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**OCCUPATIONAL STRESS IN SCHOOL ADMINISTRATORS  
IN SINGAPORE**

**Lim Tock Keng**

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# OCCUPATIONAL STRESS IN SCHOOL ADMINISTRATORS IN SINGAPORE<sup>1</sup>

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## ABSTRACT

The current study centred on the stress levels of school administrators in Singapore. It compares the stress levels and job satisfaction of the two management groups (top management group of principals and vice principals and middle management group of heads of department). It also considers differences in the major sources and consequences of occupational stress, coping mechanisms used and the personality of the individual. The Occupational Stress Indicator (OSI), a comprehensive instrument on occupational stress developed by Cooper, Sloan and Williams (1988), was used in the study. The study found significant differences in the two groups in Type A, Locus of Control, Job Satisfaction, Coping Skills and Mental and Physical ill-health.

## Introduction

Most studies on stress in school administrators focus on the top management group in schools: school principals. Stress in the middle management group in schools, such as among heads of department, have been considered only in a few studies, e.g., Dunham (1984) and Marland and Hill (1981). This study will address occupational stress on school administrators in Singapore. School administrators encompass the whole management team consisting not only the principal and vice principal but also heads of department (HOD), four of them in a primary school and eight in a secondary school. Since 1984, the HOD scheme has been gradually introduced into Singapore's education system to strengthen the management team in schools. Under this scheme more teachers are given management responsibilities in addition to their professional duties.

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This study will compare the stress levels and job satisfaction of the top management group consisting of principals, and vice principals and the middle management group consisting of HODs. It will consider differences in the major sources and consequences of occupational stress, coping mechanisms used and the personality of the individual. A comprehensive instrument on occupational stress developed by Cooper, Sloan and Williams (1988), i.e., the Occupational Stress Indicator (OSI), was identified for the study.

### **Subjects and Instrument**

The sample used in the study consisted of 36 principals, 19 vice principals and 162 HODs. There were 97 males (45%) and 120 females (55%) in the age range of 30 to 55 years. A group of 20 principals who attended a stress management course, conducted by the author, did the OSI in the course; the rest of the sample received the OSI through the mail.

The OSI takes a combined person-situation approach to the conceptualization and measurement of occupational stress. It has 6 main scales, Sources of Pressure (6 subscales), Type A Behaviour (3 subscales), Locus of Control (2 subscales), Coping Skills (6 subscales), Job Satisfaction (22 items) and Physical and Mental Illhealth. The original subscales of Sources of Pressure and Job Satisfaction in Cooper et. al. (1988) are used in this study as they have high internal consistency as measured by coefficient alpha. The original subscales of Type A Behaviour, Locus of Control and Coping Skills are not used as their reliability on the Singapore sample are low. Instead, new subscales for them, derived in a factor analysis of the items by the author (Lim, in press), have better reliability measures than the original subscales.

Besides these scales, the OSI also contains a Biographical Questionnaire which provides significant stress related data. This section, adapted for the Singapore sample, consists of questions on commitments, interests, habits, recent life history and work history.

### **Analyses and Results**

In Table 1, summary statistics are computed for the 27 variables of the OSI, the 6 subscales of Sources of Stress, 3 subscales of Type A, a total Type A scale, 2 subscales of Locus of Control,

a total Locus of Control scale, 6 subscales of Coping Skills, 5 subscales of Job Satisfaction, a total Job Satisfaction scale, a Mental Health scale and a Physical Health scale. The internal consistency measures (alpha coefficient) of the variables in Table 1 ranged from moderate to high.

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Insert Table 1 about here

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For comparative purposes, the variables of the OSI were analyzed by management group and gender. A two-way ANOVA using SAS Version 5 (SAS Institute Inc., 1985) was carried out to compare all the variables of the OSI across the two factors. Table 2 sets out the comparison of the variables' means across the 2 groups. In the management group (principals/VPs versus HODs), significant differences were found in Type A, Locus of Control, Job Satisfaction, Coping Skills and Mental and Physical health. The higher scores of the Principals/VPs in Manner of Behaviour indicated that the top management group was more confident, forceful and vigorous.

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Insert Table 2 about here

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In Locus of Control, the HODs as middle management, understandably, perceived less control in their work, particularly in Organisational Forces. Consequently, HODs reported significantly less job satisfaction, particularly in the job itself and in personal relationships. In the UK (Dunham, 1984), departmental management in a comprehensive school had important relational aspects and interaction with colleagues can be a major source of stress.

In terms of coping skills, both groups used similar coping skills, except that the principals used social support more frequently. HODs would need to learn how to use coping techniques effectively. As the HODs appeared to suffer from more stress, it is not surprising that they reported significantly higher levels of mental and physical ill health. Dunham, too, felt that the middle management role of HOD often bear intensely heavy pressures.

Surprisingly for significant male and female differences, the males found home/work interface to be a greater source of pressure. This appeared to be in contradiction to most studies conducted (Cooper, 1982; Chusmir & Franks, 1988), which found that women managers face more conflicting demands of home and work. Males also realized more job satisfaction, in design and structure, in organisational processes and in personal relationships. Females used social support as a coping skill extensively, compared with males.

The interactions between the two factors (management group, gender) were examined to see the effects due to the joint influence of management group and gender. The only significant interaction was in Organisational Processes, a subscale of Job Satisfaction.

The information from the Biographical Questionnaire were also examined. In terms of work history and commitments, 75% of the sample had less than 5 years in the present position. Where prospects of promotion were concerned, about a quarter of the sample expected their promotion within the next 2 years, another quarter anticipated their promotion within the next 3 to 5 years while one third of the sample felt they would not be promoted. Under the section on habits and interests, the majority of the sample (95%) did not drink or smoke. They also did not have regular planned exercises as only 19.5% indicated that they took planned exercises and 42.5% exercised occasionally. About half of the sample (46%) found time to relax and wind down. In terms of stressful events, approximately half the sample (48%) had encountered a major stressful event in the past few months. However the majority of the sample (85%) perceived that they were healthy and had no significant illness over the last few months.

A few variables, expectations for promotion, planned exercises, time to relax and feeling healthy were then identified for further analysis across the two groups: management and gender. The results of the analysis of frequencies and the  $\chi^2$  test are reported in Tables 3A and 3B. In expectations for the next promotion, there were significant differences between the HODs and the P/VPs; the majority of the HODs did not expect to be promoted at all. Although most HODs found occasional time to relax, they perceived themselves as healthy. There were significant differences between the single and married administrators in the taking of planned exercises; married administrators exercised less.

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Insert Tables 3A and 3B about here

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## **Conclusion**

This study showed that HODs generally suffered from higher levels of stress than principals. Principals suffered less stress and reported significantly higher job satisfaction, particularly in the job itself and in personal relationships. Principals were more confident, forceful and vigorous and perceived more internal control in their work. The HOD's degree of powerlessness appeared to be directly related to his degree of job stress (Milstein & Farkas, 1988). Thus more research would have to be carried out to identify the areas that HODs perceived themselves as having little control. The HOD scheme in Singapore would also have to be carefully studied to determine why HODs are more stressed out than their principals and VPs. Currently most schools do not have their full complement of HODs (four in a primary school and eight in a secondary school) as teachers are very reluctant to take up the position.

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TABLE 1 Summary Statistics of the Variables of the Sample

Variables	Mean	S.D.	Rel.
<b>Sources of Pressure</b>			
Factors intrinsic to the Job	30.72	6.62	0.79
The Managerial Role	38.52	8.75	0.87
Relationships with Others	33.55	7.77	0.84
Career and Achievement	29.33	8.49	0.85
Org. Structure & Climate	39.57	8.49	0.85
Home/work Interface	34.61	10.31	0.89
<b>Type A Behaviour</b>			
Pace of Living	23.50	4.24	0.67
Achievement	17.75	3.99	0.64
Manner of Behaviour	12.10	2.31	0.61
Total Type	53.35	6.47	0.60
<b>Locus of Control</b>			
Organisational Forces	21.69	3.71	0.66
Individual influence	17.29	2.72	0.30
Total Locus of Control	38.98	4.68	0.51
<b>Coping Skills</b>			
Proactive Strategies	31.63	4.65	0.85
Passive Strategies	25.48	3.88	0.64
Use of Outside Interests	12.85	2.80	0.77
Taking Action	17.99	2.66	0.69
Home/Work relationships	11.90	2.62	0.50
Social Support	12.40	2.48	0.62
<b>Job Satisfaction</b>			
Achievements/value & growth	26.64	4.29	0.85
The job itself	18.18	2.75	0.77
Org. design & structure	21.65	3.25	0.81
Org. processes	18.57	2.86	0.80
Personal relationships	13.56	1.91	0.67
Total job satisfaction	98.60	13.39	0.95
<b>Current state of health</b>			
Mental health	49.17	12.12	0.89
Physical health	29.35	10.60	0.90

TABLE 2 Means &amp; F Values for Differences between Management Groups &amp; Gender on the OSI

Variables	Management Group (M)				Gender (G)			M*G
	N	HOD [162]	P/VP [55]	F test	Male [97]	Fem. [120]	F test	F test
<b>Sources of Pressure</b>								
Factors intrinsic to Job	Mean	30.88	30.41	0.20	31.43	30.23	1.40	0.15
	S.D.	6.69	6.49		6.95	6.34		
The Managerial Role	Mean	38.39	38.98	0.14	39.68	37.65	2.86	0.20
	S.D.	8.61	9.27		8.73	8.74		
Relationships with Others	Mean	33.59	33.60	0.00	34.47	32.90	2.17	0.03
	S.D.	7.70	8.04		7.34	8.06		
Career and Achievement	Mean	29.15	29.85	0.16	31.16	27.91	8.07 <sup>***</sup>	1.28
	S.D.	8.12	9.59		8.00	8.50		
Org. Structure & Climate	Mean	39.42	39.98	0.11	40.60	38.77	2.65	0.00
	S.D.	8.41	8.81		8.42	8.50		
Home/Work Interface	Mean	34.48	35.00	0.05	36.43	33.19	4.88 <sup>*</sup>	0.14
	S.D.	10.18	10.83		9.23	10.95		
<b>Type A Behaviour</b>								
Pace of Living	Mean	23.44	23.67	1.92	23.97	23.13	2.18	0.00
	S.D.	4.20	4.42		5.15	4.30		
Achievement	Mean	17.73	17.79	0.02	17.58	17.88	0.28	0.02
	S.D.	3.89	4.30		13.20	13.33		
Manner of Behaviour	Mean	11.86	12.78	6.52 <sup>*</sup>	12.26	11.98	0.84	2.29
	S.D.	2.27	2.32		11.46	12.55		
Total Type A	Mean	53.04	54.24	1.37	53.82	52.98	0.90	0.23
	S.D.	6.44	6.60		7.17	5.89		
<b>Locus of Control</b>								
Organisational Forces	Mean	22.07	20.62	6.86 <sup>***</sup>	21.97	21.48	0.94	0.98
	S.D.	3.62	3.84		13.20	13.33		
Individual Influence	Mean	17.31	17.16	0.08	17.15	17.38	0.35	0.13
	S.D.	2.65	2.94		11.46	12.55		
Total Locus of Control	Mean	39.38	37.78	4.91 <sup>*</sup>	39.12	38.86	0.03	0.32
	S.D.	4.55	4.92		5.15	4.30		

\* p &lt; 0.05

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p &lt; 0.01

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p &lt; 0.001

TABLE 2 (continued)

Variables	Management Group (M)				Gender (G)			M*G
	N	HOD [162]	P/VP [55]	F test	Male [97]	Fem. [120]	F test	F test
<b><u>Job Satisfaction</u></b>								
Achiev./Value & Growth	Mean	26.57	27.05	0.63	26.74	26.66	0.02	0.92
	S.D.	4.30	4.19		4.37	4.21		
The Job Itself	Mean	17.98	18.84	4.43*	18.39	18.06	0.83	3.39
	S.D.	2.80	2.47		2.98	2.54		
Organ. Design & Structure	Mean	21.48	22.31	2.50	22.31	21.22	6.40*	1.58
	S.D.	3.24	3.19		3.05	3.33		
Org. Processes	Mean	18.62	18.52	0.08	19.03	18.25	4.13*	3.97*
	S.D.	2.83	2.97		2.77	2.90		
Personal Relationships	Mean	13.36	14.16	6.86***	13.86	13.33	4.21*	0.35
	S.D.	1.97	1.62		1.69	2.05		
Total Job Satisfaction	Mean	98.01	100.9	2.20	100.3	97.52	3.80	2.25
	S.D.	13.51	12.7		13.20	13.33		
<b><u>Coping Skills</u></b>								
Proactive Strategies	Mean	31.33	32.62	3.50	31.18	32.06	1.92	0.05
	S.D.	4.77	3.94		4.47	4.67		
Passive Strategies	Mean	25.47	25.64	0.08	25.79	25.29	0.71	0.00
	S.D.	3.76	4.25		4.04	3.77		
Outside Interests	Mean	12.78	13.19	1.00	12.69	13.04	0.78	0.23
	S.D.	2.72	2.80		2.79	2.70		
Taking Action	Mean	17.96	18.14	0.20	17.81	18.16	0.84	0.12
	S.D.	2.51	2.95		2.39	2.81		
Home/Work Relationships	Mean	11.78	12.21	1.23	11.68	12.06	1.06	0.00
	S.D.	2.56	2.79		2.46	2.74		
Use of Social Support	Mean	12.19	12.93	4.11*	11.97	12.72	4.70*	0.13
	S.D.	2.54	2.25		2.44	2.47		
<b><u>Current State of Health</u></b>								
Mental Health	Mean	50.73	44.28	12.58***	49.32	48.93	0.06	0.26
	S.D.	11.69	11.94		11.46	12.55		
Physical Health	Mean	30.73	25.57	11.79***	29.81	29.02	0.67	0.92
	S.D.	11.03	8.36		11.24	10.15		

TABLE 3A Distribution of Variables by Management Groups

Variables	Management Group			$\chi^2$ Test
	HOD	P/VP	Total	
<b>Expectations of the Next Promotion</b>				
Within 1 - 2 years	12.4%	11.5%	23.9%	26.34 <sup>***</sup>
3 - 5 years	17.5%	8.8%	26.3%	
Over 5 years	12.9%	2.8%	15.7%	
Never	30.9%	3.2%	34.1%	
Total	73.7%	26.3%	100%	
<b>Take Planned Exercises</b>				
Usually	12.7%	6.8%	19.5%	4.45
Occasionally	30.0%	12.3%	42.3%	
Rarely	31.0%	7.3%	38.3%	
Total	73.7%	26.4%	100%	
<b>Find Time to Relax</b>				
Usually	28.8%	17.4%	46.2%	11.95 <sup>***</sup>
Occasionally	38.4%	7.8%	46.2%	
Rarely	6.4%	1.4%	7.8%	
Total	73.6%	26.6%	100%	
<b>Feeling Healthy</b>				
Yes	59.8%	24.7%	84.5%	4.48 <sup>*</sup>
No	13.7%	1.8%	15.5%	
Total	73.5%	26.5%	100%	

\* p &lt; 0.05

\*\* p &lt; 0.01

\*\*\* p &lt; 0.001

TABLE 3B Distribution of Variables by Gender

Variables	Gender			$\chi^2$ Test
	Male	Female	Total	
<b>Expectations of the Next Promotion</b>				
Within 1 - 2 years	12.0%	12.0%	24.0%	1.87
3 - 5 years	10.6%	15.7%	26.3%	
Over 5 years	4.6%	11.1%	15.7%	
Never	16.6%	17.5%	34.1%	
Total	43.8%	56.3%	100%	
<b>Take Planned Exercises</b>				
Usually	10.9%	8.6%	19.5%	6.53
Occasionally	19.1%	23.2%	42.3%	
Rarely	13.4%	24.6%	38.0%	
Total	43.6%	56.4%	100%	
<b>Find Time to Relax</b>				
Usually	21.9%	24.2%	46.1%	2.06
Occasionally	19.6%	26.5%	46.1%	
Rarely	2.3%	5.5%	7.8%	
Total	43.8%	56.2%	100%	
<b>Feeling Healthy</b>				
Yes	37.4%	47.0%	84.4%	0.12%
No	6.4%	9.1%	15.5%	
Total	43.8%	56.15	100%	