

**FACTORS RELATED TO COPING STRATEGIES OF NURSES
WORKING IN HEALTH CARE CENTERS ON TIMOR ISLAND,
EAST NUSA TENGGARA PROVINCE, INDONESIA**

The seal of Mahidol University is a large, circular emblem in the background. It features a central golden chakra (a five-spoked wheel) surrounded by a blue ring. The outermost ring is white with Thai script. The author's name is printed in bold black text across the center of the seal.

SYLVIA CORNELIA FRANCIS SKERA

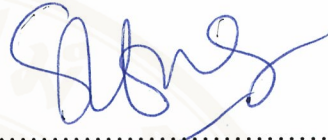
**A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF PRIMARY HEALTH CARE MANAGEMENT
FACULTY OF GRADUATE STUDIES
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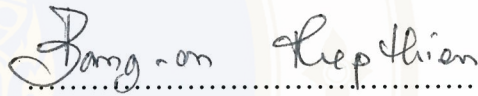
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EAST NUSA TENGGARA PROVINCE, INDONESIA**



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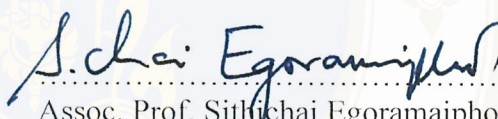
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was submitted to the Faculty of Graduate Studies, Mahidol University
for the degree of Master of Primary Health Care Management

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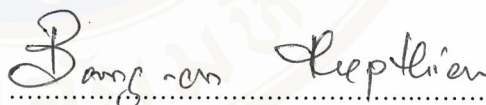
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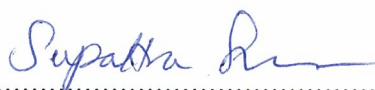
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“Success is never final. Failure is never fatal. Courage is what counts” – Sir Winston Churchill

Sylvia C.F Skera-“aslove”

FACTORS RELATED TO COPING STRATEGIES OF NURSES WORKING IN
HEALTH CARE CENTERS ON TIMOR ISLAND, EAST NUSA TENGGARA
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ABSTRACT

This descriptive and cross-sectional study was conducted to determine and explore factors related to nurses' coping strategies, who work in health care centers in Timor Island, East Nusa Tenggara Province. Data were collected by using self-administered questionnaires from 322 nurses, who randomly selected by proportional sampling in one municipality and four districts. Chi-square test and multiple logistic regressions were used to analyze the data.

Coping strategies were divided into 2 parts, problem-focused coping and emotional-focused coping. Almost half of the respondents often used problem-focused coping and emotional-focused coping. The quality of hardy personality was divided into three subcomponents; commitment, control, and challenge, almost 80% of the respondents used a combination of these three subcomponents. For social support, 98.1% nurses had friends, 64.4% occasionally shared their problems with others, 78% always received support from family and friends, and 89.7% lived with their families. When adjusted to other variables, nurses working years 0 until 20 years (AOR = 0.40, 95% CI = 0.20 – 0.78), and a high level of workload stress (AOR = 1.84, 95% CI = 1.15 – 2.95) were significant as predictors of often using emotional-focused coping. Gender (Female) (AOR = 1.85, 95% CI = 1.06 – 3.24), occasionally sharing problems with others (AOR = 1.87, 95% CI = 1.13 – 3.10) and occasionally receiving supported from family and friends (AOR = 1.94, 95% CI = 1.09 – 3.47), were significant as predictors of often using problem-focused coping.

This study found that gender (female) and social factors such as sharing problems with others and received support from family and friends were significant factors related to use of problem-focused coping. Nurses working years and workload were significant factors related to emotional-focused coping. The successful utilization of coping effectively depends on the situation and an individual's personality. Pre-employment screening of personality and coping traits should be considered, in order to identify staff who exhibit a hardy personality associated with lower perception of job stress and coping strategies.

KEY WORDS : COPING STRATEGIES/JOB STRES /HARDY
PERSONALITY/SOCIAL SUPPORT

98 pages

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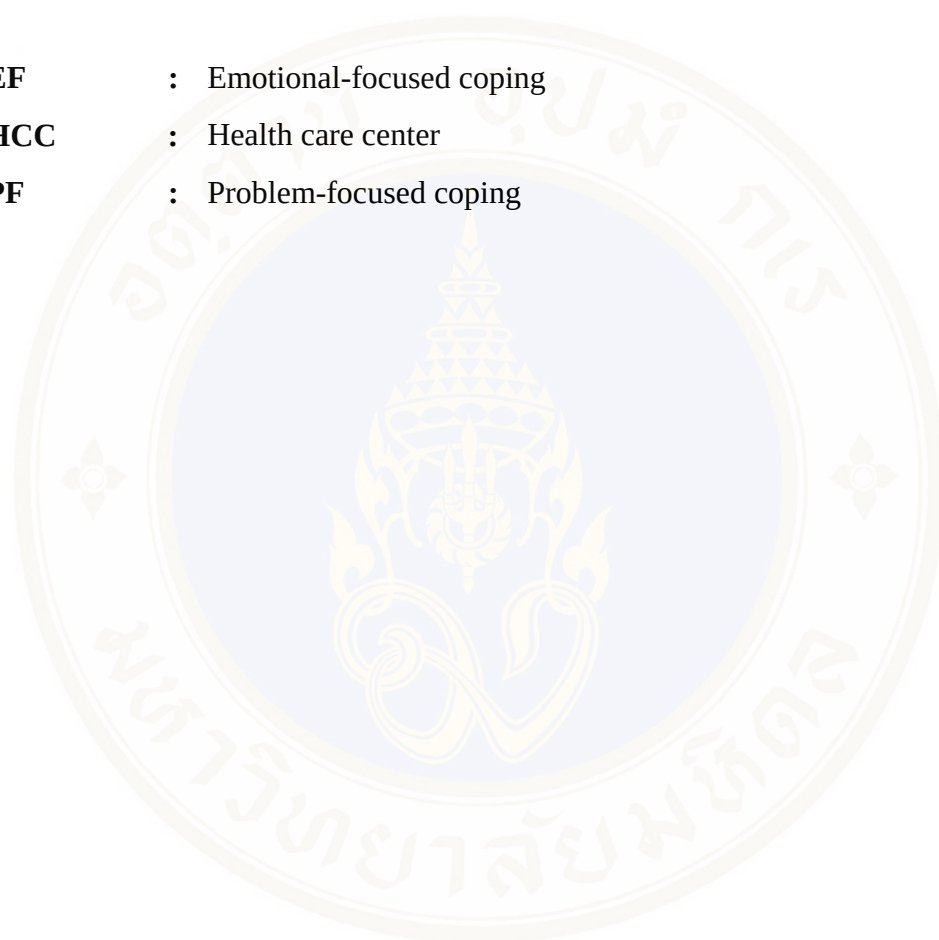
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ABBREVIATIONS

EF	: Emotional-focused coping
HCC	: Health care center
PF	: Problem-focused coping



CHAPTER I

INTRODUCTION

1.1 Rationale and Justification

Many health professionals and other human service professionals experience stress in their professional relationships with clients who make emotional demands, fail to improve, or are otherwise difficult to treat(1). One sub category of professionals which has a very close relationship with clients are Health Care Centre (HCC) workers. HCCs are often the first stop for health services for people in the community(2). They provide primary, secondary and tertiary care and promotion so they can help to improve the health status of the community. In order to provide good services, HCCs' need adequate resources including human resources in this regard nurses are in the central element.

Nurses have the closest and most frequent contact with patients, families, caregivers and the community. According to Benoliel et al (1990) Nursing is one of the most stressful and challenging vocations because of the need for specialization, complexity, and requirement to handle emergency situations(3). Heim 1992, found that that nurses have higher level of stress than physicians and the stressors of nurses are worries caused by responsibility, being forced to decide under time pressure, increasing criticism and complaints of patients (4). Laffrey & Page (1989) stated that despite recognition of the value of illness prevention and health promotion, community nurses focus nursing care on individuals and families to solve specific health problems(5). This entails a lot of responsibilities and may lead to stress and burnout. Su (1993) indicated that nursing is one of the most stressful professions(15). Previous research regarding nursing stress has found a positive relationship between work stress and subjective perceptions of mental distress, and high incidences of stress-related 'burnout' and emotional disorders(6, 7). Burbonnais et al., (1999) have warned that nurses are a group of employees who have been considered vulnerable to stress and burnout(8).

Given the prevalence of workplace stress in our society, along with its negative outcomes, it becomes increasingly important to understand the types of strategies that workers use to cope with these pressures, as well as the determinants and outcomes of workplace coping strategies. The effectiveness of coping behaviors depends on the situation in which they are used. Some coping behaviors may work well for some situations but not for others(9). The efficiency of a coping strategy is determined only by its effects in a given encounter and where exposure to stress is long term. The impact of stress and coping on health, includes physical, psychological, and social aspects (10). In dealing with routine work and situations which can cause problematic situations, nurses also have to find their own way to cope with unpleasant situations.

Folkman & Lazarus in Aneshel CS (1992) defined coping as cognitive and behavioural efforts made to master, tolerate, or reduce external and internal demands and conflicts(11). The coping response is categorised by Lazarus into problem-focused coping which involves efforts to solve problem or master situation; and emotional-focused coping, where there is an attempt to reduce negative feelings associated with threats rather than alter the source of such threats. Studies of the effects of coping strategies and job satisfaction in a sample of Australian nurses have found that in order to cope with these constraints, nurses may be using avoidance and escape forms of coping and also humour (12). Some empirical studies suggested that nurses who report high workload levels use more problem solving strategies; that nurses who are subjected to stress due to patient demands and home/work conflicts use social support strategies, and that avoidance is the most reliable symptom of stress and job dissatisfaction (7, 13).

Poor stress management can affect the satisfaction and performance of individuals and can affect the environment where the activities take place. Stress is a contributing factor to organizational inefficiency, high staff turnover, absenteeism because of sickness, decreased quality and quantity of care, increased health care costs, and decreased job satisfaction (14). A study of job stress, stress coping strategies, and job satisfaction for nurses working in middle-level hospital operating rooms found that job stressors are positively related to stress response. Job stress

correlates positively to negative coping strategies and nurse adopt positive coping strategies more than negative strategies (15, 16).

The nature and effects of stress might be best understood by saying that some environmental variables (stressors), when interpreted by an individual (cognitive interpretation), may lead to stress. The stress experienced by the individual may cause strains and long-term negative effects. Whether, or not, individuals experience stress and its effects depends, among other things, on their characteristics such as social support, hardiness, type A behaviours, and coping strategies. Thus, stressors are objective events, and stress is the subjective experience of the event, and strain is the maladaptive response to stress (17).

In Indonesia, most nurses have to deal not only with health problems but also with administrative work such as completing District Health Office's matrix and daily or monthly reports, attending meetings or doing other tasks unrelated to the physical examination and care of patients. Ihsan Husain MH(2006) found that staff in Jawa – Bali (physicians and dentists) have more skills than Eastern region of Indonesia and Sumatra (18). Lack of qualified health workers is one of the problems that East Nusa Tenggara has to solve. In order to do so, the government provides scholarships for health workers including nurses to gain more knowledge. Data from the Man Power and Development Division in The East Nusa Tenggara Provincial Health Office in 2009 showed that 1798 health employees were then still in the process of gaining or upgrading their health qualification in various institutes or universities (19).

Many nurses are given permission to upgrade their skills and qualifications. For this purpose they are given temporary leave but are not normally replaced. This imposes an additional burden on those nurses who remain. This, in turn affects, the quality of services they provide, an additional work responsibilities may generate additional stress. Overlapping jobs or overtime work, lack of personnel, inappropriate scheduling or shifts can lead to stressful situations for HCC nurses in health care centre. To deal with this kind of situation, nurses have to develop special strategies for stressful events and dealing with them.

The purpose of this research is to identify the factors that relate to the way nurses cope with routine workplace stressful events. It will identify the kind of

coping strategies nurses adopt to provide good service in HCC in The Timor island, East Nusa Tenggara Province.

1.2 Research questions

1.2.1 How nurses in the HCCs on the Timor island use coping strategies in their dayli work??

1.2.2 What are the significant factors related to such coping strategies.

1.3 Research Objectives

1.3.1 General Objective

To determine and explore factors related to such nurses' coping strategies working inHCC.

1.3.2 Specific Objectives

1.3.2.1 To describe the coping strategy of nurse regarding job stress.

1.3.2.2 To examine the relationship between coping strategies and job stress

1.3.2.3 To describe the socio-demographic factors of nurses dealing with coping strategies.

1.3.2.4 To examine the relationship between hardi personality and coping strategies.

1.3.2.5 To examine the relationship between social support and coping strategies.

1.4 Conceptual Framework

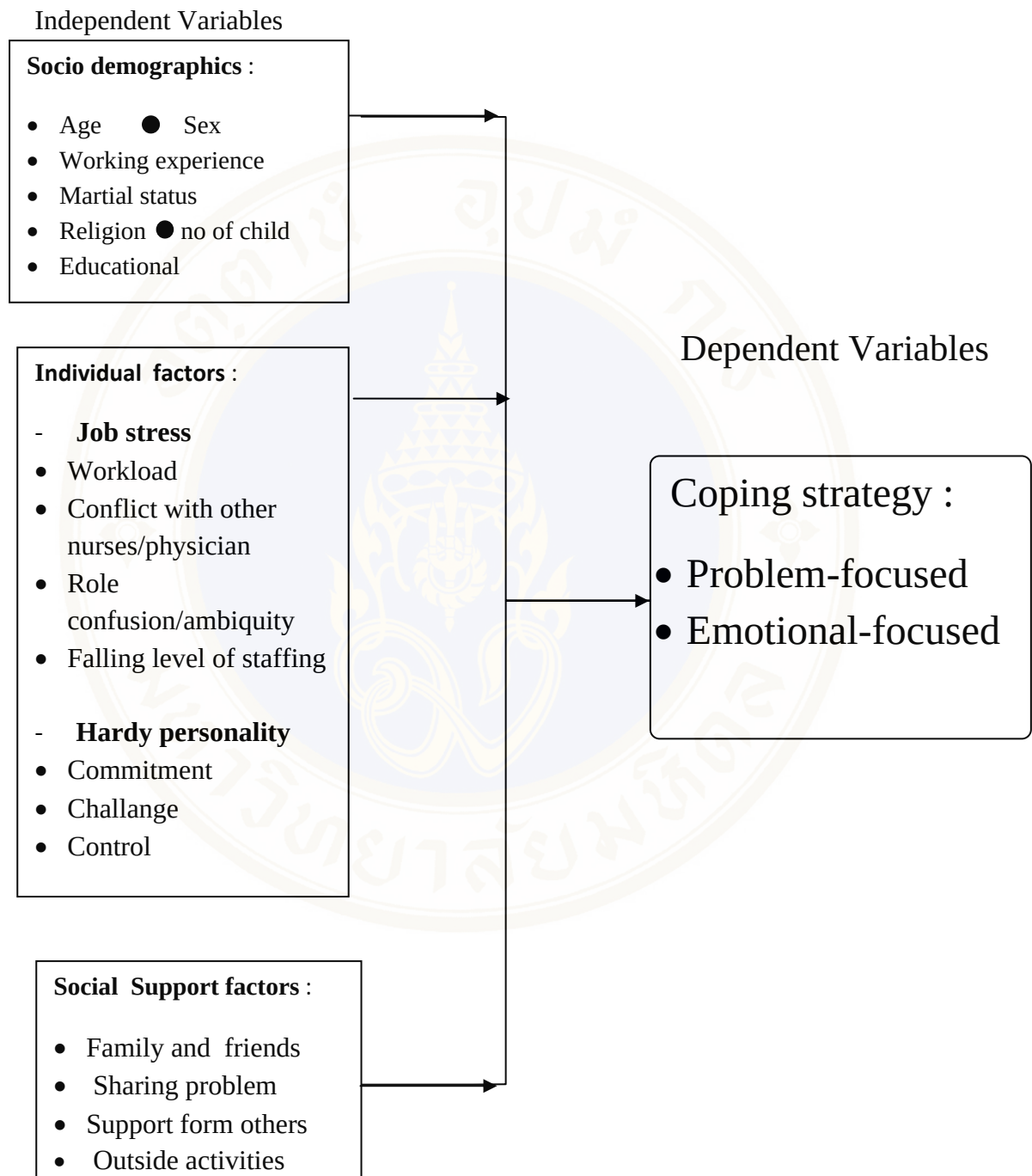


Figure 1.1 Conceptual framework

1.5 Operational definitions

1.5.1 Independent variables :

Socio-demographics: this refers to individual characteristics of East Nusa Tenggara nurses including age, marital status, number of children, religion, and education level.

Job Stress: refers the failure to cope emotional and physical situations in work where nurses are so overwhelmed that they cannot cope adequately with the physical or emotional situation. In this study, job stress includes work loads, conflict with other nurses/physicians, role confusion/ambiguity and Falling level of staffing. Job stress level was measured on a 0 – 3 scale, where 0 mean never get stressed and 3 mean frequently experienced workplace stress. The result will be presented as two groups which are “low level of stress” and “high level of stress”

- **Workload:** refers to how heavy nurses' working load were. The amount of labour, working hours or tasks she have to do and measured on a 0 – 3 scale, which explained if nurse have workload in daily activities, she felt never experience stressful situation (0) or very frequently (3).

- **Conflict** with other nurses/physicians : means disagreements among nurses, and between nurses and other health care professionals. It includes opinions, supporting other ideas, clashes within groups and with other groups, lack of mutual assistance between nurses' and other groups, and personality clashes which create problems for nurses. This is measured on a 0 – 3 scale ranging which from never get stressed to very frequently get stressed because of this event.

- **Role Confusion/Ambiguity** : means confusion or uncertainty about tasks or roles or responsibilities resulting in misunderstanding with patients or colleagues. In this study, this event will be measured with score 0 – 3 scale which never stress until very frequently get stressed in this way.

- **Falling level of staffing** : refers to lack of staff because of others leaving for upgrading their skill and qualification or decreased the number of staff for specific reasons and is measured on a 0 – 3 scale as a stressful event or not a stressful event for nurse who experience this condition.

Hardiness: is defined as a nurse characteristic comprising the dimensions of commitment, control and challenge in dealing with daily work situations. The hardy personality will be measured by using Likert Scale (0 means “not at all true”, 1 means “a little true”, 2 means “a quite true” and 3 means “completely true”). The result will be presented as two groups, “high hardy personality” and “low hardy personality”

- **Commitment:** refers to a nurse’s belief in the truth, importance and value of herself, and her work. This includes the tendency to be involved in all activities of life, including work, interpersonal relations, and social institutions.
- **Challenge :** refers to the belief that change, in contrast to stability, is a normal characteristic of life. Seeing our difficulties as a challenge rather than as a threat and accepting that the only thing in life that is constant, is change.
- **Control :** refers basically to the trend to act as if she (nurse) could influence the course of event. She can control the flow of the events.

Social Support : is defined as the product of interpersonal relationships that has the potential to promote the well being or coping abilities of individuals. It also includes emotional support rendered by relatives, spouses or other family members, m colleagues, co – workers and nursing supervisors.

5.1.2 Dependent variables

Coping strategies refers the cognitive and behavioral actions made by nurses to master, tolerate, or reduce external and internal demands and conflicts. How a nurse copes with stressful situations and manage them as outcomes for the situation. This study will use two strategies: Problem-Focused and Emotional-Focused. The two strategies will be measured by using a fourpoint Likert scale (0 means “does not apply or is never used” to 3 means “used a great deal”). The result will showed as two group,” rarely used” and “often used”.

- **Problem-focused coping** is defined as a nurse’s strategies that attempt to do something constructive about stressful condition in her working environment.

- **Emotion Focused coping** is defined as nurse's strategies that attempt to regulate the emotional consequences of stressful event.

1.6 Limitation of the study

This research is a cross sectional study and is limited by the lack of time collecting the data, produce the whole thesis. The study group composes nurses from four districts and one municipality in Timor Island. There are geographical barriers in this region which influence the selection of sampling technique and the HCCs'. This study is confined only to the particular or specific geographical setting and population under study. Some nurses may be absent and have outside duty while the research is conducted.

Therefore, the result of this study cannot represent the general situation in East Nusa Tenggara Province. Another limitation is this study use self administered questionnaire and could have been affected by the environment; participants feel shy to express their attitudes or experiences or forget about the experiences related to objectives of this study. There was also an administration bias occurred in this study.

1.7 Expected Outcome

This study provided information and data about job stress, hardi personality, socio-demographics, social support and how the coping strategies were used by nurses in HCCs'. The findings can be used as a reference for policy maker from provincial until health care centre level to improve work place, job specifications, training, assessment, staffing and replacement so that nurses can give good quality service.

CHAPTER II

LITERATURE REVIEW

This chapter shows concept of job stress, job stressors, hardiness personalities, socio-demographics and social support. It also presentate the concept of coping stress, coping strategies, coping outcomes and model of coping.

2.1 Concept of Job stress

Stress develop through interaction between and individual and the work environmental. The individual workers also has a role to paly in decreasing organizational stressor.

Cooper et al., (1987) and Sutherland et al., (1988). have identified intrinsic job factors (e.g. poor working conditions and work overload), role in organizations (e.g. role conflict and role ambiguity), career development (e.g. lack of promotion policies and job security), poor relationships at work, and organizational culture (e.g. politics in organizations and lack of participation in decision-making) as organizational stressors.(20-22)

Cohen (1989) stated that stress in the workpalce may be defined objectively by the social or organizational properties of the work it self or its setting, time variables, job changes or physical properties of the work environment (23). Work stress can be defined as the harmful physical and emotional responses that occur when the requirements of the job do not match the capabilities, resources, or need of the workers (24).According to Heilegenstein e al.,1996, work stress in the absence of adequate coping resources can contribute to poor health outcomes and a decreased in service provision(25).

The key factors to work stress are psychological job demands (i.e., work load and task demands of a job) decision latitude or control (i.e., the breadth skills usable on a job and the social authority over making decision), and social

support (i.e., the overall levels of helpful social interaction available on the job from both co-workers and supervisor)(26, 27).

2.1.1 Job stress

Occupational/Job stress has attracted increasing public concern during the past three decades, due to its significant impact on economic loss and health damage (28, 29). A study about stress in IC and Non ICU nurse mention that Occupational stress produces negative consequences for workers, such as high health care costs and increased risk for depression and anxiety(26). Nursing provides a wide range of potential workplace stressors as it is a profession that requires a high level of skill, team working in a variety of situations, provision of 24-hour delivery of care, and input of what is often referred to as emotional labour (26).

French et al. in McVicar (2003) identified nine sub-scales of workplace stressors that might impact on nurses. In non particular order, these are:

- conflict with physicians,
- inadequate preparation,
- problems with peers,
- problems with supervisor,
- discrimination,
- workload,
- uncertainty concerning treatment,
- dealing with death, and dying patients,
- patients/their families.(30)

2.1.2. Workload

Workload is a chief factor producing high level of occupational stress. workers who feel required to work too long and too hard at too many tasks feel more stressed, practice poorer health habits and sustain more health risk than do workers not suffering from overload(31).

Overload may arise not only from too many job demands but also from attempting to combine too many demanding roles. When work overload and pressure

involve responsibility for people, rather than responsibility for things like products, stress may be even greater (31).

2.1.3 Conflict with other nurses or physician

Interprofessional conflict, particularly between nurses and physicians, appears to be more of a problem. The impact of professional conflict as a source of distress is supported by findings that bullying is prevalent. The recent 'Working well' survey for the Royal College of Nursing, 2002 found that 30% of nurses on long-term sick leave reported harassment and intimidation arising from sex/gender, age, race, sexuality or personal clashes as the main cause of their absence(30).

2.1.4 Role Confusion

Since the traditional role of nurses is deeply rooted in the minds of everyone, role confusion is considered a major obstacle for nurses when organizing health promotion activities. Nurses, regardless of whether they work in the community or in hospitals, face challenges when collaborating with other professional disciplines. Frustrations arise when members of the team do not understand their new roles. Difficulties can emerge over role boundaries over the care provided by the team. In this situation, nurses need to be flexible and flexibility causes challenges and frustrations at the same time (32).

In Occupational Stress Handbook, Florence Slepian wrote that each member of team have their own way of decreasing tension during stressful situations. Each may decide about socialization outside of work and these relationship then may lead to role of confusion, role of ambiguity and overlapping(33).

2.1.5 Falling level of staffing

Continued stress over time can have a seriously depressing effect on an individual's job performance and satisfaction. One of the major difficulties that come up in several units was the fact that there was inadequate staffing and the need to have outside staff(33).

According to Demerouti et al. 2000, Learthart, 2000 & McGowan 2001 in Workplace stress in nursing: a literature review, identified lack of reward and shift

working as major sources of distress, but these did not appear as significant stressors in earlier studies. Difficulties with internal shift rotation cause of staff shortages are common reasons for nurses leaving the profession (34-36).

2.1.6 Effect of Job stress

Stress can produce frustration, which is known to cause annoyances and irritation. These mood changes may, in turn, lead to reduced interest in and performance on subsequent task. Workers who cannot participate actively in decision about their job show higher rates of absenteeism, job turnover, job dissatisfaction and lower level of performance(31).

2.2 Hardiness Personalities

According to Florian et al., (1995) stated that hardy persons are easily committed to what they are doing in their lives, believe that they have some control over the causes and solutions of life problems, and view changes in life and adaptive life demands and challenges as opportunities for growth rather than as threats(37).

Hardiness is a personality that seems to have much to do with how an individual handles stress. Hardiness is defined as having sense of control, commitment and challenge towards life in general. Hardy individuals tend to make a positive appraisal of their situation when faced with a stressful life event and, in effect, the stressor becomes an interesting and important entity on which it is possible to act(38).

Previous study had found that hardiness is associated with a tendency to perceive potentially stressful events in less threatening terms, perceive the threatening situation as challenge, and increase optimism about one's ability to cope with the situations(39). According to Mc Crainie et al (1987), hardiness is an important source of resistance against negative effect of stress among health care provider(40). A study about hardiness with registered nurse in Quebec (2001) mention that hardiness is defined as a personality characteristic comprising the dimensions of commitment, control and challenge(41).

Commitment refers to believing in the truth, importance and value of oneself and one's work. This includes the tendency to be involved in all the activities of life, including work, interpersonal relations, and social institutes. Moreover, the quality of commitment also includes a feeling of community and cooperation. Committed people benefit from the feeling, that if necessary, when others must undergo stressful situations, they can help them to deal with them (41, 42).

Control refers basically to the trend to act as if one could influence the course of events. The perception of control allows the person to consider many stressful events as having predictable consequences due to their own activity. Overall is related to the belief that individuals can influence their life experiences(42).

Challenge refers to belief that change, in contrast to stability, is a normal characteristic of life. It is the positive anticipation of change, where change is perceived as stimulating and contributing to personal growth. (41, 42).

Perceived hardiness, work support, and psychological distress seem particularly good predictors of people's overall responses to stressful situations, psychological distress found to be a particularly significant risk factor in the work related stress and burnout literature (43).

According to Duquette et al., (1995) hardiness is an important source of resistance against negative effects of stress among health care provider populations. Nurses who demonstrate more hardiness, more work support, and use active coping strategies perceive fewer occupational stressors and experience less burnout(43). The result in a study about hardiness, work support and psychological distress among nursing assistants and registered nurses in Quebec (2002) showed that hardiness was found to be negatively related to psychological distress. Work support was also negatively correlated with psychological distress, and hardiness was positively correlated with work support (41).

2.3 Socio-demographic

According to findings from a study for nurses in middle-level hospital, nurse demographics are correlated with job, stress response, and job satisfaction (2). Research about Job stress, Job Stressors and Their Effects on Physical Health,

Emotional Health, and Job Satisfaction in a University Staff (1994) found there was a significant effect of age on job stress and job stress factors. In general younger staff reported more job stress than older staff. Job stress factor scores showed that younger staff reported more stress due to job significance than older staff; younger staff also reported more stress as a result of work politics than older staff and they reported more stress due to working conditions than older. On the other hand, older staff reported more stress than younger staff as a result of workload and university reorganization (16).

In the same study, also found that above senior staff reported higher workload stress than all other staff. Support staff, followed by staff below senior technical officer and staff below administrative officer 2 level, reported more work politics stressors than other staff (17). In literature review also reported that differences in nursing experience levels, age and responsibility also influenced coping strategies used to manage the event in comparison of coping subscale(44).

2.4 Social Support

Social support can act as a moderating factor that reduces some of the stressful demands of the work role as well possible ill effect on health. Social support from co-workers plays important roles of coping with potential job stressor (45). Social support is a function of a team which develops over time and which probably the most effectively only after the member feels that she or he was accepted in that team. The sense of belongingness and understandability also supportive to each other during the time of crises or high workload provided immeasurable help in both getting through these kinds of situations and also willing to confront or cope with the stress (46, 47).

In a book of Stress, Lazarus & Folkman (1987), said that “when people are happy and enjoy working together, the positive emotional climate generated by their interaction makes work pleasurable and satisfying. On the other hand if there is an air of tension on the job, people sense it and begin to reflect that tension in their work or in their relationship with the co-workers”. This shows that relationship with others and social support from others is one of the best ways to cope with the

stressful situation at work. Talking with colleagues at work was the important environmental coping mechanism for those in working with patients in care units where the fact it accounted for one third of the environmental coping strategies (9).

2.5 Concept of Coping stress

In a study of job stress for nurses in middle-level hospital stated that the way one chooses to respond to or cope with a stressful situation may be influenced by one's interpretation and explanation of that event. Past work suggests that individuals have stable dispositional tendencies to use positive or negative attributional, or explanatory, styles to interpret and explain the events that occur in their lives (2).

In literature review, coping has also been defined as "efforts to reduce the negative impacts of stress on individual well-being". Coping as a "response set" was characterized by four ingredients: the availability of energy directly focused on potential sources of the difficulty; a clear distinction between events internal and external to the person; confronting rather than avoiding external difficulties; and balancing external demands with needs of the self. Other experts similarly suggests that, to be effective, the individual person must be motivated to cope, have clarified the nature and dimensions of the problem and the reality in which it exists, and then selected the most appropriate resources for the problem at hand(48).

Lazarus and Folkman, 1973 in journal of Advance Nursing (2000) mention that coping is commonly defined as the 'person's constantly changing cognitive and behavioral effort to manage specific external and/or internal demands that are appraised as taxing or exceeding the person's resources (49). The strategies of coping that attempt to bring the organization more nearly into congruence with human and abilities.

The definition of coping has several important aspect. First, the relationship between coping and a stressful event represent a dynamic process. Coping as a series of transactions between a person who has a set of resources, values and commitments and a particular with its own resources, demands and constraints. Coping is not a one-time action from individual takes, rather as a set of

reciprocal responses, occurring over time, by which the environment and the person influence each other. Secondly, the definition clearly encompasses a great many actions and reaction to stressful condition. There are emotional reaction including anger or depression can be thought as a part of coping process to confront the event. In turn, coping efforts are moderated by resources that individual has available (50, 51).

According to some researchs in a study of job stress for nurses in operating room, although a person may use a variety of coping strategies across situations or from one stage to another of a stressful encounter, past research suggests that one's choice of coping strategy can be predicted, in part, by personality characteristics (52). Coping, like the experience of work stress itself, is a complex, dynamic process. Coping efforts are triggered by the appraisal of situations as threatening, harmful or anxiety producing (i.e., by the experience of stress). Coping is an individual difference variable that moderates the stress-outcome relationship.

Coping styles encompass trait-like combinations of thoughts, beliefs and behaviours that result from the experience of stress and may be expressed independently of the type of stressor. A coping style is a dispositional variable. Coping styles are fairly stable over time and situations and are influenced by personality traits, but are different from them. Individual differences in personality, age, experience, gender, intellectual ability and cognitive style affect the way an individual copes with stress. Coping styles are the result of both prior experience and previous learning.

2.5.1 Coping strategy

Lazarus & Folkman (1987) divided coping strategies into two types which is Problem-Focused coping (PF) and Emotion-Focused (EF) coping(9).

Problem-focused encompasses numerous specific coping strategies such as defining problem, generating, evaluating and selecting potential solutions and attempting to cognitively reappraise the situation by shifting level of aspiration, reducing ego involvement, finding alternative channels of gratification or developing new standards of behaviours. PF tends to predominate when people feel that

something constructive can be done, when they view a situation as changeable, or when they confront work related areas.

Emotion Focused includes strategies such as minimization, positive comparisons, seeking positive value from negative events, selective attention, distancing, avoidance, exercise, meditation, use of alcohol, venting anger and seeking emotional support. EF tends to predominate when people feel that the stressor is something to be endured, when they confront personal health issues or when they confront personal health (9, 32).

Generally, PF is associated with positive outcomes and Emotion Focused especially wishful thinking or denial of problem, are associated with poor outcomes. In more recent studies, the researcher found that most people appear to use combination of both emotion and Problem-focused strategies instead of one or the other exclusively, depending on the type of stressor and the situation (9).

Researchs indicates that PF such as problem-solving, is more effective of the two at preventing burnout in nurses. There is evidence that coping dimension being used by nurses vary with experiences and so the workplace may have be flexible in facilitating coping amongst nurses of different level of experience (30) .

Coping strategy can be described with reference to dimensions of complexity and flexibility. People using a variety of strategies exhibit a complex style; those preferring a single strategy exhibit a single style. Those who use the same strategy in all situations exhibit a rigid style; those who use different strategies in the same, or different, situations exhibit a flexible style. A flexible style has been shown to be more effective than a rigid style.

An individual will use a wide variety of spesific coping strategies in managing a singgle stressful event. Some will use problem-focused and others will be used emotional-focused. Which coping strategies will be used and what their effects are depends in a large part on nature of the stressor itself and the problems that are imposed by the particular setting within which the event has arisen. Effectiveness of coping strategies depends on an individual's personality, the type of threat, and the subject well-being, social functioning, and general health of the individual.

Lazarus and Folkman also designed tools to identify the thoughts and actions an individual has used to cope with a specific stressful encounter, which called Ways Of Coping (WAYS). It measures coping processes, not coping dispositions or styles. As the definitive coping measure, the WAYS can assess and identify thoughts and actions that individuals use to cope with the stressful encounters of everyday living. It measures coping processes, not coping dispositions or styles. In a variety of studies, researchers have used it to investigate the components and determinants of coping(53).

There are eight factors measured by WAYS which were (53):

- 1) Confrontive Coping: describes aggressive efforts to alter the situation and suggests some degree of hostility and risk-taking.
- 2) Distancing: describes cognitive efforts to detach oneself and to minimize the significance of the situation.
- 3) Self-Controlling: describes efforts to regulate one's feelings and actions.
- 4) Seeking Social Support: describes efforts to seek informational support, tangible support, and emotional support.
- 5) Accepting Responsibility: acknowledges one's own role in the problem with a concomitant theme of trying to put things right.
- 6) Escape-Avoidance: describes wishful thinking and behavioral efforts to escape or avoid the problem. Items on this scale contrast with those on the Distancing scale, which suggest detachment.
- 7) Planful Problem Solving: describes deliberate problem-focused efforts to alter the situation, coupled with an analytic approach to solving the problem.
- 8) Positive Reappraisal: describes efforts to create positive meaning by focusing on personal growth. It also has a religious dimension.

From this eight factors, represented two types of coping strategies, which were:

Problem-focused coping represented in Planful problem solving, confrontive coping and seeking social support

Emotional-focused coping represented in Self control, distancing, positive reappraisal, escape avoidance and accepting responsibility.

2.5.2 Coping Outcomes

Coping outcomes represent an individual adaptation to a stressor, following from their primary and secondary appraisal. The change of situation, environment, problem or stressor will cause the change of outcome in differing time frame.

Kobasa et al., (1982) stated that individuals who seem to encounter stress and remain healthy are open to change, possess a feeling of involvement in their activities believe that they can control and transform the events of their experiences, and perceive change as an opportunity and a challenge as opposed to a threat. (54)

According to Menaghan (1982) Specific coping efforts are behavioral or intrapsychic actions taken in specific situations that are aimed at reducing a particular problem or strain (55). Nurses who use cognitive and rational coping strategies seems to experience more favorable outcomes (56).

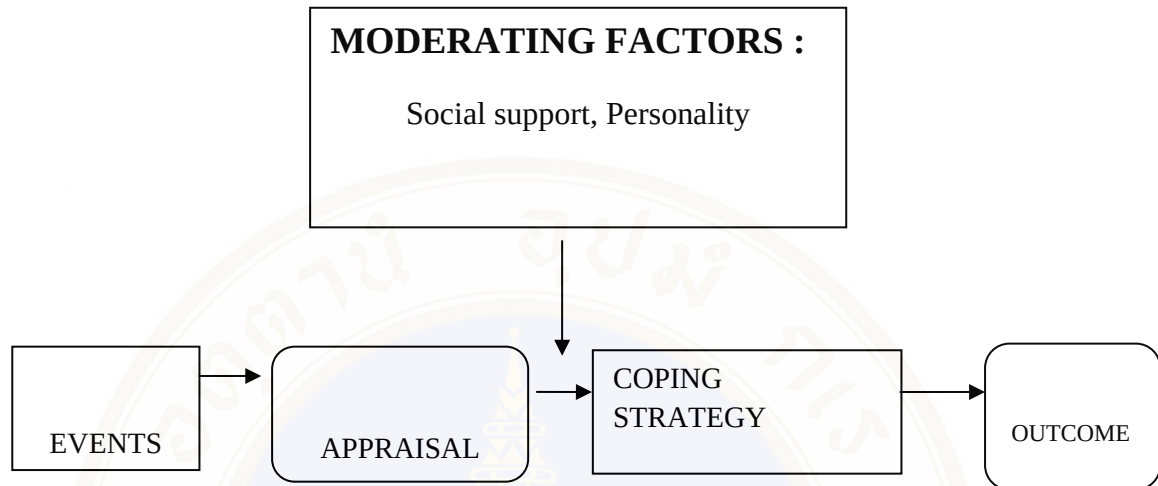
Cohen and Lazarus, 1979 suggested that coping efforts center on five main tasks which are:

- 1) To reduce harmful environmental condition and enhance the prospects of recovery.
- 2) To tolerate or adjust to negative events or realities.
- 3) To maintain positive self image.
- 4) To maintain emotional equilibrium.
- 5) To continue satisfying relationship with others.
- 6) To elaborate, the individual must first deal with the immediate demands of stressor itself. The person must come to terms with any negative and irreversible problem that stressor has produced. (23)

Unsatisfactory coping outcomes have also been associated with confrontive and distancing strategies(9) , and avoidance coping has been related to more complaints of depressed mood and physical symptoms. Roth & Cohen (1986) mentioned that a general lack of flexibility in coping resources has also been found to be maladaptive. The extent to which specific coping strategies result have beneficial outcome, depend on the length of outcome, is short or long term (23).

2.5.3 Model of coping stress

Model stress and coping by Lazarus and Folkman (1984)



Richard Lazarus and Susan Folkman interpretation of stress focused on the transaction between people and their environment (known as Transactional Model). The model conceptualized stress as a result of how a stressor is appraised and how a person appraises his or her resources to cope with the stressor(57).

This model's central tenet is that a potentially stressful event will trigger the primary appraisal process in which an individual assesses the degree of threat in relation to his or her wellbeing. When an event is perceived as threatening or a challenge, the secondary appraisal process provides a global assessment of the individual's coping resources and ability to manage the threat/challenge(58). Coping responses are initiated after the cognitive appraisals and the eventual psycho-physiological experience (stress outcomes) of this potentially stressful event depends on the effectiveness of one's cognitive appraisals and coping processes. The stress outcomes will then feed back to the cognitive appraisal stages for further actions if required.

Coping efforts are triggered by the appraisal of situations as threatening, harmful or anxiety producing (i.e., by the experience of stress). Coping is an individual difference variable that moderates the stress-outcome relationship.

- **EVENT**

The transactional model of stress and coping is a framework for evaluating the process of coping with stressful events. Events may be perceived as positive, neutral or negative in their consequences. As mentioned before, the transactional model deals mostly with understanding the cognitive structure of the stress process and it outlines the importance of its mediation effects on the relationship between environmental events and physical as well as mental well-being. In this way people cognitively interpret situational demands as threatening their physical and psychological health constitute the central focus of the stress process. Thus, as the model has been derived from the cognitive appraisal paradigm, the main emphasis is on the assessment of individual perception (i.e., subjective measuring) of stress, whereas the advocates of epistemological paradigm emphasized the importance of obtaining objective measures of occupational exposures and hard outcomes (58).

The sequence of influence between primary appraisal and secondary appraisal does not always present itself as one being more important than the other (i.e. primary vs. secondary), or that one always precedes the other (9). Their relationship is far more dynamic but as a basic process Lazarus and Folkman conceptualised a linear sequence flowing from primary to secondary appraisals to coping and eventually, to stress outcomes as a reflection of the basic pathways within the dynamic process. Therefore the key premise of Lazarus and Folkman's transactional model is that primary appraisal, secondary appraisal and coping strategies mediate the relationship between stressor and the individual's stress outcomes. (58)

- **APPRAISAL**

Stressful experiences are construed as person-environment transactions. These transactions depend on the impact of external stressor. This is mediated by firstly the person's appraisal of the stressor and secondly on the social and cultural resources at his/her disposal. (23, 57)

Psychological stress, particular relationship between person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering the wellbeing. As this approach, the theory determines two

processes : cognitive appraisal and coping as critical mediator stressful person – environment relation and their immediate stress outcome.(5, 9, 49)

When faced with a stressor, a person evaluates the potential threat (primary appraisal). Primary appraisal is a person's judgment about significance of an event as stressful, positive, controllable, challenging or irrelevant. Facing a stressor, the second appraisal follows, which is an assessment of people's coping resources and options(23). Secondary appraisal address what one can do about the situation. Actual coping efforts aimed at regulation of the problem give rise to outcomes of the coping process. (57).

According to Lazarus and Folkman (1987) how individual perceive the problem determine what coping strategies they will use and also how person has appraised the situation will determine what coping strategies one may use. The way a person copes will depend on one's general health beliefs, social support and physical resources (9).

- **PRIMARY APPRAISAL**

Lazarus (1987) maintains that when individual confront a new or changing environment, they engage in process of primary appraisal, to determine the meaning of the event. As discussed before, event may be perceived as positive, neutral or negative in their consequences. Negative events are further appraised for their possible harm, threat or challenge. "Harm" is the assessment of how much damage that has already been done by an event. "Threat" is the assessment of possible future damage that may be brought by the event. Finally, events may be appraised as "challenge" which is the potential ultimately to overcome and profit from the event (9)

A study about the Importance of primary appraisal in the experience of stress from college student viewed a gruesome film showed that stress was not only intrinsic to the gruesome film itself but also depended on the viewer's appraisal of it. Once primary appraisal of potential stressful event has occurred, secondary appraisal initiated(59).

- **SECONDARY APPRAISAL**

Secondary appraisal is the assessment of one's coping abilities and resources and whether or not they will be sufficient to meet the harm, threat and challenge of an event.

- **MODERATING FACTORS**

One study about workers in government agency found that the greater the workload, the higher was the worker's blood pressure; but for those who had supportive relationship with their supervisor, workload was not tied to high blood pressure. This showed social support can act as a moderating factor to reduce some of the stressful demands of work role as well as possible ill effect on health (60).

A person personality can make affect the amount of stress experiences and that can promote the coping effectivity. Kobosa (1979) studied middle – and upper-level business executive found out that their sense of commitment, control and challenge; hardy individuals may appraise potential stressful life events more favorably than individuals who are not so hardy (54).

In this study, model stress and coping by Lazarus and Folkman, 1984 gives the idea and input for the framework. The transactional model deals mostly with understanding the cognitive structure of the stress process and it outlines the importance of its mediation effects on the relationship between environmental events and physical as well as mental well-being. The ways in which people cognitively interpret situational demands as threatening their physical and psychological health constitute the central focus of the stress process. This model helps the researcher to understand and generalize the workplace stressor from nurses and followed by the action or strategy the nurse took which influenced by sociodemographic, personality and social support and finally the outcome from that strategy which is the final effort of coping itself (9, 58).

CHAPTER III

RESEARCH METHODOLOGY

3.1 Research design

This is a quantitative cross sectional descriptive research to study factors related to coping strategy from nurses work in Health Care Centre on Timor Island at East Nusa Tenggara Province. Permission to conduct this research was granted by the Ethics committee at The Mahidol University, Sayala – Thailand.

3.2 Study area

The study will be conducted in Timor Island, East Nusa Tenggara Timur, Indonesia. Timor island is purposively selected because the capitol city (Kupang Municipality) is located in this island. This island is also the centre of health service referral system and health education, including nursery. There are five districts which are Kupang Municipality, Kupang, South Central Timor, North Central Timor and Belu District.

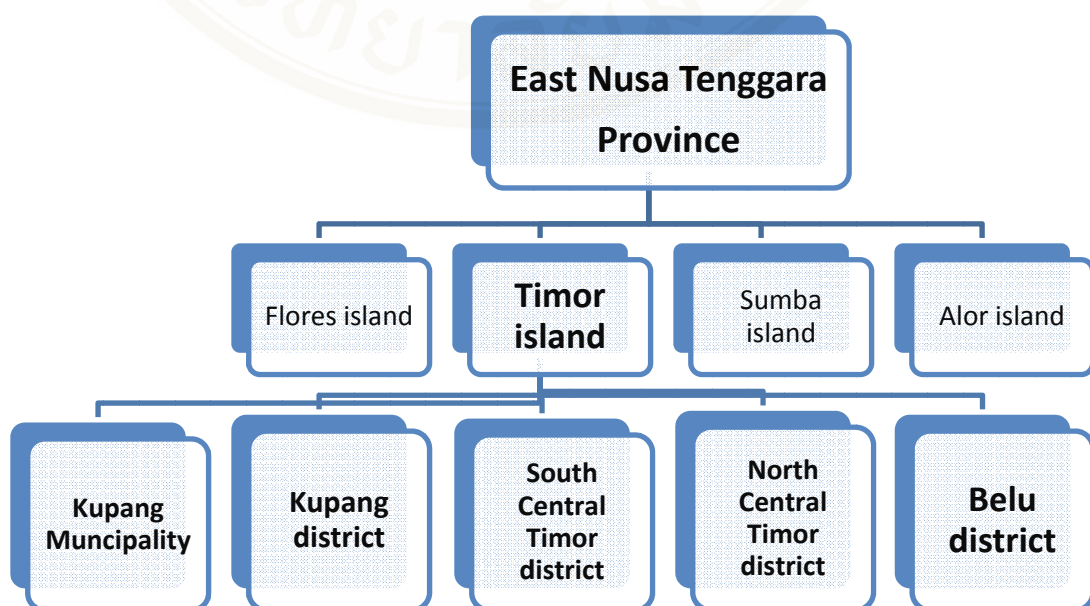


Figure 3.1 Regional area of East Nusa Tenggara Province



Figure 3.2 Map of East Nusa Tenggara Province

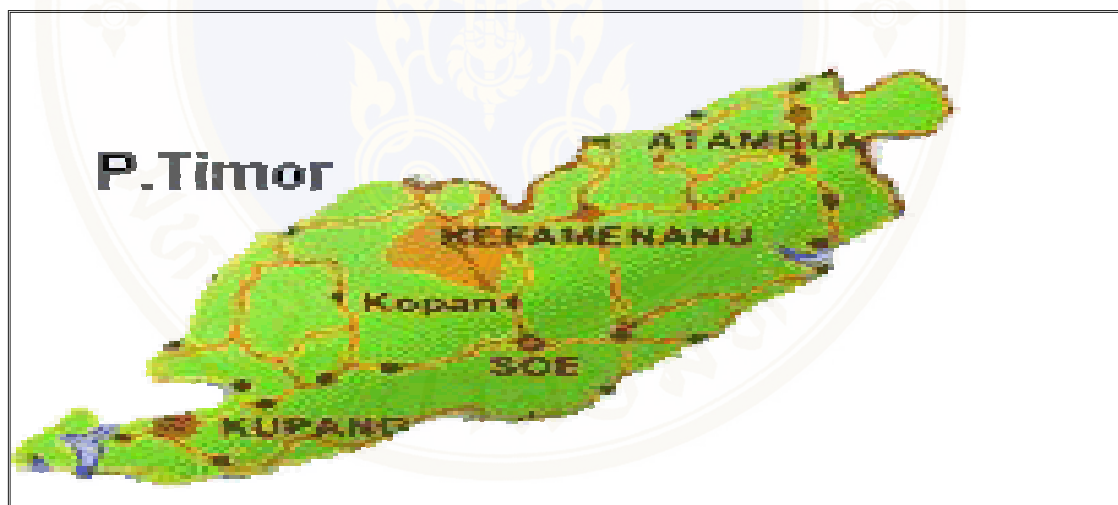


Figure 3.3 Map of Timor island

3.3 Study Population

Participant in this study are nurses working in Health Care Centers (puskesmas) in Timor island, East Nusa Tenggara Province. There were three hundred and twenty-two (322) nurses who work in puskesmas joined this research. “Nurse” refers to any person who graduated from nursing school in Indonesia and working in health care center as a civil servant.

The number of nurses in East Nusa Tenggara province and Timor Island will show as below (Table 3.1 and Table3.2)

Table 3.1 Number of Nurses in Health Care Center, East Nusa Tenggara Province, 2009

NO	DISTRICT/ MUNICIPALITY	HEALTH CARE CENTRE	Medical Personel			
			NURSE			
			BACHELOR NURSES	DIPLOMA	UNDER DIPLOMA	SUM
1	2	3	4	5	6	7
1	Sumba Barat	6	0	13	74	87
2	Sumba Timur	17	0	38	90	128
3	Kab. Kupang	23	1	53	95	149
4	TTS	26	3	83	29	115
5	TTU	15	3	54	115	172
6	Belu	21	0	72	155	227
7	Alor	20	0	6	62	68
8	Lembata	9	3	41	70	114
9	Flores Timur	18	1	48	132	181
10	Sikka	19	0	32	162	194
11	Ende	23	1	60	75	136
12	Ngada	10	1	61	31	93
13	Manggarai	15	2	121	81	204
14	Rote Ndao	12	0	32	21	53
15	Kota Kupang	10	0	77	65	142
16	Manggarai Barat	12	4	136	81	221
17	Manggarai Timur	17	3	160	91	254
18	Nagekeo	7	5	142	38	185
19	Sumba Barat Daya	8	0	25	102	127
20	Sumba Tengah	6	0	8	45	53
21	Sabu Raijua	6	0	7	4	11
TOTAL (PUSKESMAS)		300	27	1.269	1.618	2.914
2008		291	9	957	1.398	2.364
2007		284	16	739	1.664	2.419
2006		264	32	891	2.171	3.094

Source : East Nusa Tenggara Health Profile, 2009

Table 3.2 Number of Nurses in Health Care Center, Timor Island, 2009

NO	DISTRICT/ MUNICIPALITY	HEALTH CARE CENTRE	Medical Personel			
			NURSE			
			BACHELOR NURSES	DIPLOMA	UNDER DIPLOMA	SUM
1	2	3	4	5	6	7
3	Kab. Kupang	23	1	53	95	149
4	TTS	26	3	83	29	115
5	TTU	15	3	54	115	172
6	Belu	21	0	72	155	227
15	Kota Kupang	10	0	77	65	142
TOTAL (PUSKESMAS)		95	7	339	459	805
2008			9	957	1.398	2.364
2007			16	739	1.664	2.419
2006			32	891	2.171	3.094

Source : East Nusa Tenggara Health Profile, 2009

3.4 Sample Size

The sample size (n) using the proportion formula (61) :

$$n = \frac{Z^2 N P (1-P)}{\overline{Z^2 P (1-P) + (N-1)E^2}}$$

$$\frac{(1.96)^2 (805) (0.5) (1-0.5)}{(1.96)^2 (0.5) (1-0.5) + (805-1) (0.05)^2} = \frac{3.8416 \cdot 805 \cdot 0.5 \cdot 0.5}{3.8416 \cdot 0.5 \cdot 0.5 + 804 \cdot 0.0025} = \frac{773,122}{2.9729} = 260.0565 \sim 260 \text{ nurse}$$

CI = 95% (confidence interval)

E = 5% (acceptance error)

Z = 1.96 (standard normal score at 95% of confidence interval)

N = 805 (total population of nurses in 4 districts and 1 municipality)

P = 0.5 (the largest proportion)

According to above data calculate, the required sample size should not less than 260. In this study, the sample size will be increased by 20% to allow for insufficient information, less of responses rate and incomplete answers. So, the final sample size for this study are :

$$260 * 20\% = 52 \rightarrow 260 + 52 = \mathbf{312 \text{ nurses}}$$

According to calculation the sample size were 312 but in order to avoid the unexpected events, the sample size were added up until 322 nurses.

3.5 Sampling technique

East Nusa Tenggara province consists of twenty one (21) districts, two hundred and eighty – five (285) sub districts, 2.469 villages. East Nusa Tenggara province divided into four big island which are Flores, Timor, Sumba and Alor, and well known as FLOBAMORA. Since there are geographical obstacles in most of district and the limitations for this study, Timor island have been purposively chosen for this study.

Timor island consists of five (5) districts which are Kupang Municipality, Kupang, Kupang, South Central Timor, North Central Timor and Belu District. In this island there are ninetyfive health care centers and eight hundred and five (805) nurses spread in that health care centers. There are differences in number of nurses in each health care center. The reason for purposive sampling have been explained.

3.6 Data collecting tools and methods

A self administered questionner were given to nurses di Puskesmas. Participant were requested to describe their own experience about everyday work related stress, how they handled, cope with it and their hardy personality. They were asked with questions on four point Likert scale for stress scale for job stress, hardiness personality and Ways Of coping for coping strategy.

Participants also were requested to fill their demographics factors and about their social support. For all of this factors, there were 80 questions present in this study. The questionnaire had been tested on sample in Kupang Municipality and

Kupang district. Questiones were originally constructed in English languages and later translated into Bahasa Indonesia. The questionnaire comprised in 5 parts.

3.6.1 Demographics

Demographic information collected from each participant included: age, gender, number of children, level of education, number of years worked, working unit, shifts, trainning or other courses. Demographics questions are in Appendix A, contained 14 basic questions for respondents.

3.6.2 Social support

This part were asked about respondent's friends and relationship between family, partner, colleagues. This part also asked about respondent's activities outside routine work. This part is on Appendix B, contains 6 questions.

3.6.3 Nursing stress scale

Gray-Toft and Anderson (1981, 1981b, 1983) designed an instrument to measure the frequency in which hospital nurses suffered work-related sources of stress: the Nursing Stress Scale (NSS). In their study they obtained a factor structure of 7 dimensions: Death and dying, Conflict with physicians, Inadequate preparation, Lack of support, Conflictwith other nurses, Work load, and Uncertainty concerning treatment.

Other research about nurses stress studied some of stress sources such as too much work, interpersonal relations and relations with hospital administration, role conflict and ambiguity appears also related to nurses occupational stress (46). Work overload, relations with other staff, difficulties with critically ill patients, treatment of patients, and dealing with difficult or helplessly ill patients was done by Dewe, 1987 (62).

The Nursing Stress Scale (NSS) measures the frequency and sources of the stresses nurses experience at work and consists of thirty-four potentially stressful situations measured on a four-point Likert scale (0=“never” to 3=“very frequently”). The stressful situations were originally identified from the literature examples of items include “conflict with a physician” and “role conflict”. Gray-

Toft and Anderson (1981a) state that “internal consistency measures exceeded 0.70 for all components with the exception of two subscales (p. 640). Gray-Toft and Anderson (1981b) reported test-retest reliability over a two week period for the total scale at 0.81. They presented four measures of internal consistency: a) Spearman-Brown (0.79), Guttman Split-Half (0.79), Alpha Coefficients (0.89) and the Standardised Item Alpha was 0.89. Gray-Toft and Anderson (1981b) examined the validity of the NSS comparing it to other stress measures such as state anxiety. The resulting correlation was 0.39.(63)

In This study, questions about nurses job stress are in appendix C, divided into 4 (four) factors which are :

I. Factor I: Conflict with other nurses/physicians

There are 7 (seven) questions to see this factor (Q1 – Q7)

II. Factor II: Workload

There are 5 (five) questions to see this factor (Q1 – Q5)

III. Factor III: Falling level of staff

There are 4 (four) questions to see this factor (Q1 – Q4)

IV. Factor IV: Role confusion/ambiguity

There are 5 (five) questions to see this factor (Q1 – Q5)

Scoring was used in this scale 0 until three, and added up all the score . After that, total score were divided into two group which were high level of stress and low level of stress. Normality test were conducted and for this part, found not normal distribution, so median were used as cut off point. Median were used to divide the group. If the total score lower until equal to median means low level of stress and if higher than median was high level of stress.

3.6.4 The Abridged Hardiness Scale – revised

Because hardiness is a constellation of personality demension (i.e., commitment, control and challange) it is measured by five scale each rovide negative indicator of hardiness. Raw score are trasformed into standard score and these are added accross the five sub scale into produce a total overall hardiness score.

Intercorrelations between subscale on The Abridged Hardiness Scale are all substantial ($r = .17$ -.17 mean $r = .42$) and highly significant ($\alpha; p < 0.005$) and

Cronbach's Alpha (a second measure of interval consistency) is .81. a principal components factor analysis performed on the subscale reveals at first and only large factor "general hardiness" that accounts for 46.5 % of total variance. Also the hardiness composite has shown a stability correlation of 0.61 over a five years period (39).

The Abridged Hardiness Scale, revised from Kobasa, 1985 Personal Communication consists of 20 items answered on four point scale from 0 (not at all true) to 3 (completely true) (54). In this study, by using four point Likert scale (from 0 until 3), there will be eleven (11) questions in Appendix D spread in each subscale which are :

1. Commitment

Is measured by the alienation from self and alienation from work scale of the alienation test scale reflect a "lack of involvement with one's destructive skills, sentiments and values and a passive attitude towards personal decision making and goal setting". In this study commitment present in Q1 – Q4

2. Challenge

This measured "the degree to which safety, stability and predictability are deemed important". Person scoring high on this scale are unlikely to perceive changes at stimulating challenges to growth (54). In this study challenge dimension present in Q5 – Q8

3. Control

The control dimension of hardiness is measured by three items from "Powerlessness scale of the alienation test". It measures "cognitive control or the ability to find meaning in stressful life events (54). In this study this dimension present in Q9 – Q11

Scoring were used to see the level of hardy personality. The score were added from each number into each subscale. After scoring, each subscale were grouped as low and high hardy (from each sub components) by using median as cut off point. If score lower until equal were low hardy and if higher than median were high hardy personality. Median were used as cut off point because when normality test were conducted, the result found that this part were not normal distribution.

3.6.5 Ways of Coping Questionnaire

The Ways of Coping Questionnaire from Folkman and Lazarus (1980) consists of sixty-six questions categorised into seven subscales. The subscales used in this study were “planful problem solving” and “confrontive coping” to represent problem-focused coping. “Escape-avoidance” and “distancing” were used to represent emotion-focused coping. “Social support” has components of both problem and emotion-focused coping depending on how it is used.

The subscales used in this study are identified in the literature in relation to work stress. Lazarus and Folkman (1984) report internal consistencies for the scales as planful problem solving (0.68), confrontive coping (0.70), distancing (0.61), and escape avoidance coping (0.72). In order to respond to the coping questionnaire the nurses were asked to identify a Job stressful event in the past 2 weeks and to indicate the extent to which they used the coping strategies to deal with that event. The questions were rated on a fourpoint Likert scale (0 means “does not apply or is never used” to 3 means “used a great deal”).(9)

In this study, there are 28 (twenty-eight) questions about coping strategy. This 28 questions contains 8 (eight) factors in Appendix E which are :

1. The first factor Planful problem solving includes five items. There are three items were loaded on Planful Problem Solving . (Q2, Q11, Q16)
2. The second factor, Distancing was identified by four items. (Q4, Q9, Q18, Q26)
3. The third factor, Escape Avoidance, identified by three items (Q3, Q10, Q23)
4. The fourth factor, which call Self Control, was identified by three items. (Q5, Q13, Q20)
5. The fifth factor, Seeking Social Support, was identified by four items. (Q8, Q17, Q22, Q28)
6. The sixth factor, Positive Reappraisal, was identified by three items. (Q7, Q12, Q24)
7. The seventh factor, Confrontive coping, was represented by three factors. (Q1, Q15, Q21)

8. The last factor, Accepting Responsibility was identified by four items. (Q6, Q14, Q19, Q25)

As for two type of coping were represented in eight factors as followed:

1. Problem-focused coping represented in planful problem solving, confrontive coping and seeking social support.
2. Emotional-focused coping represented in self control, distancing, positive reappraisal, escape avoidance and accepting responsibility.

In this part, after scoring, the total score from each part were divided into two group, Problem-focused and emotional-focused. In each two group, the total group were divided into two categories, rarely used coping and often used coping. Median were used as cut off point for total score. If the total score below until equal to median were rarely used coping strategy and if above median were often used coping strategy. Median were used as cutt of point because when normality test were conducted, the result found that this part were not normal distribution.

3.7 Data collection procedure and Pre - test

The data collection conducted after received the approval from Ethics Committee of Mahidol University on 24th January 2011.

The questionnaire originally was constructed in English language and were translated into Bahasa Indonesia. Before data collection, pre-test were conducted Kupang Municipality and Kupang District on 30 nurses. Pre-test was tested for reliability using Cronbach Alpha and KR Coefficient. The result of reliability test is shown in table below :

Table 3.3 The reliability result of pre-test

Variables	Result of Pre-test
Job Stress (Nursing Stress Scale)	0.83
Hardiness personality	0.61
Coping strategies (WAYS)	0.93
Overall questionnaire	0.83

Pre-test and data collection were executed according to this steps :

a. Reported to Provincial Health Office about the research and asked the letter of recommendation for conduct the research in Five districts.

b. Asked permission to Municipal and districts Health Office for giving the letter of recommendation and ask the letter of permission for conduct the research.

c. Got to selected puskesmas to give the letter of recommendation and permission to head of each puskesmas.

d. Met the nurses and gave the questionnaire for them to fill it. Questionnaire were given along with letter of consent and instruction to coordinator for each puskesmas.

e. Before fill the questionnaire the researcher gave the explanation and asked the nurse or coordinator to read the instruction of this research and make sure they understand and know that all the information are classified.

f. Consent were obtained from each nurses using Research Project Summary Statement and Informed Consent approved from Ethic Committee Mahidol University (MU.SSIRB 2010/129.2112)

g. Collecting data from nurses

h. Editing and verifying the questionnaire for data analysis.

NOTE : Because this study is conducted in five districts, after went to Kupang Municipality and do all the steps (c – f) the next day the researcher will go to Kupang district and do the steps, after that to South Central Timor, North Central Timor and Belu District. Each district will take three until four days to conduct all the steps (c – f). To help this study, the researcher will cooperate with one coordinator in each puskesmas or pointed person from health office.

The number of puskesmas in each districts and Municipality were different and according to geographical situation, the length of data collection in each district and municipality were different.

3.8 Data analysis and procedure

- After examining and correcting returned questionnaires, then the data was edited, coded and analyzed by using Epidata version 3.2 and Minitab version 14.
- Descriptive statistic will be used to calculate frequency, means, standard deviations, and ranges.
- Chi-square tests procedures were used to analyze the relationships between the dependent variable (coping strategies) and independent variable (socio-demographics, individual factors and social support).
- After that multiple logistic regression were used to see the predictors for the used of coping strategies.
- The level of significant was at 0.05

CHAPTER IV

RESULTS

The study was conducted to identify and study significant factors related to nurses' coping strategies working in Health Care Centers in five districts on Timor Island. Data were collected in Health Care Centers (puskesmas) in five districts Kupang Municipality (8 puskesmas), Kupang District (8 puskesmas), South Central Timor (2 puskesmas), North Central Timor (10 puskesmas) and Belu District (10 puskesmas). 322 nurses participated in this study and were given the self administered questionnaire. The study identified respondents sociodemographic characteristics, individual factors (job stress and personality) and social support as Independent variables.

This was a descriptive cross-sectional study. Variables are described in terms of frequency and percentage distribution. The associations between each independent variable and the dependent variable were calculated using chi-square tests. The strength of association and the significant predictors were measured using multiple logistic regression. The findings are presented in three parts as follows :

- 4.1 Tables of frequency and percentage distribution for each variables
- 4.2 Association between various Independent variables and the dependent variables
- 4.3 Multiple logistic regression of dependent variables

4.1 Tables of frequency and percentage distribution for each variable

Table 4.1 Frequency and precentage distribution by socio-demographic factors

Variables	Number (n= 322)	Percentage (%)
Age years		
20 – 30	140	43.5
31 – 40	112	34.8
41 – 50	61	18.9
51 – 54	9	2.8
Min = 20 Max = 54 Median = 31 QD = 6.5		
Gender		
Female	248	77
Male	74	23
Marital Status		
Single	74	23
Married	244	75.8
Divorce	1	0.3
Widow/Widower	3	0.9
Number of Children		
No Children	86	26.7
1	52	16.2
2	91	28.3
3	51	15.8
4 – 7	42	13
Min = 0 Max = 7 Median = 2 QD = 1.5		
Religion		
Catholic	209	64.9

Table 4.1 Frequency and precentage distribution by socio-demographic factors (cont.)

Variables	Number (n= 322)	Percentage (%)
Protestan	88	27.3
Moslem	22	6.8
Buddhist	1	0.3
Others	2	0.6
Highest level of Education		
Nursing School	140	43.5
Nursing Diploma	171	53.1
Bachelor degree in Nursing	7	2.2
Other bachelor degree	4	1.2
Currently taking course/clasess		
Yes	43	13.4
No	279	86.6
Working experience in HCC		
0-1 years	54	16.8
2-5 years	96	29.8
6-10 years	54	16.8
11-15 years	47	14.6
16 - 33 years	71	22.1
Min = 0 Max = 33 Median = 6.5		QD = 6.5
Working experience asa nurse		
0-1 years	27	8.4
2-5 years	81	25.2
6-10 years	64	19.9
11-15 years	58	18
16-33 years	92	28.6
Min = 0 Max = 33 Median = 10		QD = 6.5

Table 4.1 Frequency and percentage distribution by socio-demographic factors (cont.)

Variables	Number (n= 322)	Percentage (%)
Primary Unit of assignment		
Outpatient	248	77
Dental	38	11.8
Mother and child	11	3.4
Pharmacist	1	0.3
Ward	17	5.3
Emergency	1	0.3
Administration	6	1.9
Unit of assignment more than one (all)		
Yes	179	55.6
No	143	44.4
Other unit off assignment (n=179) *		
* more than one answer		
Outpatient	73	40.8
Dental unit	12	6.7
Mother and child unit	26	14.5
Laboratorium	15	8.4
Pharmacist/Drugs unit	72	40.2
Ward	26	14.5
Emergency	46	24.7
Administration	99	55.3
Type of shift		
Morning	50	15.5
Afternoon	21	6.5
Evening	14	4.4
Don't have shift	237	73.6

Table 4.1 Frequency and precentage distribution by socio-demographic factors (cont.)

Variables	Number (n= 322)	Percentage (%)
Special trainning related to nursing (n=322)		
Yes	85	26.4
No	237	73.6
Type of special trainning (n=85)		
IMC	11	12.9
Planning	8	9.4
Manajemen/finance	62	4.7
Other	4	72.9

Table 4.1 shows that the median age was 31 years; almost 80% were 20 – 40 years old and 21.7% were 40 – 54 years old. Three-fourth respondents were female and a quarter were male. About 75.8% are married, less than a quarter were single (not married, divorced and widow/widower). 56.6% of the respondents had 1 to 2 children, a quarter of respondents had 3 to 7 children, and 6% had no children. Most of the respondents were Christian (64.9% Catholic, 27% Protestant and Advent 0.6%) and the rest were Moslem 6.9%. Half of the nurses had nursing diplomas (53.1%), 43.5% attended nursing school, and the rest had bachelor degrees (2.2% nursing bachelor degree and 1.2% other bachelor degree).

Regarding work experiences in puskesmas, 29.8% had 2 until 5 years, 22.1% had 16 until 33 years of working, 16.8% had 0 until 1, 18.6% for 6 until 10 years, and the rest were 14.6% for 11 until 15 years. For nursing experiences more than a quarter respondents worked for 16 until 33 years, 25.2% for 2 until 5 years experiences, 19.9% for those who work for 6 until 10 years, 11 until 15 years were 18% and the rest were 8.4% for 0 until 1 year worked as a nurse. There were more than three quarters respondents main unit assignment were in Outpatient unit, 11% were in dental unit, 5.3% were in wards, the rest were spread in administration, mother and child units, emergency and pharmacy.

About half of respondents claimed that they had other unit to serve and administration was the most chosen among them. Almost three-fourth of the respondents said that they did not work in a shift in their work. About 73.6% said that they didn't have special training related to nursing. For those who had attend the training, almost three-quarters respondents attended several kind of short courses, 12.9% for Integrated Manajemen of childhood illness, the rest for planning (9.4%) and Manajemen/Finance (4.7%).

Table 4.2 Frequency and percentage distribution by social support

Variable	Number (n= 322)	Percentage (%)
Friends in working place		
Yes	316	98.1
No	6	1.9
No. of Friends (n=316)		
1 – 2	47	14.8
3 – 5	64	20.1
6 – 10	54	17
11 – 15	21	6.6
16 – 20	21	6.6
21 – 60	111	34.9
Min = 1 Max = 60 Median = 10 QD= 16.5		
Share Problem with others		
Never	16	5
Occasionally	208	64.6
Always	98	30.4
Staying with		
Alone	20	6.2
Nuclear (only with husband/wife and/or children)	203	63
Family	86	26.7
Friends	13	4

Table 4.2 Frequency and percentage distribution by social support (cont.)

Variable	Number (n= 322)	Percentage (%)
Support from family/friends		
Never	5	1.6
Occasionally	66	20.5
Always	251	78
Other activity outside the routine work		
Yes	215	66.8
No	107	33.2
Kind of activity (n= 215)		
Monthly gathering	149	69.3
Sports	24	11.2
Organisation	15	7.0
Others	27	12.6
Religious meeting		
1 / month	151	46.9
1 / 2 weeks	25	7.8
1 / 1 week	146	45.3

Table 4.2 shows that almost all of the respondents claimed to have friends in their work places; 39.9% had 1 to 5 person and more than one-third had 21 – 60 friends. About 64.6% occasionally share their problem with others, more than a quarter always shared their problems, and the rest 5% never shared their problems. Nearly two-third from all respondents lived with their families as nuclear families (63%), 26.7% had big families, 4% with friends and only 6.2% lived alone. More than three-quarters respondents were always supported from their families, friends or relatives. 20.5% were occasionally supported and 1.6% were never supported.

Two-third of the respondents had other activities outside their routine work and more than half of them chose monthly gatherings as their activity. Nearly half of the respondents attended religious meeting once a month, 45.3% once a week and 7.8% for once in two weeks.

Table 4.3 Frequency and percentage distribution by individual factors - Job stress

Variables	Higher than median		Lower until equal to median	
	(n=322)	(%)	(n=322)	(%)
Conflict with other nurses/physician Min : 0 Max :17 Median : 7 QD : 1.5	96	29.8	226	70.2
Workload Min : 0 Max :15 Median : 6 QD : 1.5	123	38.2	199	61.8
Falling level of staff Min : 0 Max :14 Median : 4 QD : 1.5	156	48.4	166	51.6
Role confusion Min : 0 Max :12 Median : 4 QD : 1	156	48.4	166	51.6
Overall level of job stress Min : 0 Max :53 Median : 21 QD : 5.5	151	46.9	171	53.1

Table 4.3 shows job stress from respondents which used median as cut point. This variables contained four factors and the measurement for the stress were divided into two groups which were high level of stress (the skor was higher than median) and low level of stress (the score was lower until equal to median).

Conflict with other nurses/physician were measured from seven questions which contained interpersonal conflict or disagreement with other nurses/physician. There were almost three quarters of the respondents had low level of stress and only 29.8% claimed of having high level of stress in terms of conflict with other nurses or physician. For workload factors, contained five questions which measured situation that individual was expected to do more than he/she able to do or unsupportive working environment. In this factor, more than half of respondents had low level of stress for workload factors (61.8%) and 38.2% had high level of stress.

In terms of falling level of staff, which measured from five statements about staff formation or adequacies in their working area, there were 51.6 % had low level of stress and 48.4% had high level of stress. When answered about role of confusion factors which contained four questions to measure ambiguity about tasks in routine work, half of respondents claimed having low level of stress (51.6%) and 48.4% answered high level of stress.

Overall of job stress in this research, which measured from four factors (conflict with other nurses/physician, workload, falling level of staff and role confusion) and used median as cut of point (score higher than median as high level of stress and lower until equal to median as low level of stress), found that more than half respondents (53.1%) claimed having low level of stress, meanwhile 46.9% had high level of stress.

Table 4.4 Frequency and percentage distribution by three subcomponents of Hardiness personality

Variable	Number	Percentage
	(n)	(%)
Commitment		
- Low commitment	229	71.1
- High commitment	93	28.9
Min : 0 Max : 8 Median : 1 QD : 0.5		
Challenge		
- Low Challenge	190	59
- High Challenge	132	41
Min : 0 Max : 12 Median : 5 QD : 1.5		
Control		
- Low control	176	54.7
- High control	146	45.3
Min : 0 Max : 8 Median : 1 QD : 1		

Table 4.4 shows the measurement about hardy personality from nurse. There were three components to see hardy personality, there were Commitment, Challenge and Control. For this factor, median are used as cut of point. Subscale were computed, with higher scores (above median) reflected more/high level of hardiness and lower scores until equal to median were less/low level of hardiness.

For Commitment which measured the capacity to engage in daily activity in four questions, found that 71.1% had low commitment and 28.9% high commitment. Challenge which see the positive anticipation of change and measured

with four questions found that more than half of respondents were low challenge and 41% were high challenge.

For control which were the related to belief of individuals influence capacity, found that there was 54.7% respondent had low control and 45.3% respondents had high control.

Table 4.5 Frequency and percentage distribution by Hardy personality

Group	Commitment	Challenge	Control	Number (n=322)	Percentage (%)
1	High	High	High	41	12.7
2	High	Low	High	102	31.7
3	Low	High	High	16	4.9
4	Low	High	Low	34	10.5
5	Low	Low	High	17	5.3
6	High	High	Low	41	12.7
7	High	Low	Low	45	13.9
8	Low	Low	Low	26	8.1

Table 4.5hardiness as a set of personality, shows that there were several combination from three sub-components. 31.7% were high commitment, low challenge and high control. 13.9% were high commitment, low challenge and low control. 12.7% were high commitment, high challenge and low control whereas 10.5% were low commitment, high challenge and low control. There were 5.3% respondents had low commitment, low challenge and high control. About 4.9% had low commitment, high challenge and high control. For those who had high hardi personality were 12.7% and 8.1% respondents were low hardi personality.

Table 4.6 Frequency and percentage distribution by coping stress (per each subcomponents)

Variables	Lower until equal to median		Higher than median	
	Number (n=322)	Percentage (%)	Number (n=322)	Percentage (%)
Planful Problem Solving Min : 0 Max : 9 Median : 7 QD : 1	229	71.1	93	28.9
Distancing Min : 2 Max :12 Median : 5 QD : 1	194	60.3	128	39.7
Escape Avoidance Min : 0 Max :9 Median : 5 QD : 1	184	57.1	138	42.9
Self Control Min : 0 Max : 9 Median : 5 QD : 1.5	206	64	116	36
Seeking social support Min : 0 Max :12 Median : 8 QD : 1.5	180	56	142	44
Positive reappraisal Min : 0 Max :9 Median : 8 QD : 1	209	64.9	113	35.1
Confrontive coping Min : 1 Max :9 Median : 5 QD : 1	183	56.8	139	43.2
Accepting Responsibility Min : 2 Max :12 Median : 8 QD : 1	202	62.7	120	37.3

Table 4.6 shows about 8 (eight) factors to measure two types of coping strategy. Median were used as cut of point to see the use of coping strategies. For score that low until equal to median was marked as rarely used coping strategies and higher than median as often used coping strategies.

Planful problem solving contained three questions which measured action oriented to alter the problem, found that almost three-fourth respondents were rarely using planful problem solving and only 28.9% were often using. For distancing contained four questions which measured effort to minimize significant of the situation, found 60.3% claimed they rarely used and 39.7% were often using coping strategy. Escape avoidance contained three questions which measured

behavior effort to escape the problem, said that half of respondents (57.1%) were rarely use escape avoidance factor and only 42.9% were often using coping strategies.

Self control which saw attempts to control feelings and action, measure by three questions found that there were 36% often using self control as one way to cope with stress meanwhile more than half (56%) were rarely using coping stress. For seeking social support was the degree to which individuals seek for information, emotional and tangible support as a means of coping with stress, claimed that there were 56% respondents rarely using it but 44% said that they often using this type of coping.

In terms of positive reappraisal contained three questions and measured effort to create positive meaning to counter stressful situation, found that almost three-quarters of the respondents were rarely using coping strategies and 35.1% were often using it. When answered three questions about confrontive coping which measured aggressive effort to alter stressful situation, there were 56.8% said that they rarely used this coping strategies and for those who often used were 43.2%. For accepting responsibility in four questions about how individu attempt to put things in order, about 62.7% claimed that they rarely using this coping strategies but 37.3% said that they often using it.

Table 4.7 Frequency and percentage distribution by coping strategies

Variable	Number	Percentage
	(n)	(%)
Problem-focused Coping		
- Often used	158	49.1
- Rarely used	164	50.9
Min : 5 Max : 30 Median : 20 QD : 2.5		
Emotional-focused Coping		
- Often used	149	46.3
- Rarely used	173	53.7
Min : 6 Max : 49 Median : 32 QD : 4		

Table 4.7 shows overall score about the used of coping strategies. There were two big categories for coping strategies which were Problem-focused (planful problem solving, distancing and escape avoidance) and Emotional-focused (self control, seeking social support, positive reappraisal, confrontive coping and accepting responsibility). Median used as cut off point to measure the usage of type of coping. For often used, the score were higher than median and for the score below the median was marked as rarely used.

So, for Problem-focused coping there were 50.9% respondents claimed that they rarely used this type of coping and 49.1% were often used it. For emotional-focused coping, there were 53.7% rarely used this type of coping meanwhile 46.3% were often using it.

Table 4.8 Distribution coping strategies used by respondents

Group	Problem-focused	Emotional-focused	Number	Percentage
1	often	often	105	32.6
2	often	rarely	32	9.9
3	rarely	often	50	15.6
4	rarely	rarely	135	41.9

Table 10 shows distribution of coping strategy that used by respondents. There were 41.9% of respondents were rarely used Problem-focused and emotional-focused. 32.6% were often used coping strategies, 15.6% were rarely used Problem-focused and often used emotional-focused, meanwhile there were 9.9% of the respondents were often used Problem-focused and rarely used emotional-focused.

4.2 Association of various Independent variables with the dependent variable

In this study, Chi square test were initially proposed to be used to measure the association between dependent and independent variables. In order to fit the data to be measured by chi square test, it had to be grouped according to its category.

Chi square test was used to determine the association between coping with stress and the independent variable. If the validity of a chi-square test was doubted, a fisher-exact test was conducted to produce an accepted p.value. All independent variables in this were categorized into groups so they could fit into the equation.

4.2.1 Association between socio-demographic factors and Coping strategies

Table 4.9 shows that of all the independent variables, only gender had a significant association with Problem-focused (p. value : 0.013) and working years experience as nurse had significant association with emotional-focused coping (p.value : 0.034).

Tables 4.9 Association between socio-demographic factors and coping strategy

Variables	Problem-focused Coping				Emotional-focused Coping			
	often used		rarely used		often used		rarely used	
	(n)	(%)	(n)	(%)	(n)	(%)	(n)	(%)
Age group								
20 - 33	93	49.73	94	50.27	83	44.39	104	55.61
34 - 44	46	48.42	49	51.58	44	46.32	51	53.68
45 - 54	19	47.50	21	52.50	22	55	18	45
p value = 0.957					p.value = 0.475			
Gender								
Female	131	52.82	117	47.18	122	49.19	126	50.81
Male	27	36.49	47	63.51	27	36.49	47	63.51
p value = 0.013 *					p.value = 0.053			
Marital status								
married/widow/divorce	121	48.79	127	51.21	116	46.77	132	53.23
single	37	50	37	50	33	44.59	41	55.41
p value = 0.855					p.value = 0.487			
Number of child								
0	43	50	43	50	39	45.35	47	54.65
1-3	93	47.94	101	52.06	87	44.85	107	55.15
4-7	22	52.38	20	47.62	23	54.76	19	45.24
p.value = 0.855					p.value = 0.496			

Tables 4.9 Association between socio-demographic factors and coping strategy (cont.)

Variables	Problem-focused Coping				Emotional-focused Coping			
	often used		rarely used		often used		rarely used	
	(n)	(%)	(n)	(%)	(n)	(%)	(n)	(%)
Education level								
Bachelor	6	54.55	5	45.45	5	45.45	6	54.55
LPN	75	53.57	65	46.43	66	47.14	74	52.86
Nursing diploma	77	45.03	94	54.97	78	45.61	93	54.39
p value = 0.303					p.value = 0.963			
Workyear in HCC								
0-5	66	44	84	56	67	44.67	83	55.33
6-20	80	54.79	66	45.21	16	61.54	10	38.46
21-33	12	46.15	14	53.85	66	45.12	80	54.79
p-value = 0.169					p.value = 0.264			
Working as Nurse (year)								
0-5	51	47.22	57	52.78	50	46.30	58	53.70
6-20	86	50.59	84	49.41	71	41.76	99	58.24
21-33	21	47.73	23	52.27	28	63.64	16	36.36
p value = 0.845					p.value = 0.034*			
Primary unit (n= 322)								
ER/Admin	1	14.29	6	85.71	5	71.43	2	28.57
Lab/pharmcy/war d	9	50	9	50	5	27.78	13	72.22
Outpatient	148	49.83	149	50.17	149	46.27	173	53.73
p.value = 0.146					p.value = 0.109			
Secondary unit (n= 179)								
Lab/pharmcy/war d/er/admin	45	46.88	51	53.13	52	54.22	44	45.83
Outpatient	37	44.58	46	55.42	45	54.22	38	45.78
p.value = 0.758					p.value = 0.995			
Shift (n= 85)								
Morning shift	27	54	23	46	27	54	23	46
Afternoon shift	7	33.33	14	66.67	6	28.57	15	71.43
Evening shift	5	35.71	9	64.29	5	6.26	9	7.74
P. Value = 0.194					p.value = 0.105			
Have spesific trainning (n= 85)								
MTBS/Mjnm/Pln ng	10	43.48	13	56.52	9	39.13	14	60.87
Others	27	43.55	35	56.45	34	54.84	28	45.16
p.value = 0.995					p.value = 0.197			

4.2.2 Association between social support factors and coping strategies

In table 4.10 shows share problem with others (p.value : 0.006) and get support (p.value : 0.001) were found significant association with Problem-focused coping.

Tables 4.10 Association between social support and coping strategies

Variables	Problem-focused Coping				Emotional-focused Coping			
	often used		rarely used		often used		rarely used	
	(n)	(%)	(n)	(%)	(n)	(%)	(n)	(%)
No. Of friends (n=318)								
1-2	21	44.68	26	55.32	22	46.81	25	53.19
3-5	29	45.31	35	54.69	27	42.19	37	57.81
6-10	26	48.15	28	51.85	21	38.89	33	61.11
11-15	8	38.10	13	61.90	6	28.57	15	71.43
16-20	7	33.33	14	66.67	9	42.86	12	57.14
21-60	63	56.76	48	43.24	63	56.76	48	43.24
p-value	0.057				0.118			
share problem								
never	8	50	8	50	7	43.75	9	56.25
occasionally	89	42.79	119	57.21	97	46.63	111	53.37
always	61	62.24	37	37.76	45	45.92	53	54.08
p-value = 0.006*					p.value = 0.972			
live with								
alone	14	70	6	30	8	40	12	60
partner	99	48.77	104	51.23	98	48.28	105	51.27
family	40	46.51	46	53.49	39	45.35	47	54.65
friends	5	38.46	8	61.54	4	30.77	9	69.23
p.value = 0.221					p.value = 0.578			
get supported								
always	135	53.78	116	46.22	119	47.41	132	52.59
occasionally	23	32.39	48	67.22	30	42.25	41	57.75
p value = 0.001*					p.value = 0.441			
other activity								
no	45	42.06	65	57.94	49	45.79	58	54.21
yes	92	42.79	123	57.21	106	48.14	109	50.7
p value = 0.9					p.value = 0.553			

Tables 4.10 Association between social support and coping strategies (cont.)

Variables	Problem-focused Coping				Emotional-focused Coping			
	often used		rarely used		often used		rarely used	
	(n)	(%)	(n)	(%)	(n)	(%)	(n)	(%)
Kind of activity (n= 215)								
Monthly gathering	63	42.28	86	57.72	73	48.99	76	51.01
Sports	13	54.17	11	45.83	13	54.17	11	45.83
Organisation	9	60	6	40	10	66.67	5	33.33
Others	7	25.93	20	74.07	10	37.04	17	33.33
P.value = 0.095					P.value = 0.293			
religious meeting								
1 time/month	57	37.75	94	62.25	71	47.02	80	52.98
1 time/2weeks	13	52	12	48	14	56	11	44
1 time/1 week	67	45.89	79	54.11	70	47.02	76	52.05
p.value = 0.223					p.value = 0.706			

4.2.3 Association between Job stress and Coping strategies

Table 4.11 below shows that each factors from job stress, only workload had a significant association with emotional-focused coping (p.value = 0.037).

Tables 4.11. Association between job stress and coping strategies

Variables	Problem-focused coping				Emotional-focused coping			
	often used		rarely used		often used		rarely used	
	(n)	(%)	(n)	(%)	(n)	(%)	(n)	(%)
Conflict with other nurses/physician								
High level of stress	55	57.29	41	42.71	48	50	48	50
Low level of stress	103	45.58	123	54.42	101	44.69	125	55.31
p.value = 0.054					p.value = 0.382			
Workload								
High level of stress	61	49.59	62	50.41	66	53.66	57	46.34
Low level of stress	97	48.74	102	51.26	83	41.71	116	58.29
p.value = 0.882					p.value = 0.037*			
Falling level of staff								
High level of stress	77	49.36	79	50.64	74	47.44	82	52.56
Low level of stress	81	48.80	85	51.20	75	45.18	91	54.82
p.value = 0.919					p.value = 0.685			

Tables 4.11. Association between job stress and coping strategies (cont.)

Variables	Problem-focused coping				Emotional-focused coping			
	often used		rarely used		often used			
	(n)	(%)		(n)	(%)		(n)	(%)
Role confusion/ambiguity								
High level of stress	76	48.72	80	51.28	77	49.36	79	50.64
Low level of stress	82	49.72	84	50.60	72	43.37	94	56.63
p.value = 0.903					p.value = 0.282			
Nursing Stress Scale (overall)								
High level of stress	81	53.64	70	46.36	74	49.01	77	50.99
Low level of stress	77	45.03	94	54.97	75	43.86	96	56.14
p. Value = 0.123					p. Value = 0.355			

4.2.4 Association between Hardy personality and coping strategies

Table 4.12 shows that there was no significant relationship between hardy personality and coping stress found in this study

Tables 4.12 Association between hardy Personality and coping strategies

Variables	Problem-focused coping				Emotional-focused coping			
	often used		rarely used		often used		rarely used	
	(n)	(%)	(n)	(%)	(n)	(%)	(n)	(%)
Commitment								
Low commitment	45	48.39	48	51.61	45	48.39	48	51.61
High commitment	113	49.34	116	50.66	104	45.41	125	54.59
p.value = 0.876					p.value = 0.628			
Challenge								
Low challenge	89	46.84	101	53.16	81	42.63	109	57.37
High challenge	69	52.27	63	47.73	68	51.52	64	48.48
p.value = 0.338					p.value = 0.116			

**Tables 4.12 Association between hardy Personality and coping strategies
(cont)**

Variables	Problem-focused coping				Emotional-focused coping			
	often used		rarely used		often used		rarely used	
	(n)	(%)	(n)	(%)	(n)	(%)	(n)	(%)
Control								
Low control	67	45.89	79	54.11	68	46.58	78	53.42
High control	91	51.70	85	48.30	81	46.02	95	53.98
p.value = 0.229					p.value = 0.921			
Hardy personality								
High hardy	77	49.68	78	50.32	75	48.39	80	51.61
Low hardy	81	48.50	86	51.50	74	44.31	93	55.69
p. value : 0.833					p.value : 0.464			

4.3 Multiple logistic regression of dependent variables

Multiple logistic regression was used to select the independent variables which were statistically significant as predictors to commonly used of Problem-focused coping and emotional-focused coping strategies. Table 4.13 below shows the model of multiple logistic regression for both coping strategies (Problem-focused coping and emotional-focused coping).

Based on result of Chi-square analysis before (see table 4.9, 4.10, 4.11, 4.12) gender, share problem with others, get support from family and friends were significant association with Problem-focused coping. Nursing working years experience and workload were significant association with emotional-focused coping.

As shown in table 4.13 when applying multiple logistic regression to the model, the following factors were significant as predictors to often used coping strategies. They were:

1. Problem-focused coping

Female were almost two times more likely to often used Problem-focused coping than male when adjusted with others variables (p.value = 0.031). Respondents who were occasionally share problem with others were almost two times more likely to often used this type of coping than those who always shared problem with others when adjusted to other variables (p.value = 0.015). In addition,

respondents who occasionally get support from family or friends were two times more likely to often used Problem-focused coping than those who always get supported from family or friends when adjusted to other variables (p.value = 0.025).

2. Emotional-focused coping

For respondents who had been working as a nurse for 0 until 20 years were less likely to often used emotional-focused than those who had longer working experiences as a nurse when adjusted to other variables (p.value = 0.007). In addition, respondents who had high level of stress in workload were almost two times more likely to often used emotional-focused coping than those who had low level of stress when adjusted to other variables (p.value = 0.011).

Table 4.13 Multiple Logistic Regression of dependent variables

Factors	Coping Strategies			P. Value
	Ajd.Odds	95 % CI		
	Ratio	Lower	Upper	
Problem-focused Coping				
Gender: Male	1.00			
Female	1.85	1.06	3.24	0.031
Share problem : always	1.00			
occasionally	1.87	1.13	3.10	0.015
Get support : always	1.00			
occasionally	1.94	1.09	3.47	0.025
Emotional-focused Coping				
Nursing years : 21 - 33	1.00			
0 - 20	0.40	0.20	0.78	0.007
Workload: Low level of stress	1.00			
High level of stress	1.84	1.15	2.95	0.011

So, when adjusted to others variables, nurse who occasionally get supported from family or friends was the strongest predictor for often used Problem-focused coping. As for emotional-focused coping, nurse who had high level of stress

was the strongest predictors to often used emotional-focused coping when adjusted to others variables.



CHAPTER V

DISCUSSION

322 nurses who work in health care centers on Timor Island, East Nusa Tenggara completed a self administered questionnaire from the end of January to first of May 2011. The results were :

1. 49.1 % of the respondent were often used Problem-focused coping and 50.9% were rarely used this type of coping.
2. 46.3% were often used emotional-focused coping and 53.7% were rarely used it.
3. Gender, share problem with others and get support from family were the factors that had significant association with Problem-focused coping strategy.
4. Working years experience as a nurse and workload were the factors that had significant association with emotional-focused coping strategy.
5. Respondents who were occasionally share problem with others was the strongest predictor for often used Problem-focused coping and those who had high level of stress was the strongest predictor for often used emotional-focused coping when adjusted to other variables.

According to the result and the methodology used in this study, the discussion part is arranged into 2 sections : the research result and the research methodology

5.1 Research result

5.1.1 Coping Strategies

Almost in every way that we want to see coping, we can say that it has two components: a cognitive and a behavioural component. The cognitive component encompasses an interpretative part that includes a person's beliefs system

about identity of stress, his/her ability to expose, and the way he/she should apply. This study revealed that, there were two coping strategies were used in the study area, Problem-focused and emotional-focused. Based on the answers in the questionnaires, 49.07% of respondents confessed that they often used Problem-focused coping and about 46.27% of the respondents claimed often used emotional-focused coping. Lazarus and Folkman (1984) define coping as “constantly changing cognitive and behavioural efforts to manage specific internal/external demands that appraised as exceeding the resources of the person. The type of coping strategy were divided by Lazarus and Folkman (1984) were Problem-focused strategy and emotional-focused strategy (66). Two dimension of coping as measured in this study were problem-focused coping and emotional-focused coping.

In this study, Problem-focused coping were measured by planful problem solving, seeking social support and confrontive coping. Problem-focused coping are used to solve an existing problem by either changing the situation, one's behaviour, or both(24). In this study, revealed the difference percentage of those who were often used and those who were rarely used Problem-focused coping were 0.89%. according to study by Bowman and Stern (1995), that problem-solving effort are, in fact, perceived to be effective only for occupational situation amenable to change (64). In the other hand, Lazarus and Folkman (1984) which stated that problem-focused coping can be adjusted with other factor such as environment and personality, so the result will come out as expected (65).

In this study revealed that gender were one of the factor that associated with Problem-focused. Previous study by Greenglass (1993) has recently proposed a coping style termed social coping, which integrates social and interpersonal factors with cognitive factors. Her research showed significant relationships between various kinds of social support and coping forms (e.g., problem-focused and emotion-focused). Women, generally possessing relatively greater interpersonal competence, were found to make greater use of social coping which refers to Problem-focused coping ”(66). If related to independent factor such as job stress, we can see the fluctuation between often used and rarely used especially in conflict with other nurse/physician and workload (see in table 5). This condition compare with a study from Tyson et al.2000, had the same founding that nurse who perceived occupational

stress resulting from high levels of workload used Problem-focused coping more often (67).

For personality as a moderating factors, found that 49.68% respondents who high hardy personality were often used Problem-focused coping meanwhile 50.32% were rarely used it. Kobasa et al, (1983) explained that the high hardy person, might not only try to have the decision reversed or look for another choice (control), but also get information about what happened (commitment) and consider how the decision might actually be an important for the goal or action (challenge). Hardy individuals tend to make positive reappraisal of their situation when faced with a stressful life event also know how to use social support to reinforce their ability to manage situations. Social support in this study, revealed as get support from family or friends and share problems with others were the important factors to often used this type of coping. According to Maddi & Kobasa(1984), work support is documented as a key contextual resource for coping with occupational stressor (83).

Emotion-focused coping strategies are employed to regulate emotional reactions or to make one feel better without actually solving the problem. According to Lund (2008) Emotional-focused coping can be adaptive in dealing with incapability feeling in an unclear situation (68). This finding, explained the result from this study that 46.27% were often used emotional-focused coping because the factors that support respondents to often used this type of coping such as job stress, and hardy personality were low. Lazarus (1984) mentioned that distancing, as one of the emotional coping strategies have been reported to be significantly helpful in situations that are extremely stressful, emotionally distressing and appraised as unchangeable (66). They believe that our emotions are results of our receiving information(65). It is obvious that a person's beliefs about stress and their ability can widely change the way the person responds, that is, his/her behavioural component of their coping responses. Individuals only use emotion focused coping strategies if they were sure that there was a chance to manage or alter the stress sources or demands from the situation(69).

So, as for the nurses in this research study because half the respondents had low level of stress, it explained the percentage of those who rarely used were bigger than those who often used. In addition, it can also be explained by assumption

that the choice of coping options is determined by internal and external factors. Personal agenda (e.g., beliefs, values, experience) and resources (e.g., financial or social support) influence the outcome. Coping is not a one time action from individual takes, it's a dynamic process of transaction between coping and stressful events. Coping styles encompass trait like combinations of beliefs and behaviours that result from experiences. An individual may, at certain times, rely more heavily on one form of coping, and at other times, use a variety of strategies as a stressful event unfolds. The successful utilization of coping responses facilitates resilience and adaptation to stressful situations(24).

5.1.2 Association between socio-demographic characteristic and coping strategies

- **Age and coping strategies**

Most of the respondents were in age group 20 to 40 years old. This situation can be describe because all the respondents were civil servant and that group of age were in age group of acceptance and promotion to became a civil servant(70). Acceptance means someone who reply as a civil servent, were accepted and become a civil servent, the minimum age were 20 years old and the maximum age were 35 tahun. Promotion means that, those who worked as contract employee in government area for more than 5 years, had a chance to became civil servent. However, there was no significant association found between age and coping strategies.

- **Gender and coping strategies**

More than thrid-quarters respondents were female and there were a significant association between gender and coping strategies. Female was also significant as predictor for often used Problem-focusedcoping strategy when adjusted with other variables (see table 4.13). This result were similar with a study by Giankos (2000) on gender based analysis of coping found women were more likely than men to used direct coping when dealing with stress by working longer and harder(71).

In contraty, Lazarus and folkman (1984) found that socio-demographic have effect but not direct, but rather reflect the interaction with, and influence of

“type of stress” or situational context, for example when contextual effect are ignored, men appear to use more Problem-focused and woman more emotional-focused. These apparent gender differences, actually reflect that men reported more work related stress while women reported more health concern. Those who experienced work related stress tend to promote higher level of Problem-focused while health-related problem generate emotional-focused(66). It appears the difference in situational context of stress are responsible for the apparent gender differences in the use of different coping strategies.

- **Number of children and coping strategies**

There were more than 36.3% had 2 childrens, 20.6% had 3 children, 20.2% respondents only had 1 child and for 4 – 7 children only 16.9%. Almost all groups of in this variables shown more percentage in rarely used both coping strategies (see table 4.9). These finding were similar to a study of job stress in Yulin and Chiayai Counties (2009) that nurses with more than two children perceived the lowest level of job stress across all factors(52). This situation might happened because of nurses who had more children place more value on their family and had more life experiences. Spent time with children can be ways of releasing work stress and relaxing time. In this research, there was no significant association between number of children and coping strategies.

- **Working experiences in health care centre and coping strategies**

For working experiences in Puskesmas, there was no significant association found (see table 4.9). There were more than a quarter of the respondents had 2 until 5 years working experiences in puskesmas and 16 to 33 years were 22.1%. For 0 until 1 year and 6 until 10 years got 16.8% for each groups. This findings were supported by Burgess et al., 2010 in the United Kingdom, which set out to investigate the relationship between personality traits, perception of workplace stress and coping among intensive care unit (ICU) nurses. The authors found that, the higher the number of years experience, the lower the level of perceive stress(45). It is likely that as nurse become more experienced, they benefit from a decentralised management style which result in higher level of autonomy. Thus they are able to develop an internal locus of control over their working environment and hence reduce their perceived workplace stress (72). So, if they had lower perceived of

working place, the usage of coping were also low because of coping will be used in order to alter the stress. In this study showed that there was no significant association with dependent variable.

- **Working experiences as a nurse and coping strategies**

For working experience in nursing, there are 28.6% respondents had 16 to 33 years of working as a nurse and a-quarter have 2 until 5 years working experiences. For those who work as a nurse within 6 until 10 years are 19.9%, 11 until 15 years 18% . this study revealed that there was significant association between nursing years and emotional-focused coping ($p\text{-value} = 0.034$). Similar founding with a study about workplace stressor and coping strategies among chinesse psychiatric nurse (2008), there were significant positive correlation between years of nursing and emotional-focused coping. As the employed nurse's age increases, so does he number of years she or he spends working in nursing on a particular unit. Therefore, the longer they work, the familiar they became with the conditions and the common they found a way to cope with stressfull situation (73).

- **Unit of assignment**

There were more than three-quarters from all respondents said that outpatient unit as their primary unit in their puskesmas. Meanwhile only half from all said that they also had another unit to serve, and administration was the most choosen unit. In this variables, there was no significant association found with unit of assignment and coping strategies (see table 4.9). This finding were supported by other studies which indicated that the overall level of stress experienced by ICU nurses is no greater than experienced by nurses working in other setting (45, 74).

Other explanation was, nurses often enjoy good working relationship with their colleagues(72, 75). This positive features that were characteristic of spesific working place of friendship may be sufficient to protect nurses from stressor that arise from demanding levels of care that they provide, so the usage of coping will be lesser in their daily work. There was also evidance from Lee & Ellis (1990) that the coping dimension employed by nurses vary with experience and so the workplace may had to be flexible in facilitating coping amongst nurses of different levels of experience(76).

5.2.2 Association between social factors and coping strategies

- **Number of friends in working place and coping strategies**

Almost all respondents (98.1%) answered they have friends in their working place but the number of friends were variety. For more than half of the respondents said that they had 21 until 60 friends, 20.1% answered for 3 until 5 persons and also 17% said they had 6 until 10 friends in their working places. In this study, there was no significant association found with coping strategies, but in some ways, there were a association with Problem-focused coping (p.value = 0.057). This condition can be explained by a study McIntosh (1991) mentioned nurses accessed social support more often experienced higher level of stress and when coping with one's emotions, often allows a person to then proceed with more problem-focused way of coping (77). This assumption supported by LaRocco et al., (1980) said that social support from co-workers was an important way to reduce stress (78). So for nurses that had some friends in their work place, experienced low level of stress and rarely used the coping stress also because coping stress, especially problem-focused coping will emerge as soon as individual felt that he/she can't control the situation (64). In addition, according to Parkes (1986) Social support was a complex interactive and may be one important coping mechanism for nurses in rural areas (79)

- **Share problems with others and coping strategies**

For this variable, almost third-quarters respondents said that they were occasionally share their problems with family or friends. It revealed that there was a significant association between this factor to Problem-focused coping (p.value = 0.006). A study by Sullivan (1993) found that social support may be one of important coping for nurses. Nurses with social support can express their feelings and obtain more emotional and instrumental help in stressful condition(80). Individual who have shared their problems with friends or co-workers, enabling them to utilize the most effective coping strategies that work for them as individuals.

When adjusted to other variables, this factor was one of strong predictor for often used Problem-focused coping. Previous study by Burnard et al (2000) found that community mental health nurses often relied on such social support such as having friends to share with to cope with a stressful situation. In addition, peer

support, personal approaches (which included activities such as relaxation and belief in one's own abilities), good communication skills and receiving clinical supervision were the often used coping strategies.

- **Living with family or friends and coping strategies**

There's no significant association found with dependent variables in this variables (see table 4.10). There were 63% respondents in this research said that they live with their partner or and children as a nuclear family. Only two-fourth were lived with family (big family) and others alone or with friends. This situation might happened because almost all the puskesmas are in rural area, so nurses live in houses that provided by government near by the puskesmas and their families lives in the city or other districts. More than half percent of the respondents lived with families were rarely used coping strategies. This situation could be explained by a from Tyler and Ellison (1994) as they identified that nurse living with partner and children had fewer stress symptoms than those with no partner(81). This situation may due to they always share their problem and always get support from their family even friends. So, with their lower level of stress, their used of coping also followed by it, because coping strategies reacted only when individual were in a stressfull or high demand situations.

- **Get support from family or friends and coping strategies**

Almost everyone are happy when friends/relatives or family were there to support us when we had a problem. In this research, there were more than three-quarters respondents said that they always get supported from their families/partner/friends when they are facing some problems. There were significantly association found with the Problem-focused coping (see table 4.10). This result were similar with a study by Ruth Lo (2002) indicated that most nursing students had their family, spouse or partners as their main support system. Social support most commonly refers to function performend (e.g supporting an undividual emotionally), for distress individual by significant others such as family members, friends co-workes, relative and neighbours. Those who get supported, tend to do more Problem-focused in dealing with highly demand situations(82).

When adjusted to other variables, those who occasionally get supported by their families or friends, were two times more likely to often used Problem-

focused coping than those who always get supported. Similar with previous study by Chapman (1993) found that nurse discern less support from colleagues, they feel an increased in job stress, so they more likely to used Problem-focused coping. (83). In addition, nurses are expected to make decision beyond what is commonly considered health care in urban areas. Nurse is always in the public eyes, frequently loneliness prevails, as there are no persons with whom one can share in matter of professional issues. Therefore nurse tend to rely more on Problem-focused coping when dealing with rural community (84). Nurse in rural area become one of important person, role model or even idol. So, if she or he shown that they under stress condition it might be effect people judgment. In conclusion, nurse who were occasionally get supported by family or friends had more likely to used Problem-focused coping due to interactive relationship with communities, environmental and social prespective.

- **Other activities and coping strategies**

Eventhough there was no significant association between this factor and coping strategy, but more than half of respondent said that they had other activities outside the routine work and monthly gathering are the most choosen activity for 215 respondents (see table 4.10). Monthly gatering in East Nusa Tenggara Province, especially in Timor island became a common gathering at all level of society. There were based on ethnics, religions, working place, old friends and other groups. Usually this meeting held once in a month but there are also once in a two months. The aim of this kind of meeting are togetherness, relaxing and refreshing. Maybe this kind of situation explained why almost each of factors in the job stress were low (see table 12), because of they have a space and time to release their stress.

5.2.3 Association between individual factors and coping strategies

- **Job stress and coping strategies**

Result from this study showed that, there was only one significant association between four factors of job stress which was workload and emotional-focused coping ($p.value = 0.037$). This study also revealed that almost half of respondents who experienced high level of stress, especially in workload, they were often used either Problem-focused or emotional-focused coping. Previous study from

LeSergant and Haney (2005) found that 46% of respondents reported workload or overload to be first rank of stressfull condition in working place (85). In addition, Hatrick and Hills (1993) interviewed 23 nurses to determine their perceptions of stressor in the workplace and found that workload and interpersonal relations with other members of the health care team rank as high stressor(86). In present study, conflict with other nurses or physician also found a slight association with coping strategies ($p.value = 0,054$). Conflict between nurse and health care nurse, according to study by Lesergant and Hanney (2005) as second most stressfull events which identified by 23% of the respondents. Interpersonal conflict seems to be a stressor for both inexperienced and experienced nurses and this situations leads them to emotional-focused coping.

When adjusted to other variables, it showed that conflict with other nurses or physician as one of strong predictors for often used emotional-focused coping. This founding were supported with research from LeSergent & Haney (2004) in the United Kingdom, a positive relationship was found between nursing stress and emotional-focused coping(85). Nurse who felt more stress tended to rely on more emotional-focused coping. The work by Bowman and Stern (1995) also provides evidence to support the concept that coping successfully with work related stress stressor depends on the situation, the appraised level of control and which coping techniques were used to handle the stressful situation(64).

- **Hardy personalities and coping strategies**

According to Kobasa (1979), the effect of hardiness on mental health/stress were mediated by the cognitive appraisal and coping mechanisms of individual(87). Hardy personality is generally associated with increasing challenge and lowering threat, and also increasing secondary appraisal and using Problem-focused coping, it combine beliefs and actions towards stressful situations. Previous study found that hardy persons use more Problem-focused coping and less emotional-focused coping (88). In this study there were no significant found between hardy personalities and coping strategies. Lazarus and Folkman (1984) described three types of beliefs that influences the coping process, general beliefs or dispositions regarding to personal control; existential belief and situational control appraisal or the extent to which persons believe they can shape or influence a

particular stressful person – environment relationship. In this study, these three types or beliefs as we seen in hardy personality were all low and it related to job stress also had low level of stress. So we can conclude that a person with a low level of stress will develop a low level of hardiness as moderating effect and will come up with rarely used coping in Problem-focused and emotional-focused coping (66).

Commitment was measured individual's beliefs of truth and their own values and work. Quality of commitment also includes a feeling of community and corporation. In this study, found that there were almost same proportion of individuals had high commitment were rarely used neither Problem-focused coping nor emotional-focused coping (see table 4.12). This condition might happen because they had friends, good working environment and good interpersonal relationship. Garrosa et al., (2008) mentioned that commitment includes the tendency to be involved in all activities of life including work, interpersonal relations, and social institutions (38). So, individual were good in interpersonal relationship, they will have high commitment, produced low level of stress and also rarely used coping strategies.

Challenge measured individual's belief that change in contrast to stability. In this study, there was no significant association found. This condition can be explained with assumption that, challenge were more seen as finding a new and interesting experiences, how individual's effort to deal with the change. So, for those who had less experiencing the interesting situation and not often deal with change, they were rarely used either emotional-focused or Problem-focused coping.

Control refers to trend to act as if a person could influence the course of events. In this research there was no significant association. This may due to perception of control allows the person to consider many stressful event as having predictable consequences because of their own activity. So, we can assume most nurse in this research had a good control of their own activities so they perceived low level of stress and the usage of coping strategies were also low.

5.2 Methodological concern

This study was a cross-sectional, qualitative and descriptive-analyzed study. It was appropriate because its objective was to determine and explore factors related to nurses' coping strategies and analyze the association between coping strategies and study factors at particular time.

5.2.1 Sample

The study group compared 322 nurses who worked in health care centers on Timor Island. From calculation of sample size, the sample was planned 312 nurses. This included the 10% of sample size to prevent information loss from incomplete data or if there was some participants who withdrawn from this research. The sample size then increased to 322, because all the nurses, in pointed health care centre were involved to participate except those who was on leave.

Random sampling by proportion was used to choose health centers in each district and municipality. The locations were chosen by head of district and municipality health office or by officer in charge. Number of puskesmas in each district or municipality were not equal and most of puskesmas were located in rural areas and some in urban . All nurses from choosen health centres were involved in this study. This was appropriate since each district and municipality had different numbers of health care centre.

Since there are geographical obstacles in the area of study, this condition influenced the selection of sampling technique. This study was limited only to the particular or spesific geographical setting and population under resaerch. Therefore, the result of this study may not represent the general situation in East Nusa Tenggara Province, Indonesia.

5.2.2 Research Instrument

In this research, a self administered questionnaire was used for data collection which was developed from a standardized questionnaire. The questionnaire consisted of 5 parts which contained 80 questions. Some questions

about socio-demographic characteristics needed to use jump command to other number, depend on the respondents' answer and also had multiple answers.

Pretest for reliability was conducted in Kupang Municipality and Kupang District with 30 nurses and the results from the pre-test 0.83 (overall score). The pretest was conducted in seven puskesmas in Kupang Municipality and Kupang district in second week of January 2011.

In this study, administrative bias might have happened because the researcher was one of the staff from provincial health office, so respondents might have considered this research as an assessment from provincial health office, therefore their answers might not reflect their true opinions about working conditions, personality and social support. Respondents aware of their involvement and they will give good answer. The true conditions were under reported and because of this situation, the outcome may represent the aim of this study.

5.2.3 Data Collection

This study used a self-administered questionnaire for respondents. In order to minimize bias, in each health centre, the researcher only met their coordinator or person in charge and explained about the questionnaire. The respondents had about 4 or 5 days to complete the questionnaire and the informed consent. Informed consent was given in two language versions, Bahasa Indonesia and English, because almost all the respondents lacked of English language skills. There was no assistance in this research.

5.2.4 Statistical analysis

The characteristics of the respondents and study factors have been described. Analysis of the relationship between coping strategies and independent variables were conducted by using Chi Square and Multiple Logistic Regression.

Data were entered using Epi data and analyzed using Minitab after bivariate analyses, chi-square and simple logistic regression were used to assess the association between each variable from independent and dependent variables. Only the variables that had p-value 0.05 in chi-square test were used in multiple logistic regression analysis.

This study used Chi square test, because it is most appropriate for use with categorical variables and also there were random sampling of the data from a fixed distribution or population. Logistic regression allows one to predict a discrete outcome such as group membership from a set of variables that may be continuous, discrete, dichotomous, or a mix. Since this study used discrete variables for both dependent and independent variables, therefore Logistic Regression was chosen. By using Logistic Regression, the prediction of a discrete outcome (often or rarely used Problem-focused and emotional-focused coping) was obtained from a set of discrete variables (independent variables). Logistic regression also has no assumptions about the distributions of the predictor variables. The predictors do not have to be normally distributed, linearly related, or of equal variance within each group(89).

CHAPTER VI

CONCLUSION AND RECOMENDATIONS

6.1 Conclusion of the study

This cross-sectional and descriptive study was conducted on last January 2011 to first week of May 2001 amongst 322 health care centre (HCC) nurses in Timor Island, East Nusa Tenggara, Indonesia. The aim of this study was to describe and examine the factors related to coping strategies. Those related factor such as socio-demographic characteristics, Individual factors (job stress and hardy personality) and social support. This study used a self-administered questionnaire as the instrument for data collection.

The result of this study found that from Problem-focused coping, there 49.07% were often used this type of coping wheareas for emotional-focused coping, 46.27% of the respondent were often used this type of coping. The difference between often used and rarely use not to much different.

Regarding to the socio-demographic factors, almost 80% were in aged group 20 until 40 years old, more than third-quarters respondents were female, Christian was majority religion with highest level of education were nurse diploma (53.1%). There were 46.6% had 0 until 5 years working experience in HCC, 33.6% had 0 until 5 years working experience as nurse, majority working in outpatient unit and 55.6% of the respondents had more than one unit to serve. Almost three-quarter respondents had no shift and 73.6 % claimed that they never attended special trainning related to nursing.

In terms of Individual factors, 46.9% of the respondents had low level of stress, almost three-quarter had low commitment, more than half of the respondents had low challenge and 54.7% had low control, Regarding to social support, almost all respondents claimed they had friends in their working place, more than a quarter said that they had 1 until 5 persons, 64.6% were occasionally share their problems with others and more third-quarter were living with family. About 78% said that they

always get support from family or friends, more than half of respondents had other activity outside routine work, amongst them, almost three-quarters of the respondents choosen monthly gathering and from all respondents, more than half joined religious meeting once in a month.

Based on Chi-square test, in socio-demographic factors, only gender had significant association with Problem-focused coping. Female were almost two times more likely to often used Problem-focused than men. For emotional-focused, working years of experience as nurse had significant association. Respondents who had 0 until 20 years working as nurse were less likely to often used emotional-focused coping. For individual factors, workload as one of job stress factors had significant association with emotional-focused coping. Respondents with high level stress of workload were almost two times more likely to often used emotional-focused than those who had low level of workload stress. As for social support, respondents who share problem with others had significant association with Problem-focused coping. Those who were occasionally get support from others were almost two times more likely to often used Problem-focused coping. Respondents who get supported from family or friends had a significant association with Problem-focused coping. Nurses who occasionally get supported from family or friends were two times more likely to often used Problem-focused coping than those who always get supported from others.

Based on Multiple logistic regression test, female, respondents who occasionally share problem with others and respondents who occasionally get support from family or friends, were significant predictors of often used Problem-focused coping. Female nurses were almost two times more likely to often used Problem-focused coping, nurses who occasionally shared their problems with others were almost two times more likely to often used Problem-focused coping when dealing with stressfull situation, as well as nurses who occasionally get supported from family or friends, were two times more likely to often used Problem-focused coping. Nurse who had 0 until 20 years working experience as nurse, were less likely to often used emotional-focused and for nurses who experienced high level of workload stress were almost two times more likely to often used emotional-focused when adjusted to other variables.

6.2 Recommendations

Based on findings in this study, there are some recommendations as follows:

6.2.1 Recommendations for policy maker from provincial level until health care centre level

1. In this study, found that nurses in specific geographical area in Timor island had low hardy personality, pre – employment screening of personality and coping traits should be consider, in order to identify staff who exhibit hardiness personality that associated with lower perceive of job stress and coping strategies so they can manage their duty as a nurse which in many literatures had high level of stress work.
2. There 86.6% nurses were not taking course or classes to up grade their level of education. For this condition, should provide more programmes or scholarships, so they can up grade their skills and knowladge in order provide good health service.
3. 73.6% claimed that they never joined or attended special trainning related to nurse. For this condition, give nurses more opportunity to learn other things, attend course or trainning not only related to nursing but other topics related to their dayli jobs or to attend outside meeting so they will have a new knowladge or prespective about things that they never experienced before and preparation when facing the stressfull situations.
4. Interventional programs need to be introduced that designed to improve their coping abilities such as making use of cognitive skills in the face of work-related stress, expressing their feelings to groups, regularly engangin in physical exercise, obtaining more emotional and instrumental help in stressful conditions, keeping their psychology positive and optimistic and also improving relaxation techniques.

6.2.2 Recommendations for nurse in health care centre :

1. Attended or seeking information about the programmes or scholarships which given by government or other parties to up grade the knowladege and skill as a nurse.
2. If there was a invitation or opportunity to attend the short course or trainning related to nursing or other topics that related to dayli job, don't be hasitate to ask permission or offered yourself as a participant in that course or trainning.
3. Monthly gathering as a custom outside activity, this is a good way to share problems or just to relax, so it can reduce the stress.

6.2.3 Recommendations on further research:

1. This study was conducted only in some health care centres in Timor island, due to geographical obstacle and time limitation. Future study about factors realted to nurses' coping strategies should be undertaken by using better sampling technique so the result may represent the population in East Nusa Tenggara Province.
2. For other study about coping strategy, should have more complite questions on coping factors, situational or environment and personality factors because this are important factors to determine what kind of coping strategies and perceptions of stress.
3. With proper sample size and complete questionnaires, correlation and linear reggression could be a better way of measurement the association and it's predictors. Also, by this way it can give more deep information in each factors.

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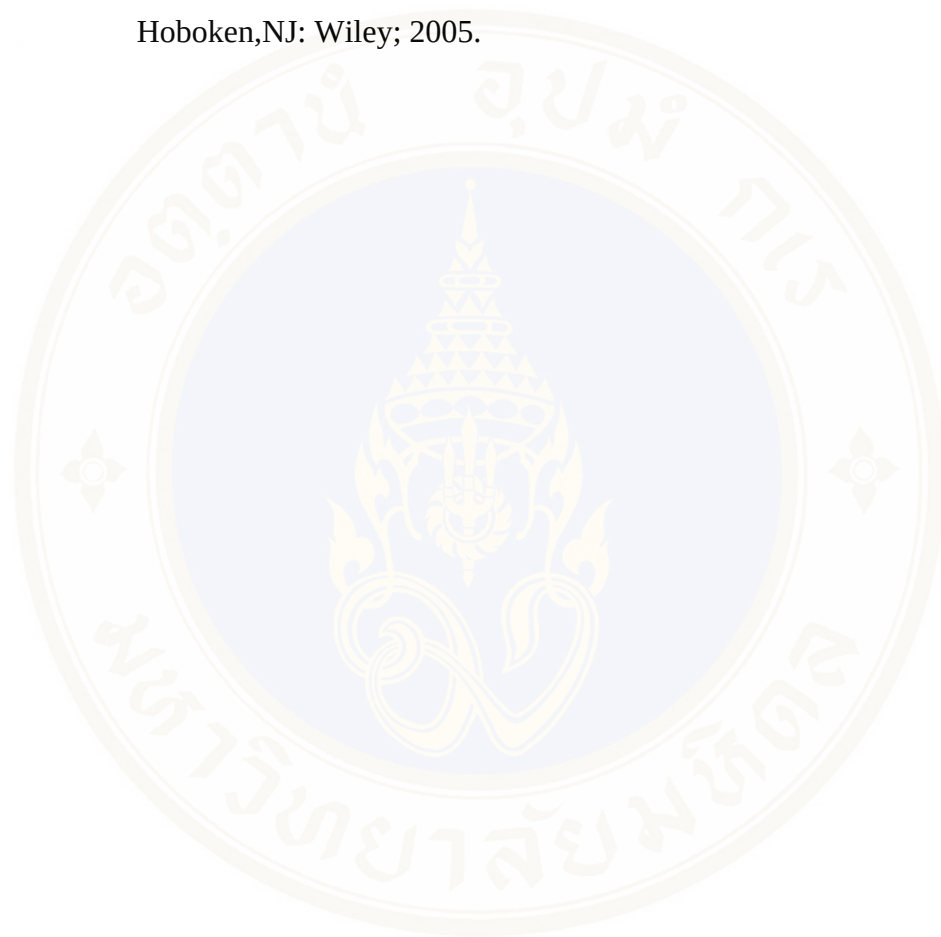
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APPENDIX A

NURSES DEMOGRAPHIC QUESTIONNAIRE

Please fill in the blank or circle or thick [✓] the appropriate number for each item

1. Age
2. Sex ☐ Female ☐ Male
3. Martial status
 - a. Single
If you answer point a go to no.5
 - b. Married
 - c. Divorced
 - d. Widowed
4. Number of children : _____
5. Religion :
 - a. Catholic
 - b. Protestan
 - c. Moslem
 - d. Buddhist
 - e. Hindu
 - f. Other , _____
6. Highest education degree earned :
 - a. Licensed Practical Nurses (LPN)
 - b. Nursing Diploma
 - c. Bachelor Degree in Nursing
 - d. Master of Science/Arts in Nursing (MSN/MA)
 - e. Other bachelors, Masters or other degree. Please specify area

7. Are you currently taking course/college/university classes?

☐ Yes ☐ No

If Yes, what degree are you pursuing ? _____

8. How many years you work in Health Care Centre : _____ years

9. Number of years of nursing experience : _____ years

10. Unit of primary assignment :

- a. Outpatient unit
- b. Dental Unit
- c. Mother and Child Unit
- d. Laboratory
- e. Pharmacist/Drugs Unit
- f. Ward
- g. Emergency Unit
- h. Administration

11. Do you work in more than one unit?

☐ Yes ☐ No

If Yes, go to number 12

If No, continue to number 13

12. Another Unit that i work (more than one answers)

- a. Outpatient unit
- b. Dental Unit
- c. Mother and Child Unit
- d. Laboratory
- e. Pharmacist/Drugs Unit
- f. Ward
- g. Emergency Unit
- h. Administration

13. For nurses who work in IPD HCC, what is the most working shift hour you have?

- a. Morning shift
- b. Afternoon shift
- c. Evening shift

14. Have you ever had specific training (workshop, classes, seminars, lectures, etc) related nursing (within 1 year ago)?

a. Yes

If yes, what kind and how long _____

b. No



APPENDIX B

NURSES SOCIAL SUPPORT QUESTIONNAIRE

Please fill in the blank or circle or thick [√] the appropriate number for each item

1. Do you have close friends in working place?
 - a. Yes
If yes, how many _____ (persons)
 - b. No
2. Do you used to share your problem with your family/partner/friends?
 - a. Never
 - b. Occasionally
 - c. Always
3. With whom do you live ?
 - a. Alone
 - b. Partner (husband/wife)
 - c. Family
 - d. Friends
4. When you are facing some problems, do you often get any support from family/partner/friends?
 - a. Never
 - b. Occasionally
 - c. Always
5. Do you have another activities outside the routine work ?
 - a. Yes
If yes, what kind of activities _____
(example: Aerobics, monthly gathering, fun club etc)
 - b. No

6. How often go to religious meeting (e.g prayer meeting, religious counseling, bible meeting, etc) ?
- a. 1 time per 1 month
 - b. 1 time per 2 weeks
 - c. 1 time per 1 week



APPENDIX C

THE NURSING STRESS SCALE

Directions: Below is a list of situations that commonly occur in a health care centre. For each item tick [✓] how often on your job you have found the situations to be stressful.

Factor I: Conflict with other nurses/physicians

NO	ITEM	Never	Occasionally	Frequently	Very frequently
1	Criticism by a physician/supervisor				
2	Fear of making a mistake in treating a patient				
3	Making a decision concerning a patient when the physician is Unavailable				
4	Conflict with a physician/nurses				
5	Disagreement concerning the treatment of a patient				
6	Difficulty in working with a particular nurse (or nurses) outside the unit				
7	Difficulty in working with a particular nurse (or nurses) on the unit				

Factor II: Workload

NO	ITEM	Never	Occasionally	Frequently	Very frequently
1	No equipment to support the work (e.g Computer, printer, type machine etc)				
2	Not enough time to complete all of my nursing tasks				
3	Not enough staff to adequately cover the unit				
4	Too many non-nursing tasks required, such as clerical work				
5	Unreasonable demands by patients or their families				

Factor III: Falling level of staff

NO	ITEM	Never	Occasionally	Frequently	Very frequently
1	Unpredictable staffing and scheduling				
2	Not enough staff to adequately cover the unit				
3	Other nurses are absent				
4	Other nurses out for school or higher education				
5	Floating to other units that are short-staffed				

Factor IV: Role confusion/ambiguity

NO	ITEM	Never	Occasionally	Frequently	Very frequently
1	Being blamed for anything that goes wrong				
2	A physician ordering what appears to be inappropriate treatment for a patient				
3	Being asked a question by a patient for which I do not have a satisfactory answer				
4	Inadequate information from a physician regarding the medical condition of a patient				

APPENDIX D

HARDINESS QUESTIONNAIRE

The following items consists of attitude with which you may or may not agree. As you will see, many of the items are worded strongly. This is so you can decide the DEGREE to which you agree or disagree. Please indicate your reaction to each item according to the following scheme by thick [✓] :

NO	ITEM	Not at all true	A little true	A quite true	Completely true
1	Most of my life is wasted in meaningless activity				
2	I find it difficult to imagine enthusiasms concerning work				
3	It doesn't matter if people work hard at their jobs, only a few bosses profit				
4	Ordinary work is too boring to be worth doing				
5	I would be willing to sacrifice financial security in my work if something really challenging came along.				
6	Encountering new situations is an important priority in my life				
7	it bothers me when I have to deviate from the routine or schedule I've set for myself				
8	I really don't mind when I have nothing to do				
9	Those who work for a living are manipulated by the bosses				
10	Thinking of yourself as a free person leads to great frustration and difficulty				
11	Often I do not really know my own mind				

APPENDIX E

WAYS OF COPING QUESTIONNAIRE

This part examines about your wide range of thoughts and acts you use to deal with the internal and/or external demands of specific stressful encounters. How do you cope with stressfull situation?

Please thick [✓] the choice that you choose to describe your thoughts and actions :

NO	ITEM	Never used	Rarely used	Oftten used	Used a great deal
1	I let my feelings out somewho				
2	I knew what had to be done, so I doubled my efforts to make things work				
3	Wished that the situation would go away or somehow be over with				
4	Tried to forget the whole thing				
5	Keep ohters from knowing how bad things were				
6	I made a promise to my self that things would be different next time				
7	I prayed				
8	I talked to someone to find out more about the situation				
9	Made light of the situation; refused to get too serious about it				
10	Hoped a miracle would happed				
11	I made a plan of action and followed it				
12	I came out of the experience better then when I went in				
13	I thought about how a person I admire would handle this situation and used that as a model				
14	I apologized or did something to make up				
15	I stood my ground and fought for what I wanted				

NO	ITEM	Never used	Rarely used	Oftten used	Used a great deal
16	Came up with a couple fo different solution to the problem				
17	Talked to someone who could do something concrete about the problem				
18	Went on as if nothing had happened				
19	Criticized or lectured myself				
20	I tried to keep my feelings to myself				
21	I expressed anger to person (s) who caused the problem				
22	I asked a relative or friend I respected for advice				
23	Tried to make myself feel better by eating, drinking or medication				
24	Changed or grew as a person in a good way				
25	Realized I brought the problem on myself				
26	Didn't let it get to me; refused to get too serious about it				
27	I tried to keep my feelings from interfering with other things too much				
28	Talked to someone about how was i feel				

APPENDIX F

TABLES OF INTEREST THAT WAS NOT INCLUDED IN RESULT PART

Table F.1 Frequency and percentage distribution by each item in four factors from the job stress

No	Statements	Never		Occasionally		Frequently		Very Frequently	
		Number (n)	Percent age (%)	Number (n)	Percent age (%)	Number (n)	Percent tage (%)	Number (n)	Percent age (%)
Factor I : Conflict with other nurses/physician									
1	Criticism by a physician/supervisor	58	18.01	237	73.6	25	7.76	2	0.62
2	Fear of making a mistake in treating a patient	50	15.53	218	67.7	46	14.29	8	2.48
3	Making a decision concerning a patient when the physician is unavailable	101	31.37	188	58.39	24	7.45	9	2.80
4	Conflict with a physician/nurse	38	11.8	204	63.35	67	20.81	13	4.04
5	Disagreement concerning the treatment of a patient	75	23.29	200	62.11	41	12.73	6	1.86
6	Difficulty in working with a particular nurse (or nurses) outside the unit	52	16.15	210	65.22	54	16.77	6	1.86
7	Difficulty in working with a particular nurse (or nurses) on the unit	95	29.5	185	57.45	36	11.18	6	1.86
Factor II : Workload									
1	No equipment to support the work (e.g computer, printer, type machine etc)	43	13.35	167	51.86	91	28.26	21	6.52
2	Not enough time to complate all of my nursing tasks	22	6.83	182	56.52	99	30.75	19	5.90
3	Not enough staff to adequately cover the unit	50	15.53	196	60.87	68	21.12	8	2.48
4	too many non-nursing tasks required, suchs as clerical work	57	17.70	184	57.14	67	20.81	14	4.35
5	unreasonable demands by patients or their families	52	16.15	205	63.66	50	15.53	15	4.66
Factor III : Falling level of staff									
1	Unpredictable staffing and scheduling	63	19.57	207	64.29	43	13.35	9	2.80
2	Not enough staff to adequately cover the unit	69	21.43	196	60.87	48	14.91	9	2.80
3	Other nurses are absent	67	20.81	163	50.62	77	23.91	15	4.66
4	Other nurses out for scholl or higher education	154	47.83	139	43.17	23	7.14	6	1.86
5	Floating to other units that are short staffed	136	42.24	150	46.58	27	8.39	9	2.80
Factor IV : Role confusion/ambiguity									
1	Being blame for anything that goes wrong	14	4.35	185	57.45	96	29.81	27	8.39
2	Aphysician ordering what appears to be innapropriate treatment for a patients	24	7.45	172	53.42	99	30.75	27	8.39
3	Being asked a question by a patient for which I do not have a satisfactory answer	47	16.60	205	63.66	57	17.70	13	4.04
4	Inadequate information from a physician regarding the medical condition of a patient	43	13.35	208	64.60	61	18.94	10	3.11

Table F. 2 Frequency and percentage distribution by each item in from the Hardiness Personality scale

No	Statements	Not at all true		A little true		A quite true		Completely true	
		Number (n)	Percent age (%)	Number (n)	Percent age (%)	Number (n)	Percent tage (%)	Number (n)	Percent age (%)
Factor I : Commitment									
1	most of my life is wasted in meaningless activity	276	85.71	45	13.98	1	0.31	0	0
2	I find it difficult to imagine enthusiasm concerning work	220	68.32	98	30.43	2	0.62	2	0.62
3	It doesn't matter if people work hard at their jobs, only a few bosses profit	218	67.70	83	25.78	15	4.66	6	1.86
4	Ordinary work is too boring to be worth doing	257	79.81	60	18.63	2	0.62	3	0.93
Factor II : Challenge									
5	I would be willing to sacrifice financial security in my work if something really challenging came along	59	18.32	192	59.63	30	9.32	41	12.73
6	Encountering new situation is an important priority in my life	19	5.90	98	30.43	83	25.78	122	37.89
7	It bothers me when I have to deviate from the routine or schedule I've set for myself	33	10.25	124	38.51	74	22.98	91	28.26
8	I really don't mind when I have nothing to do	241	74.84	63	19.57	8	2.48	10	3.11
Factor III : Control									
9	Those who work for a living are manipulated by the bosses	200	62.11	101	31.37	12	3.73	9	2.8
10	Thinking of yourself as a free persons leads to a great frustration and difficulty	169	52.48	110	34.16	28	8.7	15	4.66
11	Often I do not really know my own mind	194	60.25	114	35.4	12	3.73	2	0.62

Table F.3 Frequency and percentage distribution by each item from Coping

Table 1: Frequency and percentage distribution by each item from Coping									
No	Statements	Never used		Rarely used		Often used		Used a great deal	
		Number (n)	Percent age (%)	Number (n)	Percent age (%)	Number (n)	Percent tage (%)	Number (n)	Percent age (%)
Planful problem solving									
Q2	I knew what had to be done, so i double my efforts to make things work	10	3.11	17	5.28	163	50.62	132	40.99
Q11	I made a plan of action and followed it	17	5.28	30	9.32	180	55.9	95	29.5
Q16	Came up with a couple of different solution to the problem	6	1.86	20	6.21	187	58.07	109	33.85
Distancing									
Q4	Tried to forget the whole thing	3	0.93	30	9.32	154	47.83	135	41.93
Q9	Made light of the situation; refused to get too serious about it	21	6.52	113	35.09	158	49.07	30	9.32
Q18	Went on as if nothing had happened	45	13.98	139	43.17	117	36.34	21	6.52
Q26	Didn't let it get to me; refused to get too serious about it	21	6.52	129	40.06	138	42.86	34	10.56
Escape Avoidance									
Q3	Wished that the situation would go away or somehow be over with	7	2.17	30	9.32	168	52.17	117	36.34
Q10	Hoped a miracle would happened	66	20.5	95	29.50	90	27.95	71	22.05
Q23	Tried to make myself feel better by eating, drinking or medication	63	19.57	125	38.82	87	27.02	47	14.6
Self control									
Q5	Keep others from knowing how bad things were	32	9.94	91	28.26	126	39.13	73	22.67
Q13	I thought about how a person I admire would handle this situation and used that as a model	18	5.59	81	25.16	137	42.55	86	26.71
Q20	I tried to keep my feeling to myself	53	16.46	150	46.58	100	31.06	19	5.9
Seeking social support									
Q8	I talked to someone to find out more about the situation	8	2.48	54	16.77	159	49.38	101	31.37
Q17	Talked to someone who could do something concrete about the problem	4	1.24	24	7.45	163	50.62	131	40.68
Q22	I asked a relative or friend I respected for advice	5	1.55	22	6.83	179	55.59	116	36.02
Q28	Talked to something about how was i feel	12	3.73	91	28.26	151	46.89	68	21.12
Positive reappraisal									
Q7	I prayed	3	0.93	3	0.93	67	20.81	249	77.33
Q12	I came out of the experience better then when I went in	4	1.24	16	4.97	117	36.34	185	57.45
Q24	Changed or grew as a person in a good way	7	2.17	12	3.73	151	46.89	152	47.2
Confrontive coping									
Q1	I let my feelings out somewho	35	10.87	73	22.67	151	46.89	63	19.57
Q15	I stood my ground and fought for what I wanted	9	2.80	38	11.80	173	53.73	102	31.68
Q21	I expressed anger to person (s) who caused the problem	50	15.53	163	50.62	89	27.64	20	6.21
Accepting responsibility									
Q6	I made a promise to my self that things would be different next time	5	2	12	3	110	34	195	61
Q14	I apologized or did something to make up	5	1.55	19	5.9	157	48.76	141	43.79
Q19	Criticized or lecture myself	43	13.35	127	39.44	130	40.37	22	6.83
Q25	Realized i brought the problem on myself	34	10.56	111	34.47	146	45.34	31	9.63

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