



Prevalence and associated factors of stress in the Malaysian Police Force

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ABSTRACT

Objective. This study aims to determine the prevalence of stress and the associated socio-demographic and work factors among police personnel in Metropolitan Kuala Lumpur, Malaysia.

Method. A cross-sectional study was conducted in two randomly selected police districts in Kuala Lumpur from 2009 to 2011. A total of 579 police officers from 11 police stations and two headquarters participated in this study. The 21-item Depression, Anxiety and Stress questionnaire was used. Multinomial logistic regression analyses were carried out to examine the effect of socio-demographic and work factors on stress.

Results. The overall prevalence of stress was 38.8% (95% CI 34.2, 43.6) with 5.9% (3.9, 8.8), 14.9% (11.6, 18.8) and 18.0% (14.5, 22.2) for severe, moderate and mild stress, respectively. Inspectors were more likely to suffer from severe stress (aOR 10.68, 95% CI 3.51, 32.53) compared to junior officers. Those who complained that their salaries were not commensurate with their jobs were more likely to suffer from moderate levels of stress (aOR 2.73, 95% CI 1.43, 5.22) compared to those who were happy with their salaries.

Conclusions. This study strengthens findings that police job is stressful. Special attention needs to be paid to Inspector-level ranks and the remuneration structure of police officers to address this issue.

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Introduction

Police stress has been extensively studied looking at different types of stressors and their effects. Despite mounting evidence on police stress in America, The United Kingdom and Australia, research on police stress in South East Asia has been scanty. This has been attributed to political censure, the divorce between police theory and practice, conservative Asian Police Organisations and a desire to protect the police mystique and the need to control information (Wong, 2003).

Malaysia, a South-East Asian country has sparse research and no publications on police stress. The objective of this study was to assess the prevalence of stress and the associated socio-demographic and work factors among police personnel in Metropolitan Kuala Lumpur, Malaysia.

Methods

Study design and study population

This is a cross-sectional study conducted from 2009 to 2011. A two stage sampling procedure was used to select police officers. In stage 1, two district police headquarters were randomly selected out of four in Kuala Lumpur. The first police district headquarters had 8 departments and 7 police stations, and the second had 8 departments and 4 police stations, with 3033 police officers stationed at the 2 police districts. In the second stage, data was collected from all police officers who attended the 'roll call' at the 16 departments and 11 police stations involved in this study.

The study subjects included all ranks of police officers from constable to top management. Inclusion criteria were fully trained police officers (called regulars) who had served for at least 6 months.

Assuming a police stress prevalence of 30%–65%, with a precision of 5% and a design effect of 2, the sample size was calculated as 880 (including 15% non-response rate). A total of 579 police officers with informed consent participated in this study giving a response rate of 75.5%. Data was collected between April and September 2011 from all departments and police stations through 'roll call'.

A self-administered Bahasa Malaysia version of the 21-Item Depression, Anxiety and Stress Scale (BM-DASS) as was used in the validation paper was the study instrument (Musa et al., 2007). This is a modified version of the original 42 item DASS questionnaire (Lovibond and Lovibond, 1995). The Cronbach's alpha values for the depression, anxiety and stress scores were 0.84, 0.74 and

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0.79, respectively, and the factor loading values for most items ranged from 0.39 to 0.73 (Musa et al., 2007). In the analyses only the stress component was used. The scores for stress were converted into percentile scores. Severity was categorised as normal, mild, moderate, severe and extremely severe stress. The respondents' characteristics such as age, ethnicity, gender, marital status, income, education, rank, place of residence, place of work, years of service and information on whether their salaries were commensurate with their jobs were collected.

This study was approved by the Medical Ethics Committee of the University of Malaya Medical Centre with written approval from the Inspector General of Police.

Statistical analyses

All data analyses were performed using the Complex Samples procedure in SPSS version 17. The cases were weighted accordingly. Means and standard distribution were used for quantitative data, with frequencies and percentages for qualitative data. The independent variables which showed significance at a p-value cut off point of 0.25 in univariate analysis were entered into the multivariate multinomial logistic regression procedures to identify the significant predictors of the stress level.

Results

The demographic characteristics of police officers who participated in this study are presented in Table 1.

Out of the 579 respondents, 33 were excluded due to reporting psychiatric illness and incomplete data. The mean age of the police officers was 35.2 (SD 11.1) years. The majority (84.2%) of the respondents earned between RM1000 and RM4499 per month and 87.4% were males. The mean duration of service in the police force was 14 (SD 11.6) years. More than half (58.1%) felt that their salaries were not commensurate with their jobs.

Slightly more than a third (39%) of the officers in this study experienced some level of stress. The number of respondents in the extremely stressed category was very small. We therefore combined this category with severe stress. Of the officers in the sample, 5.9% had experienced severe stress, 14.9% moderate stress and 18.0% mild stress. In univariate analyses, with a p-value cut off point of 0.25, only rank and whether salaries were felt to be commensurate with their jobs (salary commensurability) were seen to be significant predictors of levels of stress.

Twenty-eight percent (27.8%) of police inspectors perceived severe stress. Police inspectors experienced ten times the odds of severe stress (aOR 10.68, 95% CI 3.51, 32.53) compared to junior officers. Almost one fifth (19.2%) of the police officers who felt salary did not commensurate with the job reported moderate stress. Police officers who felt that their salaries did not commensurate with their jobs had 2.7 times the odds of moderate stress (aOR 2.73, 95% CI 1.43, 5.22) compared to those who were happy with their salaries (Table 2).

Discussion

The findings of this study support the literature that socio-demographic variables add little to the explanation of police stress. We have to caution that the stress level of 39% may not be comparable with findings from elsewhere due to differing definitions, stress types, measurement tools and measurement units. There are however, few (if any) studies for us to compare with in developing countries and individual perceptions make assessments less objective (Collins and Gibbs, 2003). A study on the Brazilian Police (Carvalho et al., 2008) looking at prevalence of bruxism and psychological stress reported a prevalence of 45.7% psychological stress. Another study on stress and coping in police officers (Aaron, 2000) looking at stress and coping strategies similarly reported no association between officers' age, marital status, years of service, or even salary and experienced stressors. However, a prevalence of 38.8% does indicate that police

Table 1
Socio-demographic and work characteristics of police officers in Kuala Lumpur in 2011.

Variable	Frequency	Percentage
Ethnicity		
Malay	454	83.2
Non-Malay ^a	92	16.8
Gender		
Male	477	87.4
Female	69	12.6
Marital status		
Single	153	28.0
Married	383	70.2
Widowed/separated	10	1.8
Income		
<1000	67	12.3
1000–2499	261	47.8
2500–4499	199	36.4
≥4500	19	3.5
Education		
Secondary school	483	88.4
Diploma	37	6.8
Degree	26	4.8
Rank		
Junior officers ^b	415	76.0
Sergeant ^c	75	13.7
Inspector ^d	30	5.5
Management ^e	26	4.8
Place of residence		
Barack	251	46.0
Rental house	205	37.5
Own house	90	16.5
Place of work		
DPH ^f	207	37.9
Police station	339	62.1
Salary commensurate with job		
Yes	229	41.9
No	317	58.1
Wife working		
Yes	246	45.1
No	300	54.9
Age	35.2 ± 11.1	
Years of service	14.0 ± 11.6	

Mean ± standard deviation.

^a Non-Malay—Chinese, Indian and others.

^b Junior officers—Constable, Lance Corporal and corporal.

^c Sergeant—Sergeant and Sergeant Major.

^d Inspectors—sub-inspector, inspector and chief inspector.

^e Management—Assistant Superintendent of Police, Deputy Superintendent of Police, Superintendent of Police and Assistant Commissioner of Police.

^f DPH—District Police Headquarters.

stress is a problem as has been reported by French Police Officers (Deschamps et al., 2003).

The findings in this study further strengthen that police work is stressful similar to studies done on two other very stressed occupational groups in Malaysia, namely teachers, with a prevalence ranging from 20% to 34%, and dental officers with a prevalence of 22.2% (Hadi et al., 2009; Masilamani et al., 2012; Rusli et al., 2006).

A police inspector is more likely to experience a higher level of stress compared to a junior officer. Other studies have shown sergeants (rather than inspectors) to be most stressed due to their wide range of exposure to organisational and operational stressors (Brown and Campbell, 1990; Gudjonsson and Adlam, 1985). In our setting inspectors showed higher stress levels, possibly due to the nature of their work. They form the backbone of investigation teams in the criminal investigation, special security, commercial crimes, special operations (counter-terrorism) and narcotics departments. Future studies focussing on police inspectors should be carried out to identify the actual type of stressors based on their specific job profiles and make suggestions accordingly to reduce the stress levels. We propose that the existing counselling services at the police headquarters be reviewed with the establishment of peer stress counselling and the dissemination of such information with easy

Table 2

Factors associated with severity of police stress among police officers in Kuala Lumpur in 2011.

Variable	Severity of stress	Crude odds ratio (95% CI)	Adjusted odds ratio (95% CI)
Rank^a			
Sergeant ^b	Mild	0.86 (0.39, 1.86)	0.91 (0.41, 1.99)
	Moderate	0.78 (0.31, 1.94)	0.89 (0.35, 2.26)
	Severe	0.91 (0.20, 4.04)	0.97 (0.22, 4.21)
	Normal	1.00	1.00
Inspector ^c	Mild	0.60 (0.11, 3.30)	0.57 (0.10, 3.10)
	Moderate	3.02 (1.01, 8.99)	2.80 (0.98, 8.00)
	Severe	11.07 (3.67, 33.38)	10.68 (3.51, 32.53)
	Normal	1.00	1.00
Management ^d	Mild	1.21 (0.42, 3.48)	1.16 (0.41, 3.30)
	Moderate	0.91 (0.24, 3.47)	0.84 (0.20, 3.40)
	Severe	1.31 (0.16, 10.87)	1.26 (0.15, 10.29)
	Normal	1.00	1.00
Salary commensurate with job^e			
No	Mild	1.58 (0.92, 2.70)	1.56 (0.92, 2.65)
	Moderate	2.83 (1.48, 5.42)	2.73 (1.43, 5.22)
	Severe	1.73 (0.68, 4.39)	1.511 (0.60, 3.83)
	Normal	1.00	1.00

^a Reference group = Junior officers.^b Sergeant—Sergeant- and Sergeant-Major.^c Inspectors—sub-inspector, inspector and chief inspector.^d Management—Assistant Superintendent of Police, Deputy Superintendent of Police, Superintendent of Police and Assistant Commissioner of Police.^e Reference group = yes.

access to all police officers with a special emphasis to police inspectors who face severe stress levels. Since studies have shown that social support and stress management programmes help to mitigate work stress, we recommend that such issues be studied in the local police force to ascertain if such support and programmes can be introduced in this group (Hagihara et al., 1997; Patterson, 2003).

In this study, it was found that officers who reported that their salaries did not commensurate with their jobs were more likely to experience higher level of stress compared to those who perceived otherwise. Other studies reported similar findings where police officers have reported stress related to poor salary (Agolla, 2009; Bano, 2011; Pienaar et al., 2007). Being civil servants, police officers' salaries are comparatively low and shift work does not permit them to take on other jobs.

Study limitations and strengths

This study is the first of its kind in Kuala Lumpur. It adds knowledge to police study in an Asian country. The polychotomous nature of the outcome variable enabled identifying the particular rank (inspectors) which suffered higher stress levels enabling mitigation on these specific groups. The strength of this study lies in its repeatability in other cities in developing countries, covering all ranks within the workplace, enabling comparisons to be made. However, being a cross-sectional study, it precludes the determination of causality and since it was conducted in a metropolitan city, the results may not be generalisable to non-urban areas. Though the outcome variable was ordinal, ordinal regression analysis could not be used as the beta-coefficients produced

in this analysis could not explain the associated predictors of the stress outcomes. Other limitations would include self-reporting leading to reporting bias and underestimation of stress levels among the police force. To enhance representation to national police population, further studies should be extended to all state levels or zonal level metropolitan cities.

Conclusion

This study finds that the prevalence of stress in the Malaysian police force is high. The rank of the police officer and the perception whether salaries are commensurate with their jobs are associated with police stress. Appropriate interventions or methods to address these factors should be instituted to reduce stress levels in the police force.

Conflict of interest statement

The authors declare that there are no conflicts of interest.

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