Relationship Between Work Stress, Coworker's Social Support, Work Stress and Work Interference with Family Conflict: An Empirical Study in Malaysia

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Abstract: This study was conducted to measure the effect of work stress and coworker's social support on work interference with family conflict using 118 usable questionnaires gathered from academic staff in a public university in East Malaysia, Malaysia. The outcomes of hierarchical regression analysis showed three important findings: First, interaction between role ambiguity and coworker's social support significantly correlated with work interference with family conflict. Second, interaction between role conflict and coworker's social support significantly correlated with work interference with family conflict. Third, interaction between role overload and coworker's social support insignificantly correlated with work interference with family conflict. Statistically, this result demonstrates that coworker's social support is a moderating variable in the relationship between two work stress features (i.e., role ambiguity and role conflict) and work interference with family conflict. Conversely, coworker's social support is not a moderating variable in the relationship between role overload and work interference with family conflict. Further, this study confirms that coworker's social support does act as a partial moderating variable in the work stress model of the studied organization.

Key words: Work stress, coworker's social support, work interference with family conflict, empirical study, Malaysia

INTRODUCTION

Stress is a multi-dimensional construct and may be interpreted from the perspectives of language and organizational. Beginning in the 17th Century in the Western countries, the word stress is originally taken from the Latin word stringere, which refers to draw tight to describe hardships and/or affliction (Cartwright and Cooper, 1997a, b).

It has two major categories: eustress (good stress) and distress (bad stress) affecting human physiology (e.g., physical illness) and psychology (e.g., mental illness) (Beehr and Bhagat, 2000; Fevre et al., 2003). Eustress arises when an individual is experiencing moderate and low levels of stress an instance is an employee's ability to cope with or match his or her knowledge, skills, abilities and attitudes vis-a-vis work demands and pressures in the organization. This stress may increase the employees ability of to manage their physiological and psychological stresses leading to a positive work life (e.g., satisfaction and positive moral values) (Adler et al., 2006; Wetzel et al., 2006; WHO, 2005). On the other hand, distress comes about when an individual is experiencing high level of stress in situations where the employees knowledge, skills, abilities and attitudes are not able to cope with or do not match the organizational demands and pressures.

This stress may deteriorate the employees ability to control and manage physiological and psychological stresses, while at the same time increasing the negative behavioral attitudes and behavioral outcomes (e.g., satisfaction, commitment, productivity and quality) in the workplace (Critchley et al., 2004; Leka et al., 2004; Seaward, 2005; Sy et al., 2006).

In organizations, work stress is also known as job stress and/or occupational stress and these terms are often used interchangeably but their meaning refer to the same thing (Abu-Al-Rub, 2004; Larson, 2004). Many scholars such as Greenhaus and Beutell (1985), Beehr and McGrath (1992), Cartwright and Cooper (1997 a, b), Major et al. (2002) and Eby et al. (2005) highlight that work stress has three major features: role ambiguity, role conflict and role overload. Role ambiguity refers to a

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situation when an individual does not have clear information about his or her work objectives, work scope, supervisor's expectations and responsibilities all or any of which lead to higher job-related tension. Next, role conflict occurs when an employee is torn by conflicting job demands doing things he or she does not want to do or doing things that is not considered part of the job. Being put in a situation where one is required to make a difficult decision and making decision under conflicting demands are frequently stressful. In this case, the employee is expected to perform a certain job that may cause conflict with other job or non-job demands. Finally, role overload is associated with overly heavy work burden that is beyond one's ability to cope and this often results in stress. There are two different types of role overload described by researchers; quantitative and qualitative. Quantitative overload simply refers to having too much work to do whereas qualitative overload refers to a work that is overly difficult for an individual.

Recent studies in this area show that the ability of employees to manage their work stresses may have a significant impact on work interference with family conflict (Boles *et al.*, 2001; Duxbury *et al.*, 1992). According to Greenhaus and Beutell (1985), Adams *et al.* (1996) and Boles *et al.* (2001), work interference with family conflict is broadly described as work intrudes family domain causing work taking over family lives.

It occurs in three major forms: time-based, strain-based and behavior-based. Time-based conflict occurs when the time demands of one role are incompatible with those of another (e.g., working overtime forces an individual to cancel a family outing). Next strain-based conflict occurs when tension experienced in one role interferes with participation in another role (e.g., meeting a deadline for tender prevents an individual to pay attention on family matters). Finally, behavior-based conflict occurs when behavior patterns appropriate to one role are inappropriate in another (e.g., emotional restrictions at work are contrary with the openness expected by family members).

A thorough review of such relationships reveals that the effect of work stress on work interference with family conflict is not consistent if coworker's social support is present in organizations (Allen *et al.*, 2000; Fu and Shaffer, 2001). Beehr and McGrath (1992) defines coworker's social support as coworkers willingness to help one another (e.g., caring, friendly, warm relation, empathy, cooperation, no back bitting and gossipping, appreciation, respect and support) in performing daily tasks and handling of upsetting and threatening situations to create healthy environments in the workplace (Frone *et al.*, 1992; Mansor *et al.*, 2003;

Matteson and Ivancevich, 2003; Simpson, 2000). Within a work stress model many scholars are of the opinion that role ambiguity, role conflict and role overload, coworker's social support and work interference with family conflict are separate and distinct constructs, when in reality they are highly interrelated. For example, the level of job stress will not interfere and create employees family conflicts when coworkers are present to provide sufficient social support (e.g., moral and material support). As a result, it may control job interference in employees family affairs and increase their abilities to perform family obligations (Goldsen and Scharlach, 2001).

Although, the nature of this relationship is interesting, little is known about the moderating role of coworker's social support in the workplace stress research literature (Allen *et al.*, 2000; Fu and Shaffer, 2001). Many scholars state that the moderating effect of coworker's social support is less emphasized in previous studies because they have much described the characteristics of coworker's social support and neglected to explain about how and why coworker's social support can influence the effect of work stress on employee outcomes. As a result, it may not be able to highlight the moderating role of coworker's social support in the work stress literature (Clark, 2002; Fu and Shaffer, 2001; Major *et al.*, 2002). Hence, it motivates the researchers to examine the moderating effect of coworker's social support in the relationship between work stress (i.e., role ambiguity, role conflict and role overload) and work interference with family conflict.

Literature review: Previous studies used direct effects model to investigate work stress and found the ability of employees to control and manage their stresses in implementing job may lead to a decreased family conflict (Adams *et al.*, 1996; Major *et al.*, 2002). For example, Clark (2002)'s work/family border theory addresses that individuals often manage and negotiate the work and family affairs in order to attain balance. If this relationship is not balanced, it will increase work disturbances in an individuals family life and leading to an increased family conflict. The view of this theory is consistent with organizational stress research literature. For example, studies about job stress based on a sample of 513 employees in Fortune 500 Company, United States (Major *et al.*, 2002), assessments forms collected by couple and family therapists (Tatman *et al.*, 2006) and married/cohabit employees gathered through European Social Survey (Gallie and Russell, 2009) found that the inability of employees to properly cope with job demands (i.e., role ambiguity, role conflict and role overload) had
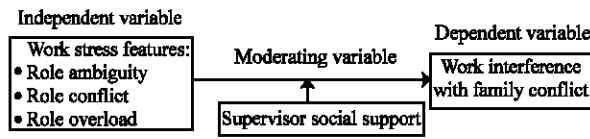
Fig. 1: Conceptual framework

caused the intrusion of work stress in their family affairs thus leading to higher family conflict. Therefore, it can be hypothesized that:

H1: There is a negative relationship between role ambiguity and work interference with family conflict.

H2: There is a negative relationship between role conflict and work interference with family conflict.

H3: There is a negative relationship between role overload and work interference with family conflict.

Recent studies used an indirect effects model to examine the workplace stress and found that effect of work stress on work interference with family conflict can be controlled if coworkers are willing to help one another in organizations (Allen *et al.*, 2000; Fu and Shaffer, 2001). Edwards and Rothbard (2000)'s spillover theory explains that an individual's first experience may subsequently affect his/her experience. For example, emotions and behavior (e.g., an employee's mood) in one role will affect second role (e.g., interaction between an employee and his/her coworker) and this may affect the third factor (i.e., relationship between an employee and his/her coworker may bring this experience when he/she returns home).

The idea of this theory is consistent with the findings of a survey conducted by Fu and Shaffer (2001) based on a sample of 800 employees from 29 academic departments and 34 administrative officers in Hong Kong University. Findings from this study shown that the willingness of coworkers to help each other (e.g., communication openness, knowledge sharing, advise, counseling and motivation) had decreased employees' work stresses (i.e., role ambiguity, role conflict and role overload). Consequently, it could lead to decreased work interference in employees' family affairs and decreases their family conflict. The literature has been used as foundation of developing a conceptual framework for this study as shown is Fig. 1. Based on the framework, it can be hypothesized that:

H4: Coworker's social support positively moderates the relationship between role ambiguity and work interference with family conflict.

H5: Coworker's social support positively moderates the relationship between role conflict and work interference with family conflict.

H6: Coworker's social support positively moderates the relationship between role overload and work interference with family conflict.

MATERIALS AND METHODS

This study used a cross-sectional method which allowed the researchers to integrate the work stress research literature, the in-depth interview, the pilot study and the actual survey as a main procedure to collect data. The use of such methods may gather accurate, less bias and high quality data (Cresswell, 1998; Sekaran, 2003). In the first step of data collection, in-depth interviews were conducted involving six experienced academic staffs who have worked in two faculties: The Science and Technology Based Faculty and The Social Science, Humanities and Liberal Arts Based Faculty.

They were selected using a purposive sampling because they have working experiences >7 years in the studied organization. This interview method was used to understand the nature of work stress features, coworker's social support characteristics and work interference with family conflict elements as well as the relationship between such variables in the studied organization. The information gathered from such interviews was recorded, categorized according to the research variables and constantly compared to the related literature review in order to clearly understand the particular phenomena under study and put the research results in a proper context.

Further, the results of the triangulation process were used as a guideline to develop the content of survey questionnaires for a pilot study. Next, a pilot study was done by discussing pilot questionnaires with the lecturers. Information gathered from such participants was used to verify the content and format of survey questionnaire for an actual study. Back translation technique was used to translate the content of questionnaires in Malay and English in order to increase the validity and reliability of the instrument (Hulland, 1999; Wright, 1996).

The survey questionnaires has three sections: First, work stress features, i.e., Role Ambiguity (RA) had four items, Role Conflict (RC) had five items and Role Overload (RO) had four items that were developed based on work stress literature (Beehr and McGrath, 1992; Fu and Shaffer, 2001; Greenhaus and Beutell, 1985; Matteson and Ivancevich, 2003). Second, Coworker's Social Support (CSS) had seven items that were developed based on

coworker's social support literature (Adams *et al.*, 1996; Beehr and McGrath, 1992; Turner *et al.*, 2004). Third, Work Inteference With Family Conflict (WIWFC) had seven items that were developed based on work to family conflict literature (Allen *et al.*, 2000; Boles *et al.*, 2001; Eby *et al.*, 2005; Frone *et al.*, 1992). These items were measured using a 7-item scale ranging from very strongly disagree/dissatisfied (1) to very strongly agree/satisfied (7). Demographic variables were used as controlling variables because this study focused on employee attitudes.

The population for this study is 320 academic staff who have worked in the studied organization (PUBUNIV). In the first step of data collection, the researchers met HR managers of the studied organizations to get their opinions about the rules for distributing survey questionnaires in their organizations. Considering the organizational rules, a quota sampling was used to determine the number of sample size based on the period of study and budget constraints which ware 2000 academic employees. After that a convenient sampling was chosen to distribute survey questionnaires because the list of registered employees was not shown to the researchers and this situation did not allow the researchers to choose random respondents in the organizations. Therefore, 200 survey questionnaires were distributed to academic staff in 8 faculties through their faculty offices. Of that number, 118 usable questionnaires were returned to the researchers, yielding 73.7% response rate. The number of this sample exceeds the minimum sample of 30 participants as required by probability sampling technique showing that it may be analyzed using inferential statistics (Sekaran, 2003). The survey questionnaires were answered by participants on a voluntarily basis. A Statistical Package for Social Science (SPSS) version 16.0 was used to analyze the questionnaire data and thus test the research hypotheses.

RESULTS

Results from analysis shown in Table 1 that most respondents were male (57.6%), aged between 40-45 years old (36.5%), married (80.5%) and had served from 1-5 years (44.1%). Table 2 shows the results of validity and reliability analyses for measurement scales. A factor

analysis with the varimax rotation was first done for 3 variables with 27 items. After that Kaiser-Mayer-Olkin Test (KMO) which is a measure of sampling adequacy was conducted for each variable and the results indicated that it was acceptable. Relying on Hair *et al.* (2006) and Nunnally and Bernstein (1994)'s guidelines, these statistical analyses showed that:

- The value of factor analysis (FLD) for all items that represent each research variable was 0.5 and more indicating the items met the acceptable standard of validity analysis
- All research variables exceeded the acceptable standard of Kaiser-Meyer-Olkin's value of 0.6 were significant in Bartlett's Test of Sphericity (BTS)
- All research variables had Eigenvalues (EG) >1 with Variance Explained (VE) >0.45
- The items for each research variable exceeded factor loadings of 0.50 (Hair *et al.*, 2006)
- All research variables exceeded the acceptable standard of Reliability Analysis (RB) of 0.70 (Nunnally and Bernstein, 1994)

These statistical analyses confirm that measurement scales have met the acceptable standards of construct validity and reliability analyses as shown in Table 2. A Pearson Correlation Analysis is carried out to measure the relationship between the dependent and independent variables. Table 3 shows the results of Pearson Correlation Analysis and Descriptive Statistic. The means for the variables are from 4.48-5.53 signifying that the

Table 1: Participant characteristics (N = 118)

Participant characteristics	Sub-profile	Percentage
Gender	Male	57.6
	Female	42.4
Age	<27	22.9
	28-33	8.5
	34-39	23.7
	40-45	36.5
	>45	7.9
Marital status	Single	19.5
	Married	80.5
	Widow/Widower	
Length of service (years)	1-5	44.1
	6-10	19.5
	11-15	23.7
	>16	12.7

Table 2: Validity and reliability analyses for measurement scales

Measure	Items	FLD	KMO	BTS	EG	VE	RB
RA	4	0.87-0.53	0.734	325.345, p = 0.000	2.865	71.628	0.802
RC	4	0.67-0.77	0.598	156.198, p = 0.000	2.349	58.724	0.753
RO	5	0.74-0.76	0.750	241.632, p = 0.000	3.058	61.168	0.836
CSS	7	0.66-0.66	0.707	624.285, p = 0.000	4.302	61.461	0.893
WIWFC	7	0.82-0.95	0.778	681.061, p = 0.000	4.497	74.953	0.927

Table 3: Correlation matrix table

Variables	Mean	SD	Pearson correlation analysis (r)				
			1	2	3	4	5
RA	5.53	0.83	(1)				
RC	5.52	0.76	0.27**	(1)			
RO	5.69	0.86	0.33*	0.06*	(1)		
CSS	5.49	0.86	0.21*	0.50**	0.17**	(1)	
WIWFC	4.83	1.22	0.14*	0.32*	0.41**	0.50**	(1)

Significant at *p<0.05; **p<0.01 reliability estimation is shown in parenthesis

levels of role ambiguity, role conflict, role overload, coworker's social support and work interference with family conflict ranging from high (4) to highest level (7).

The correlation coefficients for the relationship between the independent variable (i.e., role ambiguity, role conflict and role overload) and the moderating variable (i.e., coworker's social support) and relationship between the mediating variable (i.e., coworker's social support) and the dependent variable (i.e., work interference with family conflict) were <0.90 indicating the data were not affected by serious collinearity problem (Hair *et al.*, 2006). The measurement scales that had validity and reliability were used to test research hypotheses. As shown in Table 3, the results of testing direct effect model showed three outcomes findings: First, RA is significantly correlated with WIWFC (r = 0.14, p<0.05), therefore H1 is supported.

Second, RC is significantly correlated with WIWFC (r = 0.32, p<0.05), therefore H2 is supported. Third, RO is significantly correlated with WIWFC (r = 0.41, p<0.01), therefore H3 is supported. In short this finding demonstrates that work stress features are important predictors of work interference with family conflict in the studied organization.

Moderating effect is an interaction that shows the degree of relationship between the independent variables and dependent variables will change if other variables exist in the relationship (Jaccard *et al.*, 1990). A moderated multiple regression analysis (Cohen and Cohen, 1983) was used to test the moderating effect of perceive value of money in hypothesized model. This procedure stresses the development of a multiplicative term which is used to take into account the interaction effect and to calculate two R²s, one for the equation, which includes only main effects (main-effect model) and the other for a three-term equation (product-term model) which includes both the main and interaction effects. This technique may separate the component parts of the product term from the term itself to account for the complex combination of variance due to main and interaction effects. Standardized Coefficients (Standardized Beta) were used for all analyses. Results of an interaction are evident when the relationship between interacting terms and the dependent

Table 4: Results for hierarchical regression analysis

Variables	Dependent variable (WIWFC)		
	Model 1	Model 2	Model 3
Controling variable			
Gender	-0.27***	-0.25***	-0.21***
Age	0.33**	0.34**	0.44***
Marital status	0.42***	0.41***	0.22
Length of service	-0.67***	-0.64***	-0.44***
Independent variable			
RA		0.10	-1.68**
RC		0.11	1.67***
RO		-0.08	-0.62
Moderating variable			
RA x CSS			2.64**
RC x CSS			-3.03***
RO x CSS			0.87
R²	0.66	0.67	0.81
Adjusted R²	0.42	0.44	0.62
ΔR²	0.44	0.03	0.18
F	21.96***	13.99***	19.66***
FΔR²	21.96***	2.33	17.87***

Significant at *p<0.05; **p<0.01; ***p<0.001

variable is significant. The fact that the significant main effects of predictor variables and moderator variables simultaneously exist in analysis does not affect the moderator hypothesis and is significant to interpret the interaction term (Baron and Kenny, 1996). Outcomes of testing research hypothesis is shown in Table 4.

Table 4 shows the results of hierarchical regression analysis in three steps. Demographic variables were entered in Step 1 and then followed by entering the independent variable (i.e., RA, RC and RO) in Step 2 and the moderating variable (i.e., CSS). WIWFC was used as the dependent variable.

Table 4 shows that the results of hierarchical regression analysis were summarised in three models. Model 1 shows that all demographic variables were found to be significant predictors of WIWFC. The inclusion of these variables in this step had explained 66% of the variance in dependent variable. Model 2 displayed that RA, RC and RO were not found to be significant predictors of WIWFC (β = 0.104, p>0.05; β = -0.11, p>0.05; β = -0.08, p>0.05, respectively).

The inclusion of this variable in this step had explained 67% of the variance in dependent variable. Model 3 revealed that interaction between RA and CSS is significantly correlated with WIWFC (β = 2.64, p<0.01), therefore H1 is supported. While, interaction between RC and CSS is significantly correlated with WIWFC (β = -3.03, p<0.001), therefore H2 is supported. Conversely, interaction between RO and CSS insignificantly correlated with WIWFC (β = 0.87, p>0.05), therefore H3 is not supported. In terms of exploratory power, the inclusion of CSS in this step had explained 81% of the variance in dependent variable. This result demonstrates that coworker's social support does act as

a partial moderating variable in the relationship between work stress and work interference with family conflict in the studied organization.

DISCUSSION

This study shows that coworker's social support does acts as a partial moderating variable in the relationship between work stress and work interference with family conflict. In the studied organizations, management teams have planned and implemented challenging jobs for academic employees in order to sustain and achieve their organizational strategies and goals. Majority academic staff perceive that the levels of their work stress are high, the ability for co-workers to practice good social support are high and the levels of work interference with family conflict are high. In this case, majority academic staff feel that the willingness of coworkers to help each other have increase the ability of employees to cope with their stresses. As a result, it may lead to decreased in the interference of work in employees' family affairs and decrease their family conflict.

The study presents three major implications: theoretical contribution, robustness of research methodology and practical contribution. In terms of theoretical contribution, the results of this study confirm that coworker's social support has moderated the effect of two work stress features (i.e., role ambiguity and role conflict) on work interference with family conflict. This result is consistent with studies by Adams *et al.* (1996), Clark (2002) and Major *et al.* (2002). Conversely, coworker's social support has not moderated the effect of one work stress features (i.e., role overload) on work interference with family conflict. A careful observation of the interview results shows that coworker's social support has not played an effective moderating role may cause by external factors.

First, individual employee has different capabilities in prioritizing tasks in performing his or her job. Second, workloads for each individual employee is determined by his or her immediate supervisor. Third, each individual employee is shown a certain workload or tasks to be performed according to his or her job function and expertise, hence he or she does not have sufficient time to do coworkers' jobs or tasks and he or she may not have the knowledge or expertise which may be required to do so. These factors have overulled the influence of coworker's social support in job stress models in the studied organization. With respect to the robustness of the research methodology, the survey questionnaires used in this study have exceeded the acceptable standards of the validity and reliability analyses. This

would lead to the production of accurate and reliable findings. In terms of practical contributions, the findings of this study may be used as a guideline by the management to overcome work stress related problems in organizations. Several suggestions are first, update the content and training method. For example, the content of current training programs should tackle four domains: cognitive, affective, psychomotor and good moral values. The content of such trainings will be easily implemented if employees are trained using proper case studies and team building. Second, management should encourage employees to participate in team works to boost positive socialization, improve career and psychosocial well-being. As a result, it may lead to higher positive attitudinal and behavioral outcomes.

Third, promote work-life balance initiatives in order to reduce employees' physiological and psychological stresses through company trips for employees to loosen up their minds and bodies as well as promoting physical fitness and sporting games. Finally, provide employee assistance programs using external professional companies and/or internal counseling and guidance unit to overcome employees' personality, social and financial problems. These measures may, consequently, increase employees ability to manage their personal problems, reduce stress and deal with ethical issues in the workplace. Should the management heavily considers these suggestions it may be able to decrease employees stress in performing their job while at the same time improve their abilities to bring about family happiness. This in turn will motivate employees to support organizational effort in implementing its strategy to meet the goals set.

CONCLUSION

This study confirms that coworker's social support has moderated the effect of role ambiguity and role conflict on work interference with family conflict but coworker's social support has not moderated the effect of role overload on work interference with family conflict. This result confirms that coworker's social support partially moderates the effect of work stress on work interference with family conflict in the studied organization. Therefore, current research and practice in work stress needs to consider coworker's social support as a crucial element of work stress domain. This study further suggests that the ability of supervisors to adequately provide social support will strongly increase the employees ability to cope with stress in performing his/her job. Consequently, it may lead to higher positive attitudinal and behavioural outcomes (e.g., satisfaction,

commitment, performance, ethics and balanced life style). These positive outcomes may thus lead to increased organizational competitiveness in a global economy.

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