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The effect of emotional intelligence and job stress on mental health problems: a study among nurses

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A B S T R A C T

The study attempted to examine the effect of emotional intelligence as a moderator of the job stress and mental health problem relationship. Data were collected from 677 nurses (361 trainees and 316 trained nurses) from three general hospitals in Malaysia. The Job Stress Survey (JSS) was adapted to assess generic sources of occupational stress. The Emotional Competence Inventory (ECI) was adapted to assess level of emotional competence and a scale of Occupational Stress Indicator (OSI) was adopted to investigate mental health problems among nurses. The purpose of the study was to examine the effect of sources of stress and emotional competency on mental health problem. We also evaluated whether nurses who were skilful at regulating their own and others' emotions would be able to protect themselves from the adverse effects of stress and reporting less mental health problem than those low in emotional intelligence.

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1. Introduction

Nursing profession poses a lot of challenges. Nurses' job responsibilities not only providing health services to patients and customers but also giving them appropriate advice and educating them about health care. The profession becomes highly challenging with regard to legal issues involving medicine and patients as well as development in the field of information technology.

In the era of information technology, people have good opportunities to understand health problems, diseases, and advancement in the treatment and prevention of diseases. With all these, nurses in health care profession need to be well informed and efficient in providing the services or else it can bring a lot of complications to the patients and the profession itself. All of these challenges can bring job stress to the nursing profession.

Apart from that, nurses who provide services to patients and clients seem to have high stress levels. According to French and Caplan (1970), members of the nursing staff who are responsible for providing services to a large number of people, tend to have levels of blood pressure and cholesterol higher than those whose jobs are not "people focused". Cobb and Rose (1977) also suggest that individuals who are responsible for lives of other people are themselves victims of stress related diseases such as, *ulcers, myocardial infarctions, hypertension* and diabetes.

A number of researches have proved that emotional intelligence protects person from stress and help them well adapt with the situation. Research by Ciarrochi et al. (2000) suggests that person who has skills to manage emotions, is good in maintainng positive mood and thus can reduce the chances of having depression.

Ciarrochi, Deane and Anderson (2002) suggest that emotional intelligence serves as a unique source in understanding the relationship between stress and mental health. Results from a research done by Ciarrochi et al. explain that stress has a high and positive correlation with mental heath problem and emotional intelligence serves as moderator in relationship between stress and mental health.

Goleman (1996) suggests that emotional intelligence (Skils that help in harmonizing human) should be considered as an asset in a workplace. As information about emotional intelligence among nurses is still very limited, this present research is an effort to unreveal the contributive potentials of emotinal intelligence in lessening stress and mental health problems. Thus providing some useful information for individuals and organizatiuons, as they can benefit from the information to overcome the stress in a workplace.

Effects of job stress as reported in United States of America are numerous and costly. They may result in injuries, death, job quitting and negatively effecting prestege involing billions of US Dollars (Rice, 1999). These huge expenses are not only carried by individuals but also by organizations. It is shows that, that job stress is not only a problem for individuals or workers but also involves organziation or workplace where those individuals work. Job stress effect on organizations can be seen from the aspect of disturbance in operation, performance, and low productivity. All these factors result in low profit margin. As for individuals, effect of stress can be seen in the forms of increased health problems, psychological distress (which brings low job satisfaction and negative emotions) and changes in behavior.

Therefore, the present research is carried out as an effort to study the effect of sources of job stress and emotional intelligence on mental health problem as well as emotional intelligence as a moderator in the relationship between job stress and mental health problem.

2. Method

Subjects and Research Locations

The subjects in this study were 677 including both trained and trainee nurses from three general hospitals in Malaysia. Out of a total of 677, 361 (53.3%) of the subjects were trainee nurses and 316 (46.7%) were trained nurses. The range of age-groups of the subjects was: 337 (49.8%), between 21 and 35 years old; 124 (18.3%), below 21 years old; and 103 (15.2%) above 35 years old. The marital profile showed that most of the subjects were still single (396 or 58.5%), 267 (39.4%) were married and nine (1.3%) were widowed. Table 3 presents the demographic profile of the subjects.

Table 3

The Demographic Profile of Subjects

Variables	Frequency	Percentage (%)
Job Status		
Trainee Nurses	361	53.3
Trained Nurses	316	46.7
Age Group		
Below 21 years	124	18.3
21- 35 years	337	49.8
Above 35 years	103	15.2
Marital Status		
Married	267	39.4
Single	396	58.5
Widowed	9	1.3

Instrument

The subjects were asked to give responses to a set of questionnaire which consists of five parts. Parts A consists of demographic information such as gender, ethnics, ages, and religions. Part B, The Emotional Competence Inventory (ECI) is a tool designed to assess the emotional competencies of individuals and

organizations. It is based on emotional competencies identified by Danniel Goleman in Working with Emotional Intelligence (1998), and on competencies from Hay/McBer's Generic Competency Dictionary (1996) as well as Richard Boyatzis's Self-Assessment Questionnaire (SAQ).

The Emotional Competence Inventory (ECI) measures 20 competencies organized into four clusters. (1) Self-Awareness (contains three competencies: Emotional Self-Awareness, Accurate Self-Awareness and Self-Confidence), (2) Self-Management (contains six competencies: Self-Control, Trustworthiness, Conscientiousness, Adaptability, Achievement Orientation and Initiative (3) Social Awareness (contains three competencies: Empathy, Organizational Awareness and Service Orientation) and (4) Social Skill (contains eight competencies: Developing Others, Leadership, Influence, Communication, Change Catalyst, Conflict Management, Building Bonds, Teamwork and Collaboration and Creating Group Synergy in pursuing collective goals. All competencies are measured using three items. On a 5-point scale (from never 1 to very frequently 5), subjects evaluated their Emotional intelligence.

Part C and Part D, *The Job Stress Survey (JSS)* developed by Spielberger and Vagg (1999) and translated into Malay by the researcher (Chua Bee Seok, Harris Shah Abdul Hamid & Beddu Salam Baco, 2008). The JSS is composed of 30 items, assessing the perceived severity (intensity) and frequency of occurrence of 30 general sources of work related stress that are commonly experienced by both men and women employed in a wide variety of business, industrial and educational settings. The JSS consists of three scales (*job stress index* – JS-X, *job stress severity* – JS-S and *job stress frequency* – JS-F) and six subscales (*job pressure index* – JP-X, *job pressure severity* – JP-S, *job pressure frequency* – JP-F, *lack of organizational support index* – LS-X, *lack of organizational support severity* – LS-S and *lack of organizational support frequency* – LS-F). In responding to the JSS items, subjects first rate on a 9-point scale, the perceived severity of each stressor event by comparing it to a standard stressor with a midpoint scale value of 5. after rating the perceived severity of 30 items JSS stressor events subjects use a scale of 0 to 9+ days to report how often each stressor occured during the past 6 months. Index scores for each JSS item provide estimates of the amount of occupational stress experienced by respondents in areas evaluated by the JSS. The Job Stres Index, Severity and Frequency scales based on all 30 work related stressors provide estimates of the overall level of occupational stress experienced by a subject.

Scoring on the JSS yields three scales and six subscale. The Job Stres Index, Severity and Frequency scales score are based on responses to all 30 items. The three Job Pressure (JP) and three Lack of Organizational Support (LS) subscales are based on responses to the following 10 items that comprise each subscale.

a. Job Pressure – JP : item 4, 7, 9,11,16, 23, 24, 25, 26 and 27.
b. Lack of Organizational Support – LS: item3, 5, 6, 8, 10, 13, 14, 18, 21 and 29.

Part E consists of one of the scales of *Occupational Stress Indicator (OSI)* developed by Cooper, Sloan and Williams (1988) which was adopted to investigate mental ill health. The mental ill health scale is composed of 18 items. The scale measures overall mental ill health and taps a range of different aspects of mental health. The role of these questions is to give the user an insight into general mental health – not an in-depth clinical diagnosis. On a 6-point scale (score 1 indicate positive state of health and score 6 indicate negative state of health), subjects evaluated their state of mental health. Part E consists of the individual's biographical history.

Reliability: Internal Consistency Cronbach's Alpha

Reliability coefficients using Cronbach's alpha for Job Stress Survey (JSS), Emotional Competence Inventory (ECI) and mental health problem scale show that high reliabilities were found for the two scales of JSS. The alpha coefficients for job stress severity (JS-S) was 0.931 and alpha coefficients = .917 for job stress frequency (JS-F) scale. high reliabilities were also found for the all the subscales of JSS. The alpha coefficients range from 0.812 (job pressure frequency – JP-F) to 0.854 (Lack of organizational support severity – LS-S) with an overall average internal consistency coefficient of 0.834. Table 1 shows the reliability results of Job Stress Survey (JSS).

Table 1

Cronbach's Alpha Coefficients for The *Job Stress Survey (JSS)* Scales and Subscales

Scales / Subscales	Alpha Coefficients
Scales	
Job Stress Severity – JS-S	.931
Job Stress Frequency – JS-F	.917
Subscales	
Job Pressure Severity – JP-S	.837
Job Pressure Frequency – JP-F	.812
Lack of Organizational Support Severity – LS-S	.854
Lack of Organizational Support Frequency – LS-F	.833

Reliability coefficients using Cronbach's alpha are presented in Table 2. High reliabilities were found for all clusters of ECI. The alpha coefficients range from .693 (Self-Awareness) to .873 (Social Skills) with an overall average internal consistency coefficient of .784. Moderate reliability was found for the 20 competencies of ECI. The alpha coefficients range from .412 (Initiative) to .684 (Self-Control) with an overall average internal consistency coefficient of .515. The results also showed the high reliabilities (*Alpha* Coefficient = 0.853) for the mental health problem scale of Occupational Stress Indicator (OSI).

Data Analysis

The raw data in this study were analysed by using SPSS Program for windows 11.00. Descriptive analysis was used to report the frequency and percentage of the subjects' demographic characteristics. Regression analysis was used to assess the relationship between emotional intelligence, job stress and mental health problems.

Table 2

Cronbach's Alpha Coefficients for The Emotional Competence Inventory (ECI) Clusters and Competencies

ECI Cluster	ECI Competency	Alpha Coefficient Competency	Alpha Coefficient ECI Cluster
Self-Awareness	Emotional Self-Awareness	.667	.692
	Accurate Self-Assessment	.419	
	Self-Confidence	.600	
Self-Management	Self-Control	.684	.823
	Trustworthiness	.424	
	Conscientiousness	.597	
	Adaptability	.509	
	Achievement Orientation	.481	
	Initiative	.412	
Social Awareness	Empathy	.558	.748
	Organizational Awareness	.568	
	Service Orientation	.488	
Social Skills	Developing Others	.565	.873
	Leadership	.533	
	Influence	.523	
	Communication	.417	
	Change Catalyst	.414	
	Conflict Management	.443	
	Building Bonds	.477	
	Teamwork & Collaboration	.525	

3. Results

The Effects of Sources of Stress on Mental Health Problems

a. The Effect of Three Scale of Job Stress Survey (JSS) on Mental Health Problems

The multiple regression analysis was performed to analyse the relationships between dependent variable (mental health problems) and the independent variables (three scale of Job Stress Survey: Job stress index, job stress severity and job stress frequency). The three job stress scales were entered into a linear model of regression equation with mental health problems as the dependent variable. Table 4 presents the results of regression.

Table 4

Multiple Regressions of Sources of Stress Against Mental Health Problem for The Nurses

Independent Variables		Mental Health Problems (Beta)
Job Stress (Three Scale)		
a.	Job stress index	-0.006
b.	Job stress severity	**0.156***
c.	Job stress frequency	0.278
	Constant	0.179
	R^2	0.128*
	F	23.913
Job Stress (Six Subscale)		
a.	Job Pressure Index	**0.410***
b.	Job Pressure Severity	0.171
c.	Job Pressure Frequency	-0.102
d.	Lack of Organizational Support Index	-0.371
e.	Lack of Organizational Support Severity	-0.042
f.	Lack of Organizational Support Frequency	0.346
	Constant	1.749
	R^2	0.163*
	F	16.700

*$k < 0.05$

The regression results show that 12.8% of the variance in mental health problems can be explained by the three scales of the job stress. The results also show that only job stress severity (beta = 0.156, $p < .05$) was found to contribute significantly and positively to the mental health problem. This result indicates that the subjects who perceive high severity for the 30 Job Stress Survey (JSS) stressor events (e.g., working overtime, lack of opportunity for advancement, assignment of new unfamiliar duties, inadequate or support by supervisor etc.) are likely to have higher mental health problems.

b. The Effect of Six Sub-Scales of Job Stress Survey (JSS) on Mental Health Problems

In estimating the effect of six subscales of Job stress survey (JSS) on mental health problems, six independent variables (job pressure index, job pressure severity, job pressure frequency, lack of organizational support index, lack of organizational support severity and lack of organizational support frequency) were entered into a linear model of regression equation with Mental Health Problems as the dependent variable as shown in Table 4.

The regression results show that 16.3% of the variance in mental health problems can be explained by the six subscales of Job stress survey (JSS). Nevertheless, only job pressure index (beta = 0.410, $p < .05$) is found to contribute significantly and positively to the mental health problem. The results indicate that the subjects who perceive high in their duties such as working overtime, meeting deadlines, and excessive paper work which reflect stressful aspects of the job's structure, design or duties, are likely to have higher mental health problem.

The Effect of Emotional Competence on Mental Health Problems

a. The Effect of Four Clusters of Emotional Competency Inventory (ECI) on Mental Health Problems

The multiple regression analysis was performed to analyse the relationships between emotional competence and mental health problems. Four clusters of *Emotional Competency Inventory* (ECI) (self-awareness, self-management, social awareness, and social skill) were entered into a linear model of regression equation with Mental Health Problems as the dependent variable. Table 5 presents the results of regression analysis**.**

Refer to Table 5, The regression results show that 8.7% of the variance in mental health problems can be explained by the four clusters of emotional competence and only the scale of self-management (Beta = -0.388) is found to contribute significantly and negatively to the mental health problem. These results indicate that the subjects, who are competence in managing their internal states, impulses, and resources, have less mental health problems.

b. The Effect of 20 Competencies of Emotional Competency Inventory (ECI) on Mental Health Problems

Twenty (20) competencies of ECI were entered into a linear model of regression equation with mental health problems as the dependent variable. The regression results show that 20.8% of the variance in mental health problems can be explained by the 20 competencies of emotional competence. As shown in Table 5, only four of emotional competencies are found to contribute significantly to the mental health problems and these include self-confidence (Beta = -0.164), self-control (Beta = -0.250), and conscientiousness (Beta = -0.161) were significantly and negatively related to mental health problems. Contrary, communication (Beta = 0.167) was significantly and positively related to mental health problem.

Table 5
Multiple Regression of Emotional Intelligence (Scale and Sub Scale) Against Mental Health Problem for The Nurses

Variables		Mental Health Problems (Beta)
Emotional Competence (Scales)		
a.	Self-Awareness	0.046
b.	Self-Management	**-0.388***
c.	Social Awareness	-0.030
d.	Social Skills	0.116
	Constant	0.139
	R^2	0.087*
	F	12.348
Emotional Competence (Subscales)		
a.	Emotional Awareness	0.095
b.	Accurate Self-Assessment	0.067
c.	Self-Confidence	**-0.164***
d.	Self-Control	**-0.250***
e.	Trustworthiness	0.024
f.	Conscientiousness	**-0.161***
g.	Adaptability	-0.080
h.	Achievement Orientation	-0.057
i.	Inisiativie	0.049
j.	Empaty	0.048
k.	Organizational Awareness	0.025
l.	Service Orientation	-0.048
m.	Developing Other	-0.118
n.	Leadership	-0.006
o.	Influence	0.079
p.	Communication	**0.167***
q.	Change Catalyt	0.051
r.	Conflict Management	-0.095
s.	Building Bonds	0.045
t.	Team Work And Collaboration	-0.043
	Constant	-0.021
	R^2	0.208*
	F	6.587

*$k < 0.05$

These results indicate that the subjects who have strong sense of their self-worth and capabilities, keeping disruptive emotions and impulses in check, and taking responsibility for personal performance, have less mental health problems. The results also show that the subjects who have good communication skills such as listening openly and sending convincing messages have less mental health problem.

The Effect of Emotional Intelligence as A Moderator in The Relationship of Job Stress and Mental Health Problems

The moderating effects of the emotional intelligence (EQ) in the relationships between job stress and mental health problems were tested by models as shown below:

Model A: MHP = JS
Model B: MHP = JS + EQ
Model C: MHP = JS + EQ+ (JS.EQ)

If the differences between of Model C and R^2 of Model B are significance, this indicates that emotional intelligence acts as a moderator in the job stress and mental health problems relationship.

The result of Table 6 indicates that a change of R^2 from Model B to Model C is not significant. This result indicates that emotional intelligence is not a moderator in the job stress and mental health problems relationship or emotional intelligence failed to show any substantial moderating effect in the relationship between job stress and mental health problems.

Table 6

Statistical Distributions of Job Stress and Mental Health Problem with and without moderator (Emotional Intelligence)

Mental Health Problems (MHP) / **Emotional Competence (EQ)**	**Model A**	**Model B**	**Model C**
Emotional Competence (Scale)			
a. Self-Awareness (S.a)			
R^2	0.115*	0.155*	0.159*
Durbin-Watson			1.706
R^2 Change		0.040	0.004
Sig. *F* Change		0.000	0.133
Constant	0.029	0.068	0.068
Beta [JS]	0.339*		
Beta [$EQ_{(S.a)}$]	0.340*	-0.199*	
Beta [JS x $EQ_{(S.a)}$]	0.337*	-0.206*	0.063
b. Self-Management (S.b)			
R^2	0.114*	0.210*	0.210*
Durbin-Watson			1.703
R^2 Change		0.095	0.000
Sig. *F* Change		0.000	0.965
Constant	0.133	0.104	0.103
Beta [JS]	0.338*		
Beta [$EQ_{(S.b)}$]	0.338*	-0.309*	
Beta [JS x $EQ_{(S.b)}$]	0.337*	-0.309*	0.002
c. Social Awareness (S.c)			
R^2	0.109*	0.156*	0.157*
Durbin-Watson			1.698
R^2 Change		0.047	0.001
Sig. *F* Change		0.000	0.548
Constant	0.150	0.188	0.189
Beta [JS]	0.330*		
Beta [$EQ_{(S.c)}$]	0.330*	-0.218*	
Beta [JS x $EQ_{(S.c)}$]	0.329*	-0.221*	0.025
d. Social Skill (S.d)			
R^2	0.113*	0.154*	0.154*
Durbin-Watson			1.703
R^2 Change		0.041	0.000
Sig. *F* Change		0.000	0.778
Constant	0.178	0.185	0.192
Beta [JS]	0.336*		
Beta [$EQ_{(S.d)}$]	0.346*	-0.202*	
Beta [JS x $EQ_{(S.d)}$]	0.348*	-0.202*	-0.012

4. Discussion

Effects of job stress and emotional intelligence on mental health problems

This part discusses the result of multiple regression analysis which was used to assess the effects of job stress scales and subscales of job stress on mental health problems as well as the effects of emotional intelligence scales and subscales on mental health problems.

Effects of Job stress on mental health problems

Results of this study show that, the job stress (scales and subscales) severity and job pressure index have positive and significant effects on metal health problem. According to the present research findings, job stress seems to be as a result of work overtime, less opportunities for career development, heavy responsibilities, and noisy work place. The subjects seem to experience job pressure because of job structure, frame work, and job assignments such as work overtime, following deadlines, and doing paper works, which predispose them to have severe mental health problems.

The finding suggests that, job stress severity is very important in explaining the effects of job stress on mental health problems compare to job stress frequency. The higher is the job stress severity or the person's feelings of job stress, the greater are the mental health problems.

The findings of the present reserach are supported by the research findings of Chua Bee Seok (2003). These results also explain that workers experience stress with regard to the job characteristics and discriptions, due to workplace environment which is not suitable is uncomfortable. These factors include long working hours, jobs involving risk and danger or new technologies, too much workloads, attending meetings, doing adminstrative works , managing and supervising others', are more predispose to have mental health problems.

Findings of the present research are also supported by Kornhauser (1965), who describes that higher mental health problems have a direct relationship with working environment which is not suitable and comfortable, requiring the job to be done with great speed, more physical energy and long working hours and overtime. Apart from that, the findings of these reserachers also suggest that unsuitable working environment (Cooper & Smith, 1986), and work overloads (Cooper & Marshall, 1976) can effect mental health of the workers.

The Findings of the present study are also supported by Baglion, Cooper and Hingley (1990). These workers studied the effects of job stressors, coping strtegies, Type A behavior on job satisfaction and mental well being of 475 serior nurses in the UK. Job stressors that were found, seem to have negative impact on job satisfaction in nursing job, but only stressor which was related to work load of the nurses was found to have impact on mental health problems.

Effect of Emotional Intelligence on Mental Health Problem

In observing the effect of emotional scale on mental health problems, it was found that only self management subscales seem to effect mental health levels of the nurses. These findings suggest that, if nurses are efficient in managing internal conditions and pressures, it will help the nurses to overcome mental health problems.
As for the effects of subscales of emotional intelligence on mental health, the results indicate that, only four effiencies including self awareness, self management, social skill, and communication seem to act on mental health problems among nurses. These findings further show that, nurses who are effiecient and confident in managing their emotions and stress with responsibility on personal achievement are less likely to have mental health problems.

Research finding of the present study are supported by Schutte, Malouff, Simunek, McKenley, and Hoolander (2002) that higher emotional intelligence is related with higher positive mood and self respect.

One of the interesting findings from this analysis is that, nurses who are found to have effective communication skills, for example, those who can listen openly and give information with confidence are more

likely to have mental health problems. These findings may be related to what have been suggested by Farber (1989) and McCallum and Piper (2001) that, the individuals with the ability not to think about emotions and thoughts or having low psychological mindedness are less likely to have anxiety depression and paranoid thoughts.

Role of emotional intelligence in relationship to job stress with mental health problem

The present research findings propose that, emotional intelligence does not work as a moderator in relationship of job stress and mental health problems. This means that emotional intelligence has no effects in weakening or strenghening the effects on job stress towards mental health problem.

The findings of the present study also explain that, irrespective kind of emotional intelligence possessed by the subjects' does not change the effect of stress on mental health problems. Which explains, using emotional intelligence alone to change the effects of stress on mental health problems is not suitable and effective. According to Lazarus and Folkman (1984), effective stress coping strategies depends on many sources such as emotional, cognitive, physiological social support and behavior. Furthermore, Folkman suggests that, coping strategies are not only way of dealing with stress but it is a process that allows us to face different challanges and problem in different ways.

Apart from the function of emotional intelligence, job stress and mental health problems can be related to how frequently subjects use emotional intelligence and how well suited and appropriate they are in handling a situation or event. This was also suggested by Managhan and Merves (1984), as they conducted observation on coping style that was used by individual in handling certain situations based on suitibility and effectiveness of that coping style in the respective contexts.

Our findings are in conjunction with Ciarrochi et al. (2002). According to them, significant interaction exists between emotional perception and everyday problems (*hassles*) for three mental health variables (depression, *hopelessness*, and *suicidal ideation*). The difference in the findings may be due to different types of assessments used. For example, Ciarrochi et al. used measures of emotional intelligence in the objective way (based on job achievement in relation with emotions) while the present research used measurement of emotional intelligence in subjective way (based on subject self assessment).

5. Conclusion

Nursing profession seems to bring a lot of challanges and stressors. Quite a number of reseraches regarding stress have been conducted on nurses population. Even then, information about stress and mental health problems among nurses along with statistical reports about the cost resulting from stress in financial means as well as personal well being of the nurses is not well documented in Malaysia.

Apart from that, researches regarding emotional intelligence are scarcely conducted on the health professionals especially nurses. So to help the nation in general and nurses in particular, steps should be taken to collect, compile and update the data and reports about stress and mental health problems.

Findings of the present research have proved that severity of job stress is more important in explaining the effects of job stress on mental heath problems than the frequency of job stress. These findings can be utilized by administrative staff in health departments to justify and promote stress management programs among nurses.

It is also found that subscales of emotional intelligence can better be used to explain variance in mental health problems. This issue is quite practical and steps should be taken to intervene. Programs to overcome mental health problems by practising emotional intelligence can be introduced to enhance the special abilities of employees.

Reference

Austin, E.J. (2004). An investigation of the relationship between trait emotional intelligence and emotional task performance. *Personality and Individual Differences, 36(8),* 1855-1864.

Baglioni, Jr, A. J., Cooper, C. L. & Hingley, P. (1990). Job stress, mental health and job satisfaction among UK senior nurses. *Stress Medicine, 6*, 9 – 20.

Bar-On, R., Brown, J.M., Kirkcaldy, B.D., & Thomé, E.P. (2000). Emotional expression and implications for occupational stress; an application of the Emotional Quotient Inventory (EQ-I). *Personality and Individual Differences, 28,* 1107-1118.

Boyatzis, R., Goleman, D., & Hay/McBer. (1999). *Emotional Competence Inventory (ECI) Technical manual*. New York: Hay Group.

Brislin, R. W. 1973. *Cross-cultural research methods*. New York: John Wiley.

Johnson & Johnson: The emotional intelligence and leadership study. Consortium for research on emotional intelligence in organizations. Retrieved 20 June 2003 from http://www.eiconsortium?.org

Ciarrochi, J.V., Caputi, P., & Mayer, J.D. (2003). The distinctiveness and utility of a measure of trait emotional awareness. *Personality and Individual Differences, 34,*1477-1490.

Ciarrochi, J.V., Chan, A.Y.C., & Bajgar, J. (2001). Measuring emotional intelligence in adolescents. *Personality and Individual Differences, 31,*1105-1119.

Ciarrochi, J.V., Chan, A.Y.C., & Caputi, P. (2000). A critical evaluation of the emotional intelligence construct. *Personality and Individual Differences, 28,* 539-561.

Ciarrochi, J.V., Deane, F.P., & Anderson, S. (2002). Emotional intelligence moderates the relationship between stress and mental health. *Personality and Individual Differences, 32*, 197-209.

Cobb, S. & Rose, R.H. (1977). Hypertension, peptic ulcer and diabetes in air traffic controllers. *Journal of Australia Medicine Association*, 224, 489-492.

Cooper, C. L., Sloan, S. J. & William, S. (1988) *Occupational Stress Indicator Management Guide*. Oxford: NFER-Nelson Publishing Company Limited.

Cooper, C. L. & Marshall, J. (1976) Occupational sources of stress: A review of the literature relating to coronary heart disease and mental ill-health. *Journal of Occupational Psychology, 49*, 11-28.

Cooper, C. L., Smith, M. J. (1986) *Job stress and blue collar work*. Chichester: John Wiley & Sons.

French, J. R. P. & Caplan, R. D. (1970) Psychosocial factor in coronary heart disease. *Industrial Medicine, 39*, 383-397.

Goleman, D. (1996). *Emotional intelligence*. New York: Bantam Books.

Goleman, D. (1998). *Working with emotional intelligence*. New York: Bantam Books.

Kornhauser, A. (1965) *Mental health of the industrial worker*. New York: Wiley.

Lazarus, R. S. & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer.

Managhan, E. G. & Merves, E. S. (1984). Coping with occupational problems: The limits of individual effort. *Journal of Health and Social Behavior*, *25*, 406-423.

Rice, P. L. *Stress and Health (2rd ed.).* (1992). California: Brools/Cole Publishing Company.

Schutte, N.S., Malouff, J.M., Hall, L.E., Haggerty, D.J., Cooper, J.T., Golden, C.J., & Dornheim, L. (1998). Development and validation of a measure of emotional intelligence. *Personality and Individual Differences, 25*, 167-177.

Schutte, N.S., Malouff, J.M., Simunek, M., & Mckenley, J. (2002). Characteristics emotional intelligence and emotional well-being. *Cognition and Emotion, 16,* 769-785.

Spielberger, C. D. & Vagg, P. R. (1999). *Job Stress Survey*. U.S.A: Psychological Assessment Resources, Inc. *Utusan Malaysia*, 26 Jun 2000.