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| Author(s) | Lim Tock Keng |
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**STRESS LEVELS OF SCHOOL ADMINISTRATORS IN
SINGAPORE**

LIM TOCK KENG

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First Asian Conference in Psychology
held in Singapore from October 28-30, 1992**

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Lim Tock Keng

ABSTRACT

This paper focuses on the stress levels of school administrators in Singapore. A sample of principals, vice principals and heads of department participated in the study, using the Occupational Stress Indicator. In comparison with a British normative group of managers, the Singapore sample reported significantly greater pressure at work and consequently, significantly higher levels of mental and physical ill health. They had higher Type A scores and their perceptions of control were mainly external. They also used more coping strategies. However they also reported significantly higher levels of job satisfaction. To explore the extent to which sources of pressure, coping skills, individual differences (type A, locus of control) and background variables (age group, gender and marital status) are predictive of job satisfaction, mental and physical health, multiple regression analyses were carried out. STEPWISE regression identified sources of pressure and locus of control as significant predictors of job satisfaction, mental and physical health. Age group and coping skills were also significant predictors of job satisfaction.

INTRODUCTION

The Occupational Stress Indicator (OSI) is a comprehensive instrument on occupational stress developed by Cooper, Sloan and Williams (1988). Occupational stress is defined as a negatively perceived quality which has mental and physical ill health consequences. It arises as a result of inadequate coping with sources of stress. The OSI was originally designed for white-collar and professional groups. Currently it has been validated on a large group of senior managers (Robertson, Cooper and Williams, 1990) and on a blue-collar sample of shift workers in a chemical plant (Cooper and Williams, 1991). Rees and Cooper (1990) has also used the OSI to examine the stress levels of health service employees: nurses, technicians, junior doctors and administrators.

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The OSI takes a combined person-situation approach to the conceptualization and measurement of occupational stress. It assesses the major sources and consequences of stress, the coping mechanisms used and the personality variables (Type A Behaviour and Locus of Control) of the individual. Both the coping strategies and the personality variables can have a direct or moderating effect on the individual. The consequences of stress may be physical, behavioral or mental. The two principal outcomes measured by the OSI are job satisfaction and mental health.

Stress in school administrators have been well researched in America, Europe and Australia. These studies exploring the causes, reactions, coping responses and consequences of administrative stress took on an unprecedented interest in the 1980's (Farkas, 1984; Gmelch and Swent, 1984; MacPherson, 1985). They revealed stressors common to school administrators. A special edition of the Journal of Educational Administration (Gmelch, 1988a) was devoted to issues and research on stress in school administrators.

In Singapore stress in general work situations had been established in a survey conducted by the Counselling and Care Centre in the early eighties; one-third of the respondents reported stress in work situations, with the highest mean stress score for work performance, 3.12 on a 5-point scale (Yeo, 1985). As there were, as yet, no comprehensive studies of stress on school administrators in Singapore, this study examined the stress levels of school administrators here and compared their stress levels with that of a normative management group in the UK. It also explored the extent to which the OSI measures of sources of stress and individual differences were associated with health and job satisfaction.

METHOD

Sample

The sample was drawn from principals who applied a stress management course conducted by the author. As most schools have a management team consisting of the principal, vice principal (VP) and heads of department (HOD), their VPs and HODs also made up the sample. The 223 respondents consisted of 36 principals, 22 vice principals and 165 HODs. There were 99 males (44%) and 124 females (56%) in the 30 to 55 age range. The principals who attended the stress management course did the OSI in the course; the rest of the sample received the OSI through the mail. The survey was conducted between July and September 1991.

Instrument

The OSI is based on Cooper's model of stress. The key elements of the model are sources of stress, the individual who may be experiencing stress, coping strategies and the effect of stress on the individual and the organisation. There are 6 main scales: Sources of Pressure (61 items), Type A Behaviour (14 items), Locus of Control (12 items), Coping Skills (28 items), Job Satisfaction (22 items) and Physical and Mental health (30 items). Each main scale is divided into several Likert-type rating subscales, as listed in Table 1. The split half reliability of the subscales of the UK normative sample was generally satisfactory. However, measures of Type A behaviour and Locus of Control yielded low coefficients. In the OSI management guide, Cooper et. al., (1988) explained that Type A and Locus of Control were difficult characteristics to measure as they represented very general dispositions towards a potentially limitless range of situations.

ANALYSES AND RESULTS

Data

The main OSI variables are the 6 scales with its various subscales, as listed in Table 1. The mean scores of the OSI variables were compared with the normative statistics on a British sample of managers in a range of organisations, reported in Cooper et. al., (1988). The managers were predominantly male (76%) in the 20 to 40 age range (74%), with 34% in lower middle management, 36% in middle management and 20% in senior management. The Singapore sample of school administrators (74% middle management and 26% senior management), was predominantly female (56%) in the 30 to 55 age range.

Overall, the Singapore sample scored higher in all the subscales of Sources of Pressure and Job Satisfaction and in Mental and Physical Health. They reported greater pressure at work and consequently, higher levels of mental and physical health. As school administrators, it was not surprising that sources of pressure reflected concern, particularly with the managerial role and relationships with others. In addition, administrators worked long hours in school and home/work interface became a problem. Table 1 also indicated that school administrators had a higher Type A score. Their perceptions of control were mainly external, as reflected by the higher Locus of Control scale. Despite the higher scores for Sources of Pressure and Locus of Control, the Singapore sample also reported higher levels of Job Satisfaction.

TABLE I Summary Statistics of the Variables of the Sample

| Variables | S'pore Sample | | UK Sample | | t Test |
|--------------------------------|---------------|-------|-----------|-------|------------|
| | Mean | S.D. | Mean | S.D. | |
| Sources of Pressure | | | | | |
| Factors intrinsic to the Job | 30.72 | 6.62 | 29.70 | 6.56 | 3.26** |
| The Managerial Role | 38.52 | 8.75 | 33.53 | 8.19 | 47.76*** |
| Relationships with Others | 33.55 | 7.77 | 21.99 | 5.77 | 413.83*** |
| Career and Achievement | 29.33 | 8.49 | 26.73 | 8.30 | 96.28*** |
| Org. Structure & Climate | 39.57 | 8.49 | 34.92 | 9.28 | 36.39*** |
| Home/Work Interface | 34.61 | 10.31 | 24.68 | 8.64 | 153.90*** |
| Type A Behaviour | | | | | |
| Attitude to Living | 23.52 | 3.29 | 19.42 | 2.72 | 261.32*** |
| Style of Behaviour | 18.77 | 3.67 | 17.50 | 3.50 | 17.21*** |
| Ambition | 11.06 | 2.02 | 9.08 | 2.53 | 96.79*** |
| Total Type A | 53.35 | 6.47 | 45.98 | 4.91 | 237.70*** |
| Locus of Control | | | | | |
| Organisational Forces | 18.12 | 2.82 | 13.59 | 2.65 | 377.21*** |
| Management Processes | 12.50 | 2.31 | 10.74 | 2.33 | 77.97*** |
| Individual Influence | 8.36 | 1.79 | 9.62 | 1.92 | 61.59*** |
| Total Locus of Control | 38.98 | 4.68 | 33.95 | 3.72 | 202.30*** |
| Coping Skills | | | | | |
| Social Support | 16.82 | 3.00 | 13.54 | 3.56 | 129.88*** |
| Task Strategies | 28.81 | 3.73 | 20.51 | 2.90 | 886.21*** |
| Logic | 12.85 | 2.19 | 11.75 | 1.77 | 43.45*** |
| Home/Work Relationships | 16.10 | 3.38 | 14.98 | 3.57 | 13.92*** |
| Time | 15.70 | 2.19 | 14.23 | 2.14 | 62.89*** |
| Involvement | 25.89 | 3.46 | 18.32 | 3.02 | 760.35*** |
| Job Satisfaction | | | | | |
| Achiev./Value & Growth | 26.64 | 4.29 | 24.67 | 5.18 | 22.37*** |
| The Job itself | 18.18 | 2.75 | 17.23 | 3.00 | 14.51*** |
| Org. Design & Structure | 21.65 | 3.25 | 17.15 | 3.89 | 205.84*** |
| Org. Processes | 18.57 | 2.86 | 16.92 | 3.48 | 34.93*** |
| Personal Relationships | 13.56 | 1.91 | 12.45 | 2.48 | 32.31*** |
| Total Job Satisfaction | 98.60 | 13.39 | 88.31 | 14.97 | 69.55*** |
| Current state of health | | | | | |
| Mental Health | 49.17 | 12.12 | 46.55 | 13.36 | 5.61*** |
| Physical Health | 29.35 | 10.60 | 22.47 | 7.05 | 1105.55*** |

· p < 0.05
 ·· p < 0.01
 ··· p < 0.001

TABLE 2 Intercorrelation Matrix of OSI Scales

| | SP | TA | LC | CS | JS | MH | PH |
|------------------------|-------|------|-------|-------|-------|------|------|
| SP Sources of Pressure | 1.00 | | | | | | |
| TA Type A | 0.18 | 1.00 | | | | | |
| LC Locus of Control | 0.14 | 0.11 | 1.00 | | | | |
| CS Coping Skills | 0.07 | 0.01 | -0.25 | 1.00 | | | |
| JS Job Satisfaction | -0.18 | 0.06 | -0.35 | 0.21 | 1.00 | | |
| MH Mental Health | 0.29 | 0.09 | 0.24 | -0.01 | -0.21 | 1.00 | |
| PH Physical Health | 0.25 | 0.15 | 0.19 | 0.02 | -0.29 | 0.49 | 1.00 |

TABLE 3 Stepwise Regression on the OSI Scales

| Dependent Variable | MODEL | | | | |
|--------------------|----------------------|------------------------|------------------------|----------|----------------------|
| | Independent Variable | Regression Coefficient | Partial R ² | F Test | Model R ² |
| Job Satisfaction | Locus of Control | -0.86 | 0.125 | 30.23*** | 0.197 |
| | Age Group | 2.49 | 0.026 | 6.48** | |
| | Sources of Press. | -0.05 | 0.018 | 4.68* | |
| | Coping Skills | 0.14 | 0.016 | 4.07* | |
| | Gender | -3.17 | 0.011 | 3.09 | |
| Mental Health | Sources of Press. | 0.07 | 0.087 | 19.81*** | 0.124 |
| | Locus of Control | 0.52 | 0.037 | 8.57** | |
| Physical Health | Sources of Press. | 0.05 | 0.058 | 12.94*** | 0.092 |
| | Locus of Control | 0.35 | 0.023 | 5.37* | |
| | Type A | 0.14 | 0.010 | 2.30 | |

- p < 0.05
 -- p < 0.01
 *** p < 0.001

The intercorrelation coefficients between the scales of the OSI, displayed in Table 2, were then examined. The highest correlation was 0.49, between Physical and Mental Health. As expected, both Physical and Mental Health correlated positively with Sources of Pressure and negatively with Job Satisfaction, even though the correlation coefficients were low. In line with the comparison with the UK norm sample, the higher scores on Sources of Pressure as well as Job Satisfaction were reflected in the low inverse correlation between the two subscales. Job Satisfaction was inversely correlated with the Locus of Control.

To explore the extent to which Sources of Pressure, Coping Skills, individual differences (Type A, Locus of Control) and background variables (age group, gender and marital status) are predictive of Job Satisfaction, Mental and Physical Health, STEPWISE multiple regression analyses were carried out. In this procedure, STEPWISE in SAS (SAS Institute Inc., 1985), variables were added one by one to the model, as in the forward selection method, with the F statistic for the added variable to be significant at a certain level. After a variable was added, the stepwise procedure then looked at all the variables already included in the model and deleted any variable that did not satisfy the identified significant level. The stepwise procedure continued until no more variables could be entered or removed (Kleinbaum and Kupper, 1978).

The results of the STEPWISE procedure, displayed in Table 3, established Locus of Control and Sources of Pressure as significant predictors to all the independent variables, Job satisfaction, Mental Health and Physical Health. Locus of Control, as the major predictor of Job Satisfaction, contributed 12.5% to the total variance in this subscale. The other significant predictors, age group, Sources of Pressure and Coping Skills, together, accounted for only 7.1% of the total variance of Job satisfaction. Both Mental and Physical Health were best predicted by Sources of Pressure, followed by Locus of Control. Sources of Pressure accounted for 8.7% of the total variance of Mental Health and 5.8% of the total variance of Physical Health. The contribution of Locus of Control to each of the health subscale was lower, ranging from 3% to 5%.

DISCUSSION

The OSI has proved to be a satisfactory instrument for measuring occupational stress in school administrators. The multiple regression analyses identified Sources of Pressure as a significant predictor of Job Satisfaction, and Mental and Physical Health. The higher the Sources of Pressure, the lower the job satisfaction, and the greater the mental and physical ill health. Compared to the UK normative sample, the Singapore school administrators reported greater pressure at work and

consequently, higher levels of mental and physical ill health. Sources of pressure involved particularly the managerial role and relationships with others. In a study on school administrator burnout, Sarros (1988) revealed that work conditions most likely to lead to burnout included unsatisfactory interpersonal relationships. Gmelch and Swent (1984) also found that interpersonal relationships is a high source of perceived stress. As for home/work interface, Davidson and Cooper (1983) pointed out the feedback loop with occupational stress affecting home and social life and interestingly, a correspondingly vice versa situation as well.

Locus of Control had been identified as the main predictor of Job Satisfaction and predictors of Mental and Physical Health. When school administrators perceived that they have little control over their work, they would be less satisfied in their jobs and would be more likely to suffer from mental and physical ill health. Studies elsewhere, such as Milstein and Farkas (1988) also found that a principal's degree of powerlessness was directly related to his degree of job stress. The Singapore school administrators also had a higher mean score for locus of control compared to the UK normative sample, indicating that comparatively they perceived themselves as less in control of the situation in school. This finding of locus of control being the main predictor of job satisfaction is an area of concern; unless school administrators have the autonomy to run their school, they cannot run their school properly. There is a need for further research to determine the areas that school administrators perceived themselves as having little control.

Age group was another predictor of job satisfaction; older administrators appeared to have higher job satisfaction. This was contrary to findings by Lam (1988), which established that older and more experienced administrators experienced more stress as they adapted less easily to the changing power inherent in their position. Older school administrators in this sample seem adapted to the demands of their job. One possible reason could be that the Singapore principals are given quite a bit of inservice training, ranging from management and leadership training to technical aspects of their jobs like financial management.

Coping skills was also a predictor of job satisfaction. Thus school administrators who used coping skills against stress situations would be more satisfied in their jobs. Gmelch (1988b) felt that current research on coping consisted of coping theories and fragmented coping techniques. He worked out a possible coping taxonomy from which stress educators could seek stress reduction. There is also a need to work out a coping taxonomy for school administrators in Singapore to help them in their stress situations. Generally, it would appear that older administrators with control over their school situations and good coping skills experienced less stress in their jobs and higher job satisfaction.

REFERENCES

- Cooper, B. S., Sieverding, J. W. & Muth, R. (1988) Principals' Management Behaviour, Personality Types and Physiological Stress, Journal of Educational Administration, 26, 2, 197 - 221.
- Cooper, C. L. & Williams, J. (1991) A validation study of the OSI on a blue-collar sample, Stress Medicine, 7, 109-112.
- Cooper, C. L., Sloan, S. J. & Williams, S. (1988) Occupational Stress Indicator Management Guide, Windsor : NFER-NELSON.
- Farkas, J. P. (1984) Stress and the School principal: Old Myths and New Findings, Administrator's Notebook, 30, 8, 1-4.
- Gmelch, W. H. (1988a) Research Perspectives on Administrative Stress: Causes, Reactions, Responses and Consequences, Journal of Educational Administration, 26, 2, 134 - 140.
- Gmelch, W. H. (1988b) Educator's Response to Stress: Towards a Coping Taxonomy, Journal of Educational Administration, 26, 2, 222 - 231.
- Gmelch, W. H. & Swent, B. (1984) Management Team Stressors and their Impact on Administrators' Health, Journal of Educational Administration, 22, 2, 192 -205.
- Kahn, H. & Cooper, C. L. (1991) A note on the validity of the mental health and coping skills of the Occupational Stress Indicator, Stress Medicine, 7, 185-187.
- Kleinbaum D. G. & Kupper, L. L. (1978) Applied Regression Analysis and other Multivariable Methods, Boston, MA: Duxbury.
- Lam, Y. L. J. (1988) External Environmental Constraints and Job-Related Stress on School Administrators, Journal of Educational Administration, 26, 2 , 250 - 265.
- Milstein, M. & Farkas, J. (1988) The Over-Stated Case of Educator Stress, Journal of Educational Administration, 26, 2 , 222 - 247.
- Rees, D. W. & Cooper, C. L. (1990) Occupational Stress in Health Service Workers, Health Services Management research, 3, 3, 163-172.

Robertson, I. T., Cooper, C. L., & Williams, J. (1990) The validity of the Occupational Stress Indicator, Work & Stress, 4, 1, 29-39.

SAS Institute Inc., (1985) SAS User's Guide: Statistics (Version 5), Cary, NC: SAS Institute.

Yeo, A. (1985) Living with Stress, Singapore: Times Book International.