

ORIGINAL ARTICLE

A STUDY OF OCCUPATIONAL STRESS AND COPING STRATEGIES AMONG CORRECTIONAL OFFICERS IN KEDAH, MALAYSIA

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ABSTRACT

Introduction: The effect of stress among correctional officers at the workplace can contribute to various health problems and this also affect their work performance and motivation.

Methodology: Study was done at a prison located at the rural district in Kedah. The study was conducted by using randomized stratified sampling method. A total of 418 self administrated questionnaires were distributed. These questionnaires included socio demographic factor, family and marriage factor, Personal Stress Inventory (using Stress Symptom Scale with 52 items), work related stressors (Job Stress Survey) and Brief COPE (Coping Orientation for Problems Experienced with 28 items).

Result: Response rate was 90.9%. Stress prevalence for correctional officers was 45.8%. Socio demographic factors which have significant relation with stress status were marital status, promotion factor, age, monthly salary, duration of service and number of children ($p < 0.05$). Family and marriage factor which have significant relation with stress status among married officer were pressure from relatives, clean up house, sexual frustration, conflict with spouse, conflict with children, conflict due to household work and no babysitter ($p < 0.05$).

Discussion: The study showed that work related stressors that have influence with stress were excessive workload, working after work hours, not enough staff, disgraced words from fellow workers, competition in carrier development and excessive work stress ($p < 0.05$). Multiple linear regression model was done in this study and revealed factors that explained 52% of variation in stress score distributions were behavioural disengagement, no babysitter, denial, conflict with children, replace other worker's duty, not enough time with family, competition in carrier development, venting of emotion, positive reframing and emotional support. Coping strategies that have significant effect in reducing stress symptoms are positive reframing and emotional support.

Conclusion: Stress management programs should be implemented and emphasizing on specific stressors and coping mechanism are important to reduce the risk of occupational stress among correctional officers.

Keywords: Occupational stress, correctional officers, coping strategies.

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INTRODUCTION

Many researches have found that continuous stress can cause negative impact to mental health and physical among individuals¹. Stress among workers also can cause negative impact to their work performance such as absenteeism, increase turn over rate, inefficient work performance, decreased work performance, decreased work motivation, job satisfaction and problem with public relation^{2,3}. Study abroad showed that one out six most stressful professions is correctional officers⁴. Besides that many researchers found that working as a correctional officer was usually consistent with the job stress^{4,5}. In Malaysia, a study done by Baskaran in 2004, 65.1% of correctional officers in a prison at Klang Valley experienced stress at the workplace whereas study done at the same prison by Selvakumaran revealed that prevalence of stress among correctional officer was increased from 32.1% in year 2000 up to 54.6% in 2003^{6,7}. Stress can be defined as non specific response experienced by individual toward environmental stimuli⁸. It can also define as an outcome or non specific response of individual when their perception toward pressure is exceeding their own capabilities to reduce the pressure⁹. Occupational stress can be defined as perceived imbalance between occupational demands and individual's ability to perform⁸. Factors that contribute to stress among correctional officer are socio demographic factors, family and marriage factors, work related stressors, and methods of coping strategies. Few studies show indicates that common work related stressors for correctional officers include work overload, lack of organization support, carrier development and replacing other worker's duty^{5,10}. In view from other studies also show that non occupational stressors such as family and children conflict and lack of time with family play a major source to increase stress symptoms^{11, 12, and 13}. Sources of stress that have a direct impact on the mental health of an individual will also elicit coping responses. The differences in practising coping methods could greatly affect the response to stressors. Coping strategies refer to the specific efforts, both behavioral and psychological, that people employ to master, tolerate, reduce, or minimize stressful events. Two general coping strategies have been distinguished: problem-solving strategies are efforts to do something active to alleviate stressful circumstances, whereas emotion-focused coping strategies involve efforts to regulate the emotional consequences of stressful or potentially

stressful events. Research indicates that people use both types of strategies to combat most stressful events¹⁴. There have been studies that suggest the use of social support coping mechanism such as discussing problems with spouse and friends may prevent correctional officer from getting stress¹⁵. Besides that, other studies also have shown that by practising self distraction and positive reframing as part of coping mechanism have significantly reduce most of stress symptoms^{15,16}. Therefore, the objectives of this study were to determine the prevalence of stress among correctional officer in Kedah and also to identify the risk factors involved and mediating effect of coping strategies on stress among them. Therefore, it is hoped that this study will not only be able to illuminate the present of occupational stress among correctional officer but could also contribute toward producing of an effective stress management program in Malaysia prison.

METHODOLOGY

Study design

A cross sectional study was conducted among correctional officer in a prison located at the rural district in Kedah (located at the northern region of Peninsular Malaysia) from 17 June 2008 to 8 July 2008. The study was conducted by using randomized stratified sampling method. Correctional officers were selected according to 3 main rank categories. The categories were warder, low rank officer and high rank officer. Data were collected through self administered questionnaires. This study was approved by the Research Ethics Committee of National University of Malaysia in May 2008.

Sample Size

The sample size for the prevalence of occupational stress was estimated using guidelines by Lwanga and Tye for 95% confidence interval (CI) and prevalence of 54.6% for occupational stress by Selvakumaran. By assuming a 10% non response rate, sample size was calculated to 418 subjects from a minimum of 380 subjects. The sample size calculation of each stratum or rank category (warder, low rank officer and high rank officer) was based on proportion. The subjects were selected randomly using ballot system for each rank category based on a list name of correctional officers.

Research instrument

The self-administered questionnaire consist of 5 section which were inquiring on socio demographic factors, at the work- related stressors (using Job Stress Survey), family and marriage factors, symptom of stress (using Personal Stress Inventory- 52 items) and methods of coping strategies (using Brief Coping Orientation for Problems Experienced - 28 items). The standard questionnaire was translated to Malay language from original English version by using back to back translation method.

Statistical analysis

Data entry and analysis were done using the SPSS version 12.0. Statistical significance was considered if $p < 0.05$. Frequencies and percentages were calculated for qualitative variables data and quantitative variables the mean and standard deviation was calculated. Bivariate analysis such as Pearson’s chi square test (qualitative variables), independent t-test (quantitative variables) and multivariate analysis (multiple linear regressions) were

used to study the association of stress status and associated factors.

RESULT

In this study, out of 418 correctional officers who were selected, only 380 correctional officers were involved, giving response rate of 90.9 %. Most of the respondents were Malay ethnicity (n = 377; 99.2%) and 0.8% (n = 3) were others. Majority of them were male (74.7%) and mean for age among correctional officers in this study was 33.45 ± 10.1 and 65% of them were married.

The prevalence of stress among correctional officers in Kedah was 45.8%. Prevalence of stress according to rank category showed that warder had higher stress prevalence (55.2%) followed by low rank officer (34.3%) and high rank officer (26.9%). The differing prevalence between these category was also proven to be significant as shown from the Pearson’s chi square analysis ($\chi^2 = 13.12$; $p < 0.05$) (Table 1).

Table 1 Stress prevalence according to rank category of correctional officer

Rank Category	Stress n(%)	No Stress n(%)	Statistical test value (χ^2)	Difference P value
High rank officer	7 (26.9)	19 (73.1)	13.12	0.001*
Low rank officer	34 (34.3)	65 (65.7)		
Warder	133 (52.2)	122 (47.8)		
Total	174 (45.8)	206 (54.2)		

*Significant at $p < 0.05$

The Pearson’s chi square analysis between socio demographic variables such as marital status and stress showed significant association ($\chi^2 = 6.82$; $p < 0.05$). Those officers who were single having a lot of stress compared to those who were married (Table 2). Independent t-test was used to compare the mean numerical difference of age, monthly

salary and duration of service between stress status. Finding revealed that all numerical variables were significant association ($p < 0.05$) and those who were stress are older, getting less monthly salary, less duration of service and had less number of children compared to no stress group (Table 3).

Table 2 Relationship between marital status and stress status

Marital status	Stress n (%)	No Stress n (%)	Statistical test value (χ^2)	Difference p value
Single	73 (54.9)	60 (45.1)	6.82	0.009*
Married	101 (40.9)	146 (59.1)		

*Significant at $p < 0.05$

Table 3 Relationship between socio demographic factors and stress status

Socio demographic factors	Stress n=174 Min (s.p)	No stress n=206 Mean \pm SD	Statistical test value (t)	Difference p value
Age	32.07 (9.78)	34.62 (10.30)	2.474	0.014*
Monthly salary	1370.12 (550.05)	1559.88(664.86)	3.045	0.002*
Duration of service	9.81 (9.28)	12.08 (9.94)	2.301	0.022*
Number of children	1.33(1.53)	1.73(1.59)	2.528	0.012*

*Significant at $p < 0.05$, SD: Standard deviation

In work related factors, competition in carrier development were the most frequent stressor experienced by correctional officers who were having stress. Not enough staff were the second most frequent stressor and followed by disgraced words from fellow workers,

excessive work load, replace other worker's duty and working after work hours (Table 4). All these six work related factors were significantly associated with stress ($p < 0.05$).

Table 4 Relationship between works related stressors and stress status

Work related stressors	Stress (n=174) Mean \pm SD	No stress n=206 Mean \pm SD	Statistical test value (t)	Difference p value
1.Excessive work load	5.32 (1.29)	5.04 (1.21)	2.20	0.028*
2.Lack of organization support	5.28 (1.25)	5.13 (1.33)	1.10	0.271
3.Working after work hours	4.83 (1.71)	4.25 (1.68)	3.30	0.001*
4. Lack of work (inactive) within period of time	5.02 (1.62)	4.86 (1.20)	0.89	0.373
5. Not enough staff	5.79 (1.87)	5.16 (2.03)	3.16	0.002*
6. Disgraced words from fellow workers	5.71 (1.78)	4.78 (2.10)	4.65	0.001*
7.Inadequate income	6.40 (1.74)	6.07 (2.25)	1.57	0.116

8. Competition in carrier development	5.84 (1.84)	5.22 (1.73)	3.40	0.001*
9. Inconducive workplace environment	5.22 (1.92)	5.20 (1.91)	0.13	0.899
10. Replace other worker's duty	5.03 (1.81)	4.44 (1.90)	3.10	0.002*
11. Conflict with other department	4.95 (2.20)	4.59 (2.30)	1.58	0.115
Excessive work stress	5.33 (1.13)	5.04 (1.11)	2.46	0.014*

*Significant at $p < 0.05$; SD: Standard deviation

Table 5 shows that all variables in family factors (personal) have significant association with stress status. The most frequent family (personal) stressor were financial problem (1.63 ± 0.92) and followed by no enough time with family (1.33 ± 0.99), conflict with

friends (1.18 ± 0.88), inconducive house environment (1.08 ± 1.01) and personal problems (1.08 ± 1.06).

Table 5 Relationship between family factors (personal) and stress status

Family Factors (Personal)	Stress (n=174) Mean \pm SD	No Stress (n=206) Mean \pm SD	Statistical test value (t)	Difference p value
1. Financial problem	1.63(0.92)	1.33(0.93)	3.13	0.002*
2. No enough time with family	1.33(0.99)	1.10(0.84)	2.43	0.016*
3. Inconducive house environment	1.08(1.01)	0.76(0.88)	3.31	0.001*
4. Conflict with friends	1.18(0.88)	0.70(0.86)	5.34	0.001*
5. Personal problems	1.08(1.06)	0.69(0.92)	3.77	0.001*

*Significant at $p < 0.05$; SD: Standard deviation

Analysis on the family and marriage factors (married officer) showed that all related variables were significantly associated with stress ($p < 0.05$). The most frequent family and marriage stressors among stress group were pressure from relatives. No babysitter was the

second most frequent family stressors and then followed by sexual frustration, conflict due to household work, conflict with children and conflict with spouse (Table 6).

Table 6 Relationship between family and marriage factors (married officer) and stress status

Family and marriage factor (married officer)	Stress (n=101) Mean ± SD	No stress (n=146) Mean ± SD	Statistical test value (t)	Difference p value
Conflict with spouse	0.80(0.93)	0.41(0.72)	3.56	0.001*
Conflict due to household work	0.87(0.97)	0.44(0.75)	3.78	0.001*
Pressure from relatives	1.10(0.91)	0.56(0.81)	4.76	0.001*
Clean up house	1.05(0.87)	0.71(0.73)	3.28	0.001*
Sexual frustration	0.98(1.03)	0.35(0.65)	5.45	0.001*
Conflict with children	0.82(0.91)	0.23(0.55)	5.53	0.001*
No babysitter	1.08(1.04)	0.44(0.81)	4.93	0.001*

*Significant at p<0.05, SD: Standard deviation

The coping strategies that commonly used by stressed group were venting of emotion (1.68 ± 0.78) followed by denial (1.67 ± 0.80), behavioral disengagement (1.10 ± 0.81), self blaming (1.03 ± 0.76) and substance abuse (0.34 ± 0.70). While for non stressed group, they were commonly use few specific coping strategies such as religion (2.23 ± 0.73), planning (2.18 ± 0.71), positive

reframing (2.13 ± 0.64), instrumental support (2.10 ± 0.76), acceptance (2.08 ± 0.63), active coping (2.03 ± 0.76) and emotional support (1.92 ± 0.68). All of these coping strategies were significantly associated with stress status (p<0.05) (Table 7).

Table 7 Relationship between coping strategies and stress status

Coping strategies	Stress (n=174) Mean ± SD	No Stres (n=206) Mean ± SD	Statistical test value (t)	Difference p value
Humor	0.97(0.65)	1.30(0.71)	4.72	0.001*
Self distraction	1.42(0.82)	1.88(0.71)	5.87	0.001*
Self blaming	1.03(0.76)	0.71(0.58)	4.67	0.001*
Denial	1.67(0.80)	1.02(0.67)	8.45	0.001*
Substance abuse	0.34(0.70)	0.09(0.38)	4.14	0.001*
Behavioral disengagement	1.10(0.81)	0.43(0.56)	9.08	0.001*
Venting of emotion	1.68(0.78)	1.08(0.68)	7.95	0.001*
Positive reframing	1.91(0.81)	2.13(0.64)	2.94	0.004*
Planning	1.85(0.75)	2.18(0.71)	4.40	0.001*
Acceptance	1.64(0.84)	2.08(0.63)	5.78	0.001*
Religion	2.04(0.85)	2.23(0.73)	2.39	0.017*
Active coping	1.66(0.83)	2.03(0.76)	4.62	0.001*
Emotional support	1.68(0.78)	1.92(0.68)	3.23	0.001*
Instrumental support	1.71(0.78)	2.10(0.76)	4.98	0.001*

*Significant at p<0.05; SD: Standard deviation

With all the significant ($p < 0.05$) and work related stressors, family and marriage factors (non related stressors) and coping strategies that were potential predictors to occupational stress included, the preliminary main effect model was obtained. All independent variables were fitted into multiple linear regressions and the final effect model was obtained using the backward method. This model explained 52% of variance of occupational stress among correctional officer in Kedah as shown by the adjusted R square value of 0.522. The model was significant ($F = 11.75$, $p = 0.000$). Behavioural disengagement ($\beta = 6.912$), no babysitter ($\beta = 5.878$), denial (β

$= 5.424$), conflict with children ($\beta = 6.912$), replace other worker's duty ($\beta = 2.318$), not enough time with family ($\beta = 2.638$), competition in carrier development ($\beta = 2.638$), venting of emotion ($\beta = 4.138$), positive reframing ($\beta = -4.909$) and emotional support ($\beta = -5.804$) were found to influence the stress scores significantly ($p < 0.05$) (Table 8). Coping mechanisms that have significant effect in reducing stress symptoms are positive reframing and emotional support because of significant negative regression coefficient.

Table 8 Predictor of occupational stress among correctional officer in Kedah

Independent variables	β value	Beta	p value	C.I 95%
Constant	-1.566			
No babysitter	5.878	0.221	0.001*	2.967 - 8.789
Behavioural disengagement	6.912	0.227	0.001*	3.744 - 10.080
Denial	5.424	0.187	0.001*	2.131 - 8.717
Conflict with children	4.615	0.141	0.044*	0.115 - 9.116
Replace other worker's duty	2.318	0.188	0.001*	1.023 - 3.614
No enough time with family	2.638	0.104	0.024*	0.357 - 4.920
Competition in carrier development	1.378	0.107	0.027*	0.158 - 2.599
Venting of emotion	4.138	0.140	0.014*	0.835 - 7.441
Positive reframing	-4.909	-0.158	0.013*	-8.755 - -1.063
Emotional support	-5.804	-0.187	0.005*	-9.796 - -1.811

*Significant at $p < 0.05$; Adjusted R^2 : 52%

C.I: Confidence interval

DISCUSSION

The prevalence of stress among correctional officer in Kedah was found to be 45.8%. A study done in one of the prisons at Klang Valley, Malaysia in 2003 showed the prevalence of stress among correctional officers was quite higher (54.6%)⁷. Another study was done in 2004 at the same prison also revealed high stress prevalence among correctional stress (65.1%)⁶. The main reasons that stress prevalence in this study was lower than the other local studies were due to many factors such as differences of workload, work task, number of prisoners and location of prison. This prison is located at the rural area in Kedah with less number of prisoners and workload compared with the other prisons at Klang Valley. Despite that, stress prevalence in this study was much higher than other occupation such as production factory workers (42.1%) and workers at workshop (39%)^{17, 18}.

Based on the rank category, this study showed higher prevalence of stress among warder as compared to higher rank category. These findings were consistent with study done abroad by Giora and Ayala, revealed that correctional officer in higher rank position were less to get stress at the workplace¹⁹. This condition happened because of their workload and direct dealing with prisoners was less compared to lower rank officer¹⁹.

As far as socio demographic factors were concerned, factors such as marital status, age, monthly salary, duration of service and number of children have relationship with stress. Most of correctional officers who having stress were single, young age, less salary income and less experienced in service.

In this study, competition in carrier development, not enough staff, disgraced words from fellow workers, excessive workload, replaces other worker's duty and working after work hours were found to be the

principal contributor to occupational stress. This finding was supported by study done abroad indicated that competition in career development can create new work stressor such as job satisfaction among correctional officers and therefore it may cause stress problem became worst²⁰. Review of studies also indicated that commonly cited work related stressors for correctional officers were excessive workload^{21, 22, 23}. In other different studies done among various occupations revealed excessive workload was also associated with inadequate number of staff, replaces other worker's duty and working after work hours²¹. Communication conflict among co-workers such as disgraced words from fellow workers could create unhealthy work environment and demoralized spirit of teamwork in various setting of an organization.

Referring to other abroad studies, coping strategies commonly used by correctional officer to reduce stress symptoms were self distraction, positive reframing, emotional support^{16, 15}. This finding was consistent with this study, where coping strategies commonly used by correctional officer to reduce stress symptoms were positive reframing and emotional support, however self distraction was found to be one of the stressors (using multiple linear regressions). Other factors that had been identified to increase stress were no babysitter, denial, conflict with children, replace other's worker's duty, not enough time with family, competition in carrier development, behavioural disengagement and venting of emotion. However, the strength of association between these coping strategies and stress scores were low, therefore future prospective cohort study should be done to determine the strength of coping strategies in reducing stress symptoms among correctional officers²⁴.

Few limitation was encountered in this study includes the design of the study itself, where it is a cross sectional study, hence the ability to determine the strength of adaptive and maladaptive effect of coping on stress could not be done. Besides that this study also unable to include few relevant works related stressors such as safety threat from the prisoners, job satisfaction and environment at the work place. Nevertheless, this study did give a good picture of work related stressors and family life factors faced and coping strategies used among correctional officers in Kedah. These relevant findings could be used to assist in producing an effective stress

management and interventions program at Malaysia prison.

CONCLUSION

The prevalence of occupational stress among correctional officers in Kedah was 45.8%. Factors that contribute to stress status among correctional officers are socio demographic factors, family and marriage factors, work related stressors, and methods of coping strategies. Findings in this study could be used to set up a proper and effective stress management and intervention program at prison.

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