

## **CHAPTER 3**

### **RESEARCH METHODOLOGY**

#### **3.0 Introduction**

This chapter presents the study's theoretical approach, the proposed conceptual framework, variables and research hypothesis. The research hypotheses include the relationship between these important influencing factors and military officers' intention to study in MAF. In addition, the research hypotheses also cover the difference in the important attributes between services and marital status. The development of a conceptual model is briefly discussed, and the variables are defined in this chapter.

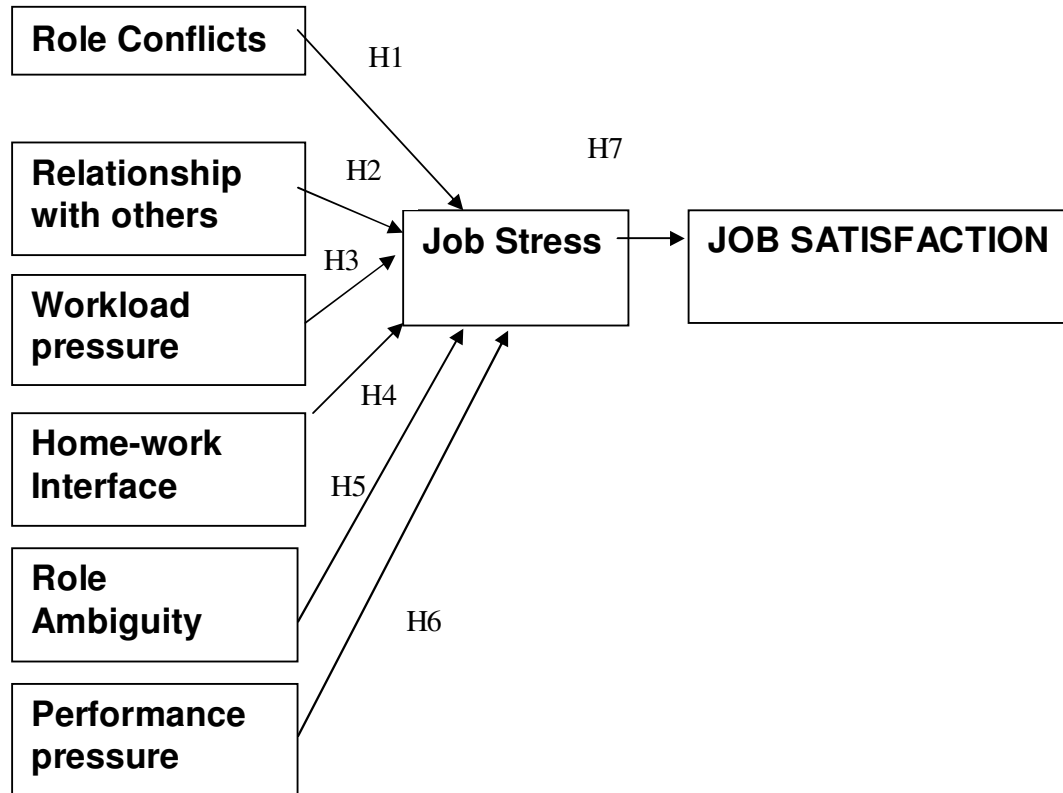
This chapter describes the subjects who have participated and the locations involved in the research. Furthermore, this chapter also discusses the instruments used to measure the identified variables. This is followed by an explanation of the sampling design, collection procedure and data analysis techniques as the protocol in conducting research.

#### **3.1 Previous Conceptual Model**

The theoretical model is adapted from a previous study, Nilufar et al. (2009), 'A Study of Job Stress on Job Satisfaction among University Staff in Malaysia'. The theoretical model comprises Job Satisfaction as the dependent variable and seven dependent variables measuring Job Satisfaction. The Independent Variables identified are role conflict, relationship with others,

work load pressure, home-work interface, role ambiguity and performance pressure. The Nulifar's theoretical model is presented in Figure 3.1.

Figure 3.1: Previous Conceptual Model

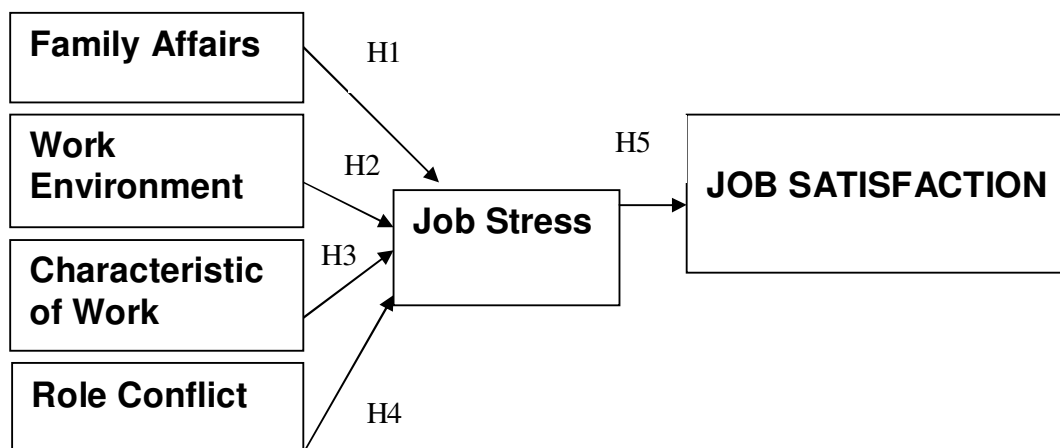


Source: adapted from Nulifar (2009)

### 3.2 Research Framework

Based on presented literature, this study proposed a Research Framework as shown in Figure 3.20. The IVs that are tested for the job stress are family affairs, work environment, characteristics of work and role conflict. Then the relationship between job stress and job satisfaction was tested.

Figure 3.2: The Proposed Conceptual Framework



### 3.3 Development of Hypotheses

Based on the conceptual framework, which was adapted from previous research, the hypotheses of this study were developed. They are:

- H1. The family affairs of the military officers will significantly affect their job stress level.
- H2. The working environment will significantly affect the military officers' job stress level.
- H3. The characteristics of work, will significantly affect military officers' job stress level.
- H4. The role conflict will significantly affect the military officer's job stress level.
- H5. The level of Job Stress will significantly affect the military officers' Job Satisfaction level.

### **3.4 Research Design**

This study was cross-sectional in design and used survey methodology. The survey was offered to 350 officers from the tri-services. Participation in the study was anonymous and voluntary. Of the 350 military officers from throughout Malaysia who were offered the survey, 300 completed it (85.7%).

The survey instruments developed in this study includes; items on demographics (13 items), work stress (9 items), the impact of work stress on family affairs (5 items), the impact of work stress on work environment (6 items), work characteristic and role conflict (10 items), and job satisfaction (10 items). Family affairs, work environment, work characteristic and job satisfaction used a Likert-type rating scale (e.g., "My work place is conducive" 1 = strongly agree to 5 = strongly disagree).

This study involved five major variables that were supposed to measure the level of job stress and job satisfaction. Job stress is measured by four components – family affairs, job environment, characteristic of work, and role conflict – which are related stress. Data was collected using the survey questionnaire method. This follows Kerlinger's, (1973) proposal that the occurrence, dispersion and inter-relation between the psychological variable and sociological variable should be studied using the survey method. A similar idea is shared by Shanghnessy and Zechiester, (1990) who believe the survey method is appropriate for studying other conditions such as thinking, thought, and human feeling. In this study the independent variable is job stress and the level of job satisfaction is the dependent variable.

### **3.5 Research Sampling**

Joseph (1989), work stress and personnel health are vital to human resource managers as it is reported that 70% of overall absence cases in the workplace are due to illnesses related to work stress. This research was conducted on the three services comprising MAF including – No. 2 Armor and PULAMOR, Port Dickson and 12 RAMD Seremban, Negeri Sembilan; from the RMN is TLDM Tanjung Gelang, Kuantan; and for the RMAF is the Air Logistic Division, Sg Besi Kuala Lumpur and Kuantan Air Base. The No. 2 Armor, Port Dickson was selected because it is recognised as being heavy duty with a high rate of absenteeism. The unit does ceremonial duty besides the task assault pioneer operational training and exercises. The study aims to relate the officers job stress as heavily duty which may causes decreasing the job satisfaction as high rate of disciplinary cases. Thus, this effort is to give a clear picture on the level and sources of job stress suffered by a combat support unit.

As shown in table 4.4.1, the respondents consist of various races and religions with Malay and Muslim comprising the majority followed by Chinese and Indian. Most of the officers had an educational level of (Sijil Pelajaran Malaysia) SPM/Sijil Tinggi Pelajaran Malaysia (STPM) and diploma; 105 officers (35%) have SPM/STPM, Diploma 117 (39.0%) and the rest were Ijazah Sarjana Muda 65 officers (21.7%) and Ijazah Sarjana 13 officers (4.3%). The majority of the officers are married, which is 177 officers (59.0%), 111 (37.0%) still bachelor/single and 12 officers (4.0%) divorced. Age group of the respondents is from 18 to 45 and above.

Table 3.5.1 Proposition of Respondents by Service

Sampling Unit	Sample Size	Location
Malaysian Army	150	No. 2 Armor, PULAMOR and 12 RAMD
Royal Malaysian Navy	80	TLDM Tanjung Gelang
Royal Malaysian AirForce	70	Air Logistic Division and RMAF Kuantan

Table 3.5.1 shows the proportion of respondents according to service.

The army has the greater number of officers as the MA is dominated by the army.

The ranking of research subjects are shown in Table 3.5 below. The officers with the job title of Captain/Major form the majority, 220 (73.3%), followed by 2<sup>nd</sup> Lieutenant/Lieutenant, 58 (19.3%), and the minority were Lieutenant Colonel, 22 officers (7.3%) from the total subject group. The proposition shown in Table 3.5.2.

Table 3.5.2 Grouping of Military Subjects According to Rank.

JOB TITLE	NUMBER	
PERCENTAGE		
2 <sup>nd</sup> Lieutenant/Lieutenant or equivalent	58	19.3
Capt/Major or equivalent	220	73.3
Lieutenant Colonel or equivalent	22	7.3
Col or equivalent	Nil	Nil
Brigadier Gen and above	Nil	Nil
<b>TOTAL</b>	<b>300</b>	<b>100.0*</b>

\* TOTAL is > 100% due to rounding up of numbers

### 3.6 Research Instruments

A structured questionnaire survey was used to collect the quantitative data across all military units mentioned earlier. All subjects obtained similar sets of questionnaires comprised of Parts A and B. Part A recorded the background demographical and career information of respondents with thirteen items including – service, gender, marital status, number in family, educational level, monthly income, work related, duration holding the current appointment and whether staying with family. Part B gathered research information consisting of family affairs, working environment, work characteristics and work satisfaction, work conflict and work stress.

The items for job stress were modified questions of *Cooper Job Stress Assessment, (1996)* which was used as the instrument for job stress. It was formed and administered to assess two constructs of job stress in a military setting, which were job satisfaction and characteristics of work. The questions were formed into two sections with the total number of items being 45; job satisfaction comprised 10 items. In addition, the job stress construct, consisted of 9 questions from 4 elements of work that had been taken into consideration in the forming process. The four elements comprised Family Affairs, Work Environment, Work Characteristics and Role Conflict.

Two 5-point Likert Scales were used, ranging from 1 (strongly agree), 2 (agree), 3 (neutral), 4 (disagree) and 5 (strongly disagree) serving as choices of answer, as shown in Table 3.6.1. The other ranged from 1 (frequent), 2

(sometimes), 3 (seldom), 4 (when necessary) and 5 (never) served as choices of answer as shown in Table 3.6.2. Items of the questionnaire were in the Malay Language so that they would be easily understood by all levels of respondents. Permission to use the scales developed by the researchers was obtained before this study began.

<b>Answer</b>	<b>Scale</b>
<b>Strongly Disagree</b>	<b>5</b>
<b>Disagree</b>	<b>4</b>
<b>Neutral</b>	<b>3</b>
<b>Agree</b>	<b>2</b>
<b>Strongly Agree</b>	<b>1</b>

Table 3.6.1 Measurement of Agreement on Likert Scale

<b>Answer</b>	<b>Scale</b>
<b>Never</b>	<b>5</b>
<b>When necessary</b>	<b>4</b>
<b>Seldom</b>	<b>3</b>
<b>Sometime</b>	<b>2</b>
<b>Always</b>	<b>1</b>



Table 3.6.2 Measurement of Frequency on Likert Scale

The procedure for the research was stated in the questionnaire as being agreed by the research supervisor. An approval to conduct the study on the selected army officers was officially obtained from the 4<sup>th</sup> Divisional and 12<sup>th</sup> Bridge Headquarters, for navy officers it was officially obtained from HQ COMNAV, and for air force officers it was officially obtained from 1<sup>st</sup> Divisional Air Headquarters. Then, the research locations were chosen as the most location appropriate to be studied because the participants deemed to fulfill the requirements to be studied. After obtaining the approval from the unit Commanding Officer, the respondents were instructed to complete them in a comfortable hall that had been identified for the purpose. The sets of questionnaire were distributed to the army officers, navy officers and air force officers on different occasions and their completion was monitored. Participants were given one hour to complete the questionnaire and returned accordingly. A total of 300 questionnaires were collected, 150 from army officers, 80 from naval officers and 70 from air force officers.

### **3.7 Data Analyses**

The data analyses involved two basic methods. The first analysis conducted was the descriptive analysis for obtaining the demographic information of the respondents. At the same time the level of job stress and job satisfaction were analysed according to the demographic differences. Next, a *Pearson* correlation analysis was conducted to examine the relationship between job stress and job satisfaction. Finally, *Pearson*

correlation was conducted to examine the relationship for each construct of job stress, family affairs, work environment, characteristic of work and role conflict with 10 factors of job satisfaction, as shown in Tables 3.8.1 and 3.8.2. Before doing the correlation, several tests were run, namely, mean of variable, factor analysis, reliability and normality test.

No	Variable	Factors	Item	Score
1.	Job Stress	Family Affairs Work Environment Work Characteristic Role Conflict	1 – 5 6 - 11 12-21 32-48	Mean
2.	Job Satisfaction		21-31	Mean

Table 3.8.1 Items Scoring according to Factors and Variable

Among the objectives of this study is to explore the relationship of job stress and job satisfaction among military officers. The scaled data is intended to identify the relationship of the factor between job stress and job satisfaction among military officers. Lastly, the research will identify the differences of demographic factor between job stress and job satisfaction.

The *Statistical Package for Social Sciences (SPSS)* was used to analyze the data for both descriptive and inferential statistics. The descriptive statistics showed the result comprehensively by frequency and percentage. The inferential statistics were used to indicate the relationship by correlation analysis (*Pearson*) and the differences of demographical factors by using the *t-test*. Table 3.8.2 below shows a summary of the statistical analysis for each

hypothesis. The mean provides the standard point to assess the level of job stress and job satisfaction among military officers.

The two-way ANOVA simultaneously tested for the effect of each independent variable on the dependent variables and also identified any interaction of variables – is there any difference in the effect of age on optimism for male and female officers.

Table 3.8.2 Summary of Statistical Analysis for Research Hypothesis

Hypothesis	Variable and Scale		Statistical Analysis
H1. The greater the wellbeing of the military officer's family the less job stress they have.	Work Stress level (interval)	Job Satisfaction (interval)	Pearson Correlation
H2. A better working environment will positively reduce the stress they have.	Job satisfaction (interval)	Family Affairs, Work Environment, Work Characteristic, Role conflict (interval)	Pearson Correlation
H3. A better relationship with characteristics of work, will decrease a military officer's job stress.	Work characteristic (interval)	Job Stress (interval)	Pearson Correlation
H4. An increase in role conflict will affect the military officer Job stress.	Role conflict (interval)	Job stress (interval)	Pearson Correlation
H5. The more job stress faced by a military officer the less job satisfaction.	Job Stress (Interval)	Job Satisfaction (interval)	Pearson Correlation

### **3.8 Conclusion**

This chapter describes the research methodology including workplace, location, subjects involved, measuring tools used, and research design. Psychometric issues such as trust abilities and the measuring tool authentication were also studied for their ability to be used in the local context. This is why the instrument of this research was modified from the actual tools of job stress and job satisfaction. From the psychometric issues investigation, it can be concluded that the measuring tool used in this study, specifically the tool that is formed to suit the local community and social cultural differences in a military setting. The next chapter will discuss the details of the research results obtained from the statistical analysis that was conducted.