related characteristics such as female, lowest educational status, having 1-3 children, staying with in-laws, shorter distance to school, living in a high-rise building and own house.**

Conclusions: **The prevalence of depression, anxiety, and stress were high among secondary schools teachers. Appropriate steps should be taken to improve the mental health of teachers, thereby ensuring good quality education.**

KEY WORDS

depression, anxiety, stress, teacher, mental health

INTRODUCTION

Teaching has been proven as a stressful job[1-4]. In Malaysia, it is expected that teachers not only spend time on instructional activities such as lesson planning, classroom teaching, and grading homework, but also on tasks such as running co-curricular activities, attending or facilitating professional development activities, and engaging parents and the community. Further, teachers are also expected to engage in administrative duties related to teaching and learning such as filling out student report cards and tracking student attendance in class. A 2011 survey of 7,853 teachers found that Malaysian teachers work between 40 and 80 hours per week, with an average of 57 hours[5]. Emotional exhaustion, high demands, low job control, high workload, and low reward are factors known to increase the risk for burnout[6]. Additionally, personal characteristics such as low self-efficacy and poor leadership were associated with burnout[7].

A study conducted among 580 secondary schoolteachers in Kota Bharu found stress prevalence of 34%. Factors like age and duration of work played pivotal roles in contributing to stress in general[8,9]. Teachers who were in secondary school, younger, having less teaching experience, and married with more than two children were more susceptible towards burnout[10]. Using salivary biomarkers of stress, the prevalence of stress in an urban setting in Malaysia was 20%. Teachers of Malay ethnicity, teaching experience of 5 to 10 years, and those without a supervisor's support showed a higher prevalence of job strain[11]. In another study, only five determinants of teacher stress were identified; namely pupil misbehavior, teacher workload, time and resources difficulties, recognition, and interpersonal relationships. Other demographic factors such as age, length of teaching experience, and the respondents monthly salary were not significantly correlated with stress[12].

This study aimed to determine the prevalence of psychological distress of depression, anxiety, and stress among secondary school teachers in Klang zone, Malaysia. Previous studies had demonstrated a different level of stress and factors involved in different teacher's population. Moreover, the teaching profession has recently undergone rapid development such as increasing use of information technology, globalization, and privatization which potentially increase the stress among teachers.

METHODS

This cross-sectional study was approved by the Human Research Ethics Committee (USM/JEPeM/15050170). The Klang zone consists of 14 secondary schools with 1,376 teachers. Six secondary schools in Klang zone were randomly chosen. The subjects were conveniently recruited. The inclusion criteria were a permanent teacher and had been teaching in the school for at least 6 months prior to the study. The study was conducted in December. Some of the teachers were around as they were invigilator in the SPM examination. There was also a compulsory meeting between the teachers and the school principals before the school reopens for the coming year.

The Malay Depression Anxiety Stress Scales (DASS) was employed to measure the psychological distress. This 21-item, 4-point Likert scale is widely used to assess the negative emotional states of

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Table 1. Socio-demographic characteristics and psychological distress of subjects (N = 356)

	All subject (%)	Depression (%)	Anxiety (%)	Stress (%)
Gender				
Male	59 (16.6)	23 (40.0)	39 (66.1)	18 (30.6)
Female	297 (83.4)	130 (43.8)	203 (68.4)	97 (32.7)
Age				
< 20	4 (1.1)	1 (25.0)	4 (100.0)	1 (25.0)
20 - 29	30 (8.4)	14 (46.7)	20 (66.7)	10 (33.3)
30 - 39	128 (40.0)	57 (44.5)	90 (70.3)	45 (35.2)
40 - 49	78 (21.9)	36 (46.2)	55 (70.5)	27 (34.6)
≥ 50	116 (32.6)	45 (38.8)	73 (63.0)	32 (27.6)
Ethnicity				
Malay	231 (65.1)	90 (39.0)	145 (62.8)	54 (23.4)
Chinese	45 (12.7)	23 (51.1)	36 (80.0)	20 (44.4)
Indian/Others	79 (22.3)	39 (49.4)	60 (76.0)	40 (50.6)
Education Level				
Sec. School/ Diploma	13 (3.7)	11 (84.6)	10 (77.0)	6 (46.1)
Degree	298 (83.7)	126 (42.3)	203 (68.1)	95 (31.9)
Masters	45 (12.6)	16 (35.6)	29 (64.4)	14 (31.1)
Experience (yrs)				
0 - 5	41 (11.5)	17 (41.5)	29 (70.7)	12 (29.2)
5 - 10	83 (23.4)	31 (37.3)	57 (68.7)	22 (26.5)
> 10	231 (65.1)	104 (45.0)	155 (67.1)	80 (34.6)
Income (RM)				
4,000 - 6,999	180 (50.7)	77 (42.8)	124 (68.9)	61 (33.9)
7,000 - 9,999	112 (31.5)	46 (41.1)	75 (67.0)	35 (31.2)
≥ 10,000	63 (17.7)	30 (47.6)	43 (68.2)	19 (30.2)
Marriage (yrs)				
≤ 10	51 (14.5)	19 (37.2)	33 (64.7)	16 (31.4)
11 - 20	209 (61.1)	69 (33.0)	152 (72.7)	78 (37.3)
≥ 20	82 (23.0)	28 (34.1)	49 (59.8)	20 (24.4)
Children				
0	17 (4.9)	3 (17.6)	10 (58.8)	3 (17.6)
1 - 3	245 (70.8)	116 (47.3)	175 (71.4)	87 (35.5)
≥ 4	84 (24.3)	30 (35.7)	54 (64.3)	25 (29.8)
Maid				
Yes	332 (94.1)	144 (43.4)	223 (67.2)	109 (32.8)
No	21 (5.9)	8 (38.1)	16 (76.2)	6 (28.6)
Staying with in-laws				
No	312 (90.4)	134 (42.9)	212 (67.9)	96 (30.8)
Yes	33 (9.6)	16 (48.5)	26 (78.8)	18 (54.5)
Distance (km)				
< 20	146 (41.0)	69 (47.3)	106 (72.6)	53 (36.3)
≥ 20	210 (59.0)	84 (40.0)	136 (64.8)	62 (29.5)
Transportation				
Car	324 (91.0)	131 (40.4)	215 (66.4)	95 (29.3)
Motorbike	17 (4.8)	11 (64.7)	14 (82.3)	11 (64.7)
Bus	15 (4.2)	11 (73.3)	13 (86.7)	9 (60.0)
House				
High rise	60 (16.9	32 (53.3)	47 (78.3)	27 (45.0)
Landed	296 (83.1	121 (40.9)	195 (65.9)	88 (29.7)
Ownership				
Own home	290 (81.5)	132 (45.5)	199 (68.6)	96 (33.1)
Rented	66 (18.5)	21 (31.8)	43 (65.1)	19 (28.8)

depression, anxiety, and stress with alpha values for the subscales were greater than 0.85 (depression $\alpha = 0.84$, anxiety $\alpha = 0.74$, and stress $\alpha = 0.79$). It has a good factor loading values for most items (0.39 to 0.73) and correlations between scales 0.54 to 0.68.[13] The responses for each item range from 0 (did not apply to me at all) to 3 (applied to me very much and most of the time). The total score for each subscale was calculated and the severity rating was classified as normal, mild to moderate, severe to extremely severe. The scale does not require special training and suitable for non-clinical settings[14,15].

Table 2. Severity of depression, anxiety, and stress among the participants (n = 356)

	Depression (%)	Anxiety (%)	Stress (%)
DASS Score			
Normal	203 (57.0)	114 (32.0)	241 (67.7)
Mild	59 (16.6)	39 (11.0)	49 (13.8)
Moderate	59 (16.6)	120 (33.7)	41 (11.5)
Severe	18 (5.1)	35 (9.8)	16 (4.5)
Extremely severe	17 (4.8)	48 (13.5)	9 (2.5)

RESULTS

Table 1 describes socio-demographic and work-related data of the participants. The total number of teachers who participated in this study was 356 and female participants outnumbered the male (83.3% and 16.6% respectively). Age 30-39 was the largest group (40%) followed by above 50 years of age (32.6%). Malay ethnic make up the largest group with 65%, followed by Indian/others 22.3% and the least Chinese with 12.7%. Majority of the teachers had household income between RM 4,000 to 6,999 per month and rest of the teachers (49.3%) had a total income of more than RM 7,000 per month. Majority of the teachers were married between 11-20 years and 23% were married for more than 20 years. Married teachers had 1-3 children making up 70% and 24.3% had children more than 4. Most of the teachers had a supportive husband where 67.2% always help in their domestic work and 26.8% had helped when was instructed. Majority of the teachers (90.4%) did not have their mother-in-law staying with them. 94% of the teachers did not have domestic servants with them to help in their house chore work.

More than half of teachers (59%) were traveling more than 20 km and the rest 41% of the teachers were traveling less than 20 km from their home to their school. The car was the preferred mode of transport making up 91% while the remaining teachers were using bus and motorbike as their transportation. Most of the teachers (83%) had landed house properties and a minority of them were living in high-rise buildings. 81% of the teachers were having their own home and 18% was renting a house for stay. Most of the teachers were degree holder (83.7%) with few teachers (12.6%) had a master degree. Majority of the teachers (65.1%) has teaching experience of more than 10 years followed by 23.4% between 5-10 years and only a minority had less than 5 years of teaching experience. 43.1% of teachers felt that they spend equal time in teaching and clerical work. 43.1% felt that clerical work takes an only a quarter of their time, rest of the time spent on teaching the students.

Depression was more frequent in female teachers (43.9%) than male teachers (40%). Depression was above 40% among teachers age 20-49 and lowers for those below 20 or above 50 years of age. Half of the non-Malay teachers were depressed. Depression was highest at 84.6% among those educated up to secondary or diploma level. It was slightly higher at 45% and 47.6% among teachers having longest teaching experience and highest income, respectively. Duration of marriage less than 10 years and having 1-3 children also had higher depression compared to other groups. Teachers staying with maids or in-laws were also having higher depression. The majority (55%) of those not receiving help from the spouse was depressed. Lastly, depression was also higher among those living nearer to school (47.3%), traveling by public transportation (73.3%), and living in high-rise building (53.3%) or own house (45.5%).

More participants had symptoms of anxiety (68.0%) compared to depression (43.0%) or stress (32.3%). Overall, anxiety was more common among the youngest (100.0%), Chinese (80.0%), lowest educational status received (77.0%), shortest teaching experience (70.7%), lowest income (68.9%), marriage duration 11-20 years (72.7%), having 1-3 children (71.4%), no living-in maids (76.2%), staying with in-laws (78.8%), shorter distance to school (72.6%), travelling by public transportation (86.7%), living in high-rise building (78.3%) and own house (68.6%).

Least number of teachers experienced stress, about a third, compared to depression and anxiety, affecting two thirds and almost half of the participants, respectively. Overall, stress was more common among female (32.7%), Indian/other ethnic (50.6%), lowest educational status (46.1%), longest teaching experience (34.6%), lowest income (33.9%), marriage duration 11-20 years (37.3%), having 1-3 children (35.5%), living-in maids (32.8%), staying with in-laws (54.5%), shorter distance to school (36.3%), travelling by motorbike (64.7%), living in high-rise building (45.0%) and own house (33.1%)

Therefore negative emotional states of depression, anxiety and stress were consistently more common among teachers with socio-demographic and work-related characteristics; female, lowest educational status, having 1-3 children, staying with in-laws, shorter distance to school, living in a high-rise building and own house.

Table 2 describes the severity of psychological distress experienced by the participants. 43% of the teachers had depressive symptoms. A third (33.2%) of the teachers had mild to moderate depression. About one-tenth (9.9%) of the teachers had severe-extremely severe depression. Two-thirds of the teachers (68%) had anxiety symptoms with 44.7% in mild to moderate category whereas 23.3% in severe to the extremely severe category. A third (32.3%) of teachers had symptoms of stress and of which some 25.3% of them were in the category of mild to moderate. The rest 7.0% of the teachers were in the severe to the extremely severe category.

DISCUSSION

In this current study, it was found that teachers had a high prevalence of depressive (43.0%), anxiety (68.0%) and stress (32.3%) symptoms. While severe to extremely severe depression, anxiety and stress were reported by 9.9%, 23.3% and 7.0% of subjects, respectively. This was similar to a study done in Kota Bharu in which 34% of secondary school teachers were having stress[9]. In contrast, the prevalence of stress was lower at 20.2% in another study using salivary cortisol and IgA as stress biomarkers[11]. With regard to depression, the prevalence of 43.0% was comparable to a previous study, which used Malay DASS21 to screen depression on secondary school teachers in Kota Bharu. The prevalence was slightly higher at 49.1% with most of them were in mild depression (21.0%). Females made up the majority of the depression cases[8].

Other highly stressful occupations include the police, nurse[16], and doctor[17]. The prevalence of stress among the police in Kuala Lumpur city was high where the overall stress was 38.8% with 5.9% severe, 14.9% moderate and 18.0% mild. Higher ranked officers like the Inspectors were more likely to suffer from severe stress compared to junior officers[18]. Using the Zung Self-Rating Anxiety Scale, the prevalence of anxiety among Chinese nurse was found to be 43.4% with associated factors lower job rank (OR 2.501), over commitment (OR 2.018), chronic diseases (OR 1.541), worse nurse-patient relationship (OR 1.434), higher social support (OR 0.573), lower hospital grade (OR 0.629), taking regular meals (OR 0.719) and higher level of job satisfaction (OR 0.722)[19].

Psychological distress has a negative impact on health. There was a high prevalence of musculoskeletal pain among teachers[20] and it was associated with of severe to extremely severe depression and anxiety[21]. Furthermore, recent findings point to the importance of teachers' mental health. Teachers' depressive symptoms were negatively associated with quality of the classroom-learning environment (CLE), and quality of CLE mediated the association between depressive symptoms and student achievement[22]. Occupational stress can also lead to increased hostility and physical aggression[23].

The result of this study, however, must be interpreted with caution. This study was conducted when most of the teachers were busy preparing the students and invigilating SPM examination which would be part of the entry qualification for tertiary education. Increased stress prior to a major examination has been documented among students[24] and teachers[25]. Lastly, the findings may not be generalized to teachers in other geographical locations, as there may be unmeasured confounding variables in this study.

Future study should focus on modifiable factors such as the school environment, leadership, and resources. There is a significant relationship between teacher's stress level and the structural and consideration dimensions of the principals' leadership style[26]. Apart from modifiable factors, we should also look into factors such as personality, notably neuroticism as it has been associated with depression in students[27] and the general population[28,29].

CONCLUSIONS

The prevalence of depression, anxiety, and stress were high among

secondary schools teachers. Appropriate steps should be taken to improve the mental health of teachers, thereby ensuring good quality education. Stress management including spiritual coping strategy[30] could be incorporated into their teaching module during their training course.

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