PREDICTORS OF MORAL DISTRESS AMONG NURSES WORKING IN JIMMA UNIVERSITY MEDICAL CENTER, JIMMA ZONE, JIMMA TOWN, SOUTH WEST, ETHIOPIA, 2019

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A MASTER THESIS TO BE SUBMITTED TO JIMMA UNIVERSITY, INSTITUTE OF HEALTH, FACULTY OF HEALTH SCIENCE, SCHOOL OF NURSING AND MIDWIFERY; IN PARTIAL FULFILLMENT FOR THE REQUIREMENT FOR MASTERS IN ADULT HEALTH NURSING.

JUNE 2019

JIMMA, ETHIOPIA

JIMMA UNIVERSITY, INISTITUTE OF HEALTH, FACULTY OF HEALTH SCIENCE, SCHOOL OF NURSING AND MIDWIFERY

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JIMMA, ETHIOPIA

SUMMARY

Background: *Moral distress is a complex phenomenon of human experience affecting individuals and whole community. Moral distressis a serious problem amongnurses and it has negative* effect *on nurse*'s *performance.*

Objective: *The aim of this study was to assess predictors of moral distress among nurses working in Jimma university medical center, Jimma Zone, Jimma Town, South West Ethiopia, April 2019*

Method: *Institution based cross-sectional study design was used. Stratified simple random sampling technique was applied. Data was collected using structured self- administered questionnaire, which contained socio demographic characteristics, Hamric's Moral Distress Scale-Revised(MDS-R), personal factors and organizational factors. The study was conducted from April 9 –May 9. Data was entered into Epi data version 3.1 and analysed by SPSS software version 20. Descriptive statistics, bivariate logistic regression analysis, multivariable logistic regression analysis were performed. Then finally, adjusted odd ration at (95%) of CI with P value < 0.05 were considered statistical significance. Results were presented in tables and figures.*

Result*: Among the study participants 174 (70.16%) of nurses hadexperienced high level of moral distress. Sex, working hours, professional commitment, autonomy and working environment were statistically significant as predictors of moral distress. In addition to this, job satisfaction was negativelycorrelated with moral distress, but job satisfaction was positively correlated to personal and organizational factors.*

Conclusion:*Moral distress is a current problem of nurses. Two third of the nurses were experienced high level of moral distress. Sex, working hours per week, professional commitment, autonomy and working environment were identifiedas predictors of moral distress.*

Recommendation: *To reduce the level of moral distress policy makers and different responsible bodies should develop reduction management programs andcoping strategies including financial and non-financial benefit among hospital nurses.*

Keywords*: Moral distress, nurses, JUMC, Ethiopia*

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LIST OF ABREVATIONS AND ACRONYMS

AACN	American Association of Critical Care Nurses
ANA:	American Nurses Association
BSc:	Bachelor of Science
CSD:	Central System Department
ICU:	Intensive Care Unit
JUMC:	Jimma University Medical Center
MDSR:	Moral Distress Scale Revised
NGO:	Nongovernmental Organization
OPD:	Outpatient Department
PES-NWI:	Practice Environment Scale Nursing Working Index
POS:	Perceived organizational support
USA:	United States of America

CHAPTER ONE

1.1 INTRODUCTION

Moral distress means a phenomena when it happens anyone who recognize about the right action to carry out, however; can't perform the right action because of different problems that leads to cause disagreements of morals, ideas and principles (1).

In every set up the healthcare services desire with the intention of health care professionals wish to identify the right and wrong characteristics' for their clients (2). Nurses are the one who affected by moral distress compared to other health care providers due to long interaction and relationship with patients (3).

This problem can be existbecause of clinical conditions, environmental sites, external and internal factors (4). External factors like; power imbalance, poor communication, work place violence and hospital police that interfere with clients request (5).

Internal factors expressed as nurses' perception of their powerlessness, unwillingness or inability to resolve ethical problems (6).

Increased moral sensitivity reduces moral distress, since sensitive providers should be more committed to patients and more morally competent (7). However, excessive moral sensitivity itself has an impact on nurses to develop moral distress (8). Nurses with moral sensitivity to the ethical dimensions of care will experience distress if they see the moral dimension of nursing being neither respected, discussed, nor managed (6).

Moral distress happen when the internal environment of nurses ideals, faith, individual personality, duty, communication challenges and supposed obligations are mismatched with the requirements of the outside work environment(8).

Because of moral distress, nurses experience physical and psychological problems manifests most often with symptoms such as frustration, anger, anxiety, guilt, loss of self-worth, depression, nightmares and physical reactions such as sweating, shaking, headaches, and crying (9). Healthcare providers who are frequently exposed to this situations feels that they cannot carry out what they consider to be the ethically right actions are potentially focus to moral distress, which leads to job dissatisfaction, burnout, and leaving a job or even the profession (10).

Studies in clinical settings have associated moral distress with low self-confidence and challenges like turnover and retention. This means that moral distress may not frame or locate as an individual concern. The suffering or personal anguish of moral distress entails presents as feelings of anger, frustration, guilt and/or powerlessness associated with a decreased sense of well-being. Thus, further investigation of the ways in which factors contribute to moral distress is very important.

1.2. STATEMENT OF THE PROBLEM

Moral distress has been investigated mostly in terms of nurses' occupational distress because nurses enter into relationship with patients and others (7). An estimated of 880,000 nurses in the US or one in three nurses experience moral distress (11, 12). However, most research on moral distress is descriptive, and still limited knowledge exists about determinants of moral distress (13). A study conducted by Corley in USA on moral distress revealed that 80% of nurses experience high levels of moral distress at their working environment (8). Moral distress has continuous effects on nurse's satisfaction, retention, recruitment and has negative implications of patient care (14). Moral distress contributes to their choice to change departments within a facility, leave an organization or to quit professional practice as a nurse (3). Clinical nurses who experienced moral distress cannot offer good quality of patient care(9). Nurses particularly who are working in intensive care or critical care unit's often-faced challenges like patient care, which includes high risks of life, patient death and grief situations (10). Moral distress can go ahead, result in an unhealthy working environment due to the complication of the situations and the various effects of moral distress (9).This problem may affect nurses on their job environment, or quality of nursing care, thus examination of moral distress is a significant issues (15). Job satisfaction is an important factor for nurses to perform their work since job satisfaction has an impact on intentions to leave and turnover for hospital-based nurses (16). Moral distress in hospital environment has an effect on nurses resulting in feelings; depression, emotional disequilibrium, & exit from nursing profession (17). Due to moral distress patients have affected because of poor nursing care quality (18).

Regarding on emotional manifestations of moral distress, which has seen as a psychological imbalance that nurses experience when facing barriers and impeded to perform interventions (12). The feeling of powerlessness can be increased with the development of a feeling of guilt in nurses because the factors associated with moral distress (19).

Therefore, the aim of this study wasto determine the predictors of moral distress, and to describe relationship of variables among the study subjects.

1.3 SIGNIFICANCE OF THE STUDY

The results of this study might be used to the stakeholders, nongovernmental organization and nurse managers to develop moral distress reduction management programwith financial or non-financial packages and strategies related to working environment, professional commitment, autonomy and nurses working hours. It alsohelps the psychologist and nurse managers in order to improving working environment through collaboration with the hospital authorities and goes to developing coping strategies for nurses who experienced moral distress in the hospital. In addition to this, the current study might be use as base line information for other researchers and may help to conduct related studies.

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CHAPTER TWO

2.1 LITERATURE REVIEW

Researchers have shown that moral distress creates system-wide trouble and harmful consequences for health care professionals including nurses (3). Moral distress has negative consequences on nurses such as reduced external relations with other members of the health team and can affect personal factors (20). The negative consequences of personal factors and organizational factors are ultimately leading to disappointment of nurses by making morally distressed (21).

2.2. Socio demographic characteristics

According to the study done in Iranian moral distress revealed that moral distress has no relationship with gender and religion (22). Similar study done in Italy by Anke J.E showed that relationship of moral distress with age, year of experience and educational level is still not obvious (23).A number of different finding explained in a research on relationship between moral distress, year of professional experience and level of education (24).Another study done in Iran on moral distress showed that there was high level of moral distress among nurses (25). However, according to the study done in Iran Shahroud University of Medical SciencesbyMaliheh on moral distress showed as demographic factors, only the age of the nurses found to be statistically significant correlation with the total level of moral distress and older nurses observed to experience higher levels of moral distress (8). According to another study done in the largest psychiatric hospital in Jordan on moral distress revealed that among 130 Jordanian mental health nurse'sincomelevel, burnout level and educational level were identified as the best predictors of moral distress (26).

2.3. PERSONAL FACTORS

2.3.1. Professional autonomy

Autonomy is a significant feature of the nursing profession that is essential for protected high-quality care (27). Autonomy allows nurses to make decision by themselves and give judgments about their service provided with the least pressure from external sources (27). Mainly the most significant factors associated to nurses' job pleasure and their capacity to work autonomously within the scope of their responsibilities (28). The nurses who work with low levels of autonomy may have unpleasant feelings of personal and professional experiences (29). According to the

study done in Afzalipour hospital by Zahra Sarkoohijabalbarezi in Iran among nurses who had professionally autonomous were developing low level of moral distress (30). There was a significant negative relationship between professional autonomy and moral distress (31).

2.3.2. Job satisfaction

Job satisfaction also another significant factor for nurses to carry out their work since job pleasure has an effect on intentions to leave and turnover for hospital-based nurses (32).High levels of moral distress are associated with job dissatisfaction, burnout and nurse's turnover (23). According to the study done in USA on moral distress by Barlem revealed that nurses experienced high levels of moral distress (33). Another study done in USA showed that high level of moral distress related to lower level of job satisfaction and some factors of job characteristics related to job satisfaction (13). Similar study conducted in USA by Ohnishi on moral distress showed that a high-level of moral distress has the result of lower job satisfaction or pleasure (34). According to the study done in the national hospital of Japan on moral distress by using convenience sampling technique a total of 130 nurses showed that significant correlations between moral distress and job satisfaction (35). Another descriptive study was conducted by Catherine A. on moral distress showed that job satisfaction, practice environment, and the participant's age were identified as statistically significant predictors of moral distress among nurses in USA (36). According to study done in Netherland on moral distress showed that lower job satisfaction, poor communications of staff members and existing of instrumental leadership style were highly identified as determinants of moral distress among nurses (23).

2.3.3. Professional commitment

Professional commitment is an internal driven force or attitudes of anyone towards their profession or job, which includes the devotion to perform the job by involving willingness (37).Professional commitment determines the degree to which a person is eager to fit into place in various work-related tasks, including those that extend beyond the immediate scope of his/her responsibilities and the organizational goals (37). According to study done in Netherland on moral distress showed that nursing staff members working less than 56hrs/wk experiences high level of moral distress and nursing staff members working greater than 56 hrs/wk experiences low level of moral distress (23). Thus, they are more likely to withstand pressure or other adverse circumstances, and tend to demonstrate greater dedication to their job and employer (38). A study conducted by Meyer, Allen, and Smith who observed a moderate negative correlation

between professional commitment, moral distress and intention to leave the profession among nurses (39). Similar study conducted in USA revealed that nurses with a lower level of professional commitment were more willing to develop moral distress and leave the profession (40). Another study done in Chinese by Wang, Tao, Ellenbecker, and Liu on moral distress among nurses showed that a significant positive correlation between professional commitment and nurses' intent to stay within an organization, but negatively correlated with moral distress; however numerous social, organizational, and demographic factors have been found to be exert a moderating role on professional commitment (41).

2.3.4. Organizational commitment

Committed nurses are the vital sources of energy and power that proceed in the direction of institutional goals and objectives (42, 43). According to study done in Iranonorganizational commitment, job satisfaction and social orientation showed that a significant positive relationship with the moral behaviour of the nurses and organizational commitment had a possible predictor of moral distress among nurses (44).

2.3.5. Empowerment

It is just nurses perform, nurse educators who feel occupied, valuable, and valued experience empowerment that allows the nurses to be effective in staff development and to make decisions quickly on their jobs (45). According to study done in USA on relationship between moral distress and psychological empowerment among critical care nurses showed that empowerment has negatively correlated with level of moral distress thus, nurses who have highly empowered experience low level of moral distress (46). Another study done in Iran on effect of moral empowerment program on moral distress in intensive care unit nurses showed that empowerment plays a great role in order to lessen the level of moral distress among nurses and improve the quality of care (47).

2.4. ORGANIZATIONAL FACTORS

2.4.1. Working Environment

In an ethical work environment referred to as a healthy work environment nurses are respected, valued and have a voice regarding issues of concern (48, 49, 50, 51). Thus, the view of nurses or perceptions of institutional environment play greater roles whether or not to develop of moral distress (52). According to study done in Span showed that there was a significant correlation between levels of moral distress and ethical climate (53). According to the study done in Sweden on moral distress showed that situations related to high levels of moral distress is associate with lack of staff and resource adequacy, nurse's managerial leadership style, nurse's participation in the work place and relationship between nurses with physicians (54). According to another the study done in Shahroud University of Medical Sciences, in Iran on moral distress revealed that nurses working in ICUs and surgical wards experienced the highest and lowest levels of moral distress, respectively (55). Regarding the professional and career-based factors, the results indicate difference between the levels of moral distress among nurses with respect to the support of the head nurse, nurses who felt more supported by the head nurse tended to undergo lower levels of moral distress (8). According to another study done in Mayo Hospital, South-West of the USA on moral distress showed that futile care, organizational factors, year of nursing experience, caring for oncology and transplant patients and working environment were identified as determinants of moral distress (56). In addition to this, according to the study done in private hospital Ankara, Turkey on moral distress among nurses showed that violations of ethical principles, and inappropriate communication between healthcare professionals were identified as the most common predictors of moral distress (57). According to the study done in Newlands on moral distress among nurses showed that heavy workload, poor work environment, compromising care and rationing care were identified as the most important causes of moral distress (58). According to another study done in USA using survey method by American Nurses Association showed that unsafe working area related to hospital climatic condition and delayed quality of patient care were identified as predictors of moral distress (36). Similar studies conducted on moral distress showed that poor ethical environment was identified as predictors of moral distress, concerned about the quality of care and ethical issues (59).

2.4.2. Perception of Quality of Care

Nurses perceived the quality of care after the patients are receiving nursing care (60). According to the study done in Israel on moral distress showed that among a total of 119 nurses' perception of quality of care was inversely correlated to the levels of moral distress and moral distress has negatively affect the quality of care(61). Similar study also showed that nurse perception of quality of care negatively correlated to their level of moral distress (62). According to the study done in Trinity Health Webinar on moral distress among critical care nurses revealed that providing futile care and experience of emotional exhaustions were significantly identified as predictors of moral distress (63). Perception of quality of care is significantly associated with the level of moral distress (64).

2.4.3. Perceived organizational support

Perception of organizational support particularly an essential element of the constraints upon nurses' actions by reducing stressors related to their professional job (65, 66). According to study done in Iran among Iranian nurses on moral distress revealed that level of perceived organizational support is low among nurses and level of moral distress is highdue to challenges; like shortage of human resource management, job dissatisfaction, inadequate man power and absence of organizational support (67). Similar study done in South Korea showed that low level of moral distress among nurses because of high-perceived organizational support (68).

Summary of literature review

A number of studies have done on moral distress among nurses in different countries. According to the studies, level of moral distress and its predictors are not that much vary. Commonly the variable that explained in the literature review has a significant contributor to develop moral distress if negatively practiced. It has predictors of moral distress among nurses in their working areas. Unfortunately, I couldn't find enough literatures what I need especially on statement of the problem about the magnitude and severity of moral distress among nurses, the number of patients died, because of the effect of moral distress on nurses in the world, Africa and Ethiopia. In addition to this, there is absence of local literatures about moral distress and its predictors among nurses, which has done in JUMC, Jimma Town, Jimma Zone, South West, and Ethiopia. Thus, this study was very important.

2.2. CONCEPTUAL FRAMEWORK

A conceptual framework has drawn after reviewing related literatures (14, 20, 21, 64, 65, 69, 70, 71, and 72). The broken line shows that level of job satisfaction is affected by personal and organizational factors.

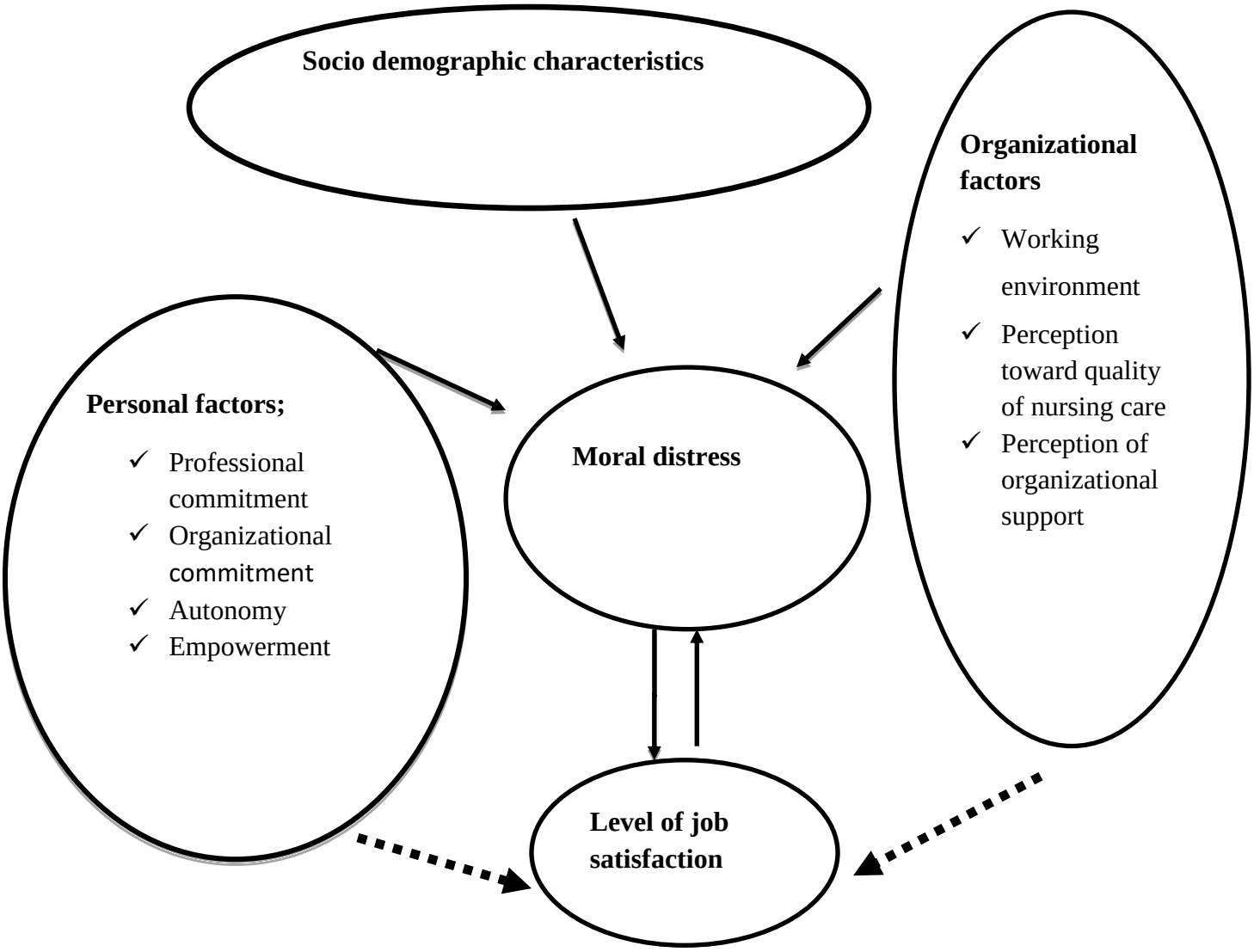

Figure 1: Conceptual framework for the study of predictors of moral distress among nurses working in JUMC, South West Ethiopia, April 2019 (n = 248).

CHAPTER THREE

3.1. OBJECTIVES

3.1.1. GENERAL OBJECTIVE

- To asses predictors of moral distress among nurses working in Jimma University Medical Center, Jimma Zone, Jimma Town, South West, Ethiopia, April, 2019

3.1.2. SPECIFIC OBJECTIVES

- To determine level of moral distress among nurses working in JUMC, Jimma Zone, Jimma Town, South West, Ethiopia, April, 2019
- To identify predictors of moral distress among nurses working in JUMC, Jimma Zone, Jimma Town, South West, Ethiopia, April, 2019

CHAPTER FOUR

4.1. METHODS AND MATERIALS

4.1.1. STUDY AREA AND PERIOD

The study was conducted in Jimma University Medical Center, Jimma Town, Jimma Zone, and South West Ethiopia. Geographically, it is located in Jimma city 352 km southwest of the capital city of Ethiopia, Addis Ababa. JUMC is the only teaching and referral hospital in this area providing services for approximately 15,000 inpatients, 160,000 outpatient attendants, 11,000 emergency cases and 4500 deliveries in a year. Currently, the hospital has 2 specialist, 27 GP doctors, 541 nurses (185 of them are diploma holder and 343 of them has bachelor degree (BSc) holder, 13 of them are MSc holders), 52 midwifery, 17 anaesthetist professionals, 68 pharmacist, 54 laboratory technicians, These all professionals were included under the hospital administration. However; there are a lot of professionals but, they were included under the academic administration of Jimma University. (Information from JUMC, Human resource office in 2019). The study was conducted from April 9 to May 9, 2019

4.1.2. STUDY DESIGN

Institution based cross-sectional study design was used.

4.1.3. POPULATION

4.1.3.1. SOURCE POPULATION

All nurses who had workedinJimma University Medical Center

4.1.3.2. STUDY POPULATION

All sampled nurses who had workedinJimma University Medical Center

4.1.3.3. ELIGIBILITY CRITERIA

4.1.3.4 INCLUSION CRITERIA

Nurses working experience greater than six months

4.1.4. SAMPLE SIZE DETERMINATION

The sample size was determined usingstandardformula for a single population considering the following assumptions.

$$ni = \frac{(z\ \alpha/2)^2 p(1-p)}{d^2}$$

Where,

n= minimum sample size required for the study

z = confidence interval at 95% (1.96)

p =prevalence of level of moral distress 50% (p=0.5)

d = marginal error5% (d = 0.05)

(1.96) (1.96) (0.5(1-0.5))/0.05(0.05) = 384 =>ni=**384**

Since the total populations are less 10,000, population correction formula used to decide the final sample size.

ni= n/ [1+ (n/N)] =384/ [1+ (384/541) =**225**

10% non-response rate = 225*10% = 22.5

Therefore, the final sample size become, 225 +23 = 248

nf = 248

4.1.5. SAMPLING PROCEDUREANDTECHNIQUE

List of nurses working in Jimma University Medical Center was obtained from the human resource office in JUMC in order to obtain the study population. Out of 541 nurses, 248 nurses were the calculated sample size by proportional allocation in each ward. Stratified simple random sampling technique was applied. The first unit was selected by using lottery method.

Final sampled nurses from each ward = **nf × Number of nurses in each ward**

Total number of nurses

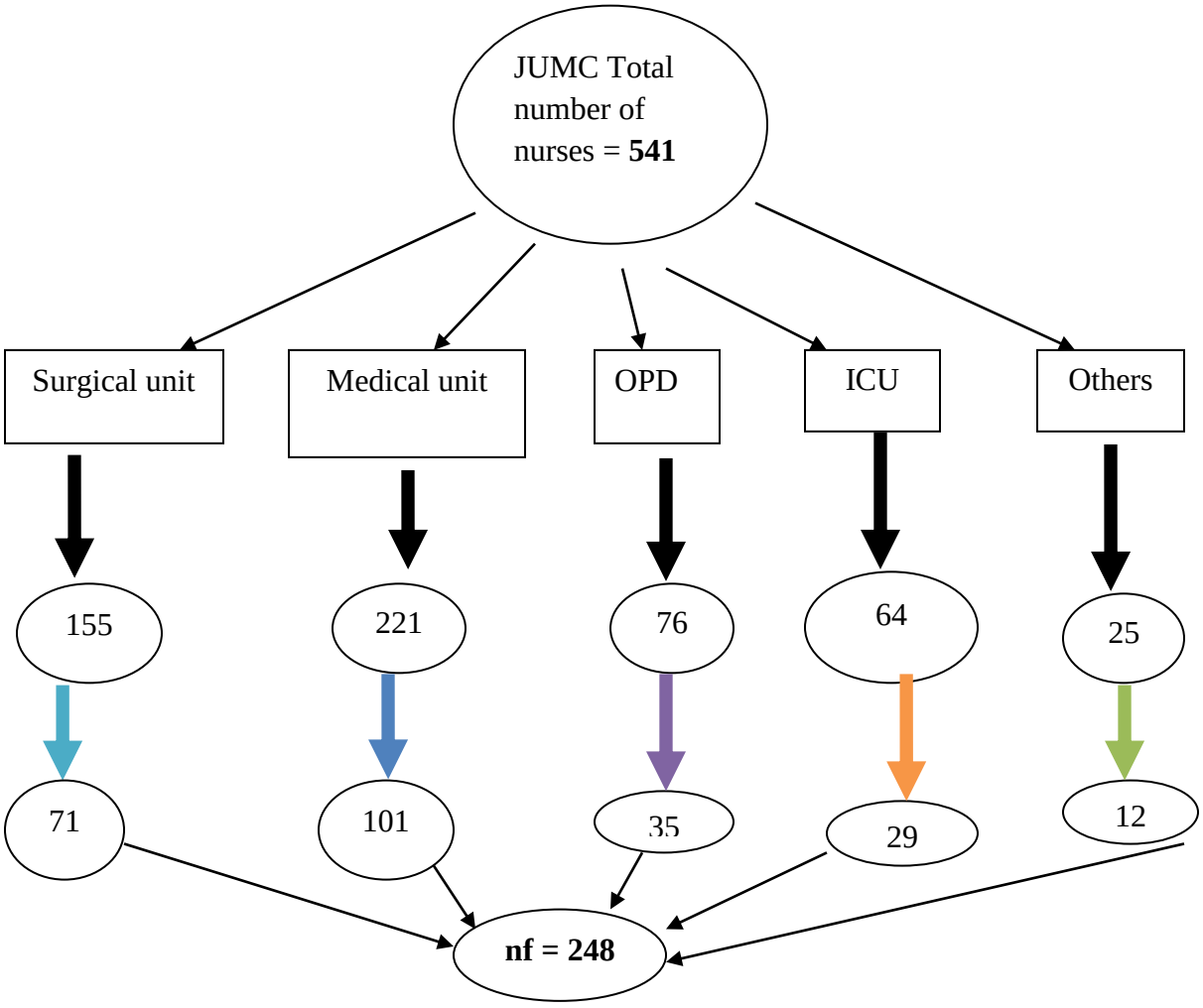

Figure 2: Proportional allocation of 248 nurses from each ward in JUMC, Jimma Town, Jimma Zone, South West Ethiopia, April, 2019 (n = 248).

4.1.6. STUDY VARIABLES

4.1.6.1. DEPENDANT VARIABLE

- Level of moral distress

4.1.6.2. INDEPENDENT VARIABLES

- Socio demographic characteristics(age, sex, religion, marital status, level of education, working experience, unit, working hrs/wk, monthly income)
- Personal factors (professional commitment, organizational commitment, autonomy, empowerment and job satisfaction)
- Organizational factors (working environment, perception towards the quality of nursing care, perception of organizational support)

4.2. OPERATIONAL DEFINITION AND DEFINITION OF TERMS

1. **Moral distress**; it's a form of psychological distress resulting from moral constraints or conflicts. Based on the percentage mean score below 60.8 considered as low level and above 60.8 considered as high level of moral distress , but if percentage mean score= 60.8 says neutral (14, 33).
2. **Job satisfaction:** itstreated as a collection of feelings associated with job situation or simply how the nurses feel about their job. Based on the percentage mean score below 44.64 considered as not satisfied and above satisfied, but if percentage mean score= 44.64 says neutral (21).
3. **Working environment**: its an area of nurses who performed clinical jobs with different professionals. Based on the percentage mean score below 47.53 considered as negative and above positive working environment, but if percentage mean score= 47.53 says neutral (70)
4. **Professional commitment**: its an internal attitude of nurses toward their professions. Based on the percentage mean score below 55.5 considered as not committed and above committed , but if percentage mean score= 55.5 says neutral (37, 41).
5. **Professional autonomy**: its nurse's freedom or right to make decisions in the clinical environment. Based on the percentage mean score below 49.87 considered as not autonomous and above autonomous, but if percentage mean score= 49.87 says neutral (20, 71).

6. **Empowerment**: it's a psychological condition characterized by a sense of perceived meaning like feeling, competency and self determination. Based on the percentage mean score below 61.9 considered as not empowered and above empowered , but if percentage mean score= 61.9 says neutral (73).
7. **Organizational commitment**: it's an internal attitude of nurses toward their organization. Based on the percentage mean score below 44.05 considered as not committed and above committed , but if percentage mean score= 44.05 says neutral (42, 43, and 44).
8. **Perception toward quality nursing care**: its nurses view of direction about the nursing care, which was given for the patients. Based on the percentage mean score below 113.5 considered as poor and above good , but if percentage mean score = 113.5 says neutral (64)
9. **Perception of organizational support**: it's the nurses' view about their organizational support when they were worked in the hospital. Based on the percentage mean score below 38.45 considered as poor and above good perception, but if percentage mean score= 38.45 says neutral (74).

4.3. DATA COLLECTION TOOLS

The data collection tools were adapted from different sources. The tools were prepared by English language. Data was collected by using structured self-administered questionnaires. The questions were grouped into four parts, which are socio demographic characteristics, Hamric's Moral Distress Scale-Revised (MDS-R), personal factors and organizational factors. The socio demographic characteristics contained9 items including age, sex, religion, etc. Moral Distress Scale Revised instrument were adapted from instrument developed by (Hamric, Brochers, and Epstein, 2012) contained 9items, Cronbach's alpha (0.74) (14, 33). Personal factors (professional commitmentscaleinstrumentwere adapted from Blau (2003) which contained 6 items, Cronbach's alpha (0.81). Organizational commitments Scale were adapted from instrument developed by Meyer and Allen (1988, 1990) which contained 5 items, Cronbach's alpha (0.78).Empowerment scale wasadapted from instrument developed by Spreitzer (1995, 1996) which contained 5 items, Cronbach's alpha (0.80).Autonomy in practice scale wasadapted from instrument developed by Dempster, Dempster Practice Behaviors Scale (1990) which contained 4 items, Cronbach's alpha (0.92). Job satisfaction scale instrument were adapted fromMinnesota Satisfaction Questionnaires from Portuguese Hospital Workers which contained 7 items, Cronbach's alpha

(0.85) (20, 21, 37, 41, 42, 43, 44, 71, 73). The entire above personal factor variables contained a total of 27 items which were measured by 4-point likert scales. Organizational factors (Nursing working environment scale instrument were adapted from Practice Environment Scale of Nursing Work Index forQueensland nurses which contained 16 items, Cronbach's alpha (0.89).Perceived organizational support scales were adapted from instrument developed by Eisenberger et. Al in 1986 which contained 5 items, Cronbach's alpha (0.79).And perception toward the quality of nursing care scale were adapted from instrument developed by Ledoux K, 2015) which contained 1 item, Cronbach's alpha (0.72). (64, 70, 74). All of the above organizational factor's variables contained a total of **22** items. All of the variables measured by 4-point likert scales. The reliability and validity of the tools were checked.

4.4. DATA COLLECTOR PERSONNEL

Four BSc nurses were the data collectors and two (MSc) nurses were supervisors for the data collection process. Twodata collectors were come from Agaro hospital, one data collector from Shebe health center and one of the data collectors was also come from LimuGenethospital. The supervisors were come from MizanTepiUniversity. Those personnelwere recruited based on their experience for the data collection.

4.5. DATA COLLECTION METHOD AND PROCEDURES

Data was collected using structured self- administered questionnaires. The data were collected in three shifts in the morning, in the afternoon and at the night. Each selected nurse received an explanation about the purpose of the study. The supervisors supervised the data collectors daily. Finally, the principal investigator collected and compiled the collected data each day.

4.6. DATA QUALITY CONTROL

The principal investigator was given training for the data collectors and the supervisors for 01 days to control the quality of the data during the time of data collection. The supervisors and the principal investigator controlled the quality of the data by close follow up and frequent monitoring of data collection procedures. Pre test was done using 5% of248 were conducted among (12 participants) inShenen Gibe General Hospital to assess instrumental simplicity, flow and consistency. After the reflection of the participants some modifications were made based on

the result of the pre test like avoid items which confused the participants, clarify the ambiguous questions.Thus, the items showed a good internal consistency or reliability. The quality of the collected data waschecked for its completeness, clarity and coherence each day by the supervisors and principal investigator.

4.7. DATA PROCESSING AND ANALYSIS

The collected data were entered into Epidata Version 3.1 after that it was exported intoStatistical Package for the Social Sciences (SPSS) Version 20. Descriptive statistics used to explain the frequency and percentage of dependent and independent variables.Bivariatelogistic regression analysis used to assess whether or not an association between dependent and independent variables at P <0.25 in order to candidate the variables in to multivariable logistic regression. Then, multivariable logistic regression analysis was used to perform the final regression model and used to identify the predictor variables at P < 0.05. Then finally, adjusted odd ration at (95%) of CI with P value < 0.05 were considered statistical significance. Results were presented in tables and figures.

4.8. ETHICAL CONSIDERATION

Ethical clearance to conduct this study was assured from Jimma University Ethical Review Board. Approval letter was obtained from Jimma University, Institute of Health, Faculty of Health Science School of Nursing and Midwifery. Formal letter was given to Shenen Gibe General Hospital to conduct the pre test andto JUMC for the purpose of their cooperativeness in order to conduct the study. The objective of the study was explained for the study participants. Then, the selected nurses were informed that participation was voluntary. Verbal consent was taken before starting the data collection. Confidentiality of the participants was kept throughout the whole study.

4.9. DISSEMINATION PLAN

The result to be disseminated to Jimma University, Institute of Health, Faculty of Health Science, school of Nursing and Midwifery and to the Nurses Manager at JUMC. At the end, possible effort was made to publish this paper on national or international reputable journal.

CHAPTER FIVE: RESULT

5.1. 1. SOCIO DEMOGRAPHIC VARIABLES

Among 248 study population to whom questionnaire were distributed, all respondents returned their questionnaires which makes 100% response rate.

Majority of the participants were young adult (85.1%). Mean age of the respondents was 29 ± 5.85. Among all of the participants,(68.5%)of them were females. Among all of the participants, more than half of them were married. Half of the participants were Orthodox (50.8%). Out of 248participants, 70.6% hold a bachelor of degree in nursing profession. Among 248participants, 50.40% of them were 2-4 years of professional experience in the current units. More than half of the participants (72.98%) were worked for 42 hrs/wk. In addition, 66.53% of the participants gained incomeof (2,628 – 5,000 birr) monthly. (Table 1)

Table 1: Socio demographic characteristics on the study of predictors of moral distress among nurses working at Jimma university medical center, Jimma Zone, Jimma Town, South West Ethiopia, April, 2019 (n = 248).

Variables	Category	Frequency	%
Age	Young adult (18 -35)	211	85.1
	Adult (36 – 45)	31	12.5
	Middle age (45 -60)	6	2.4
Sex	Male	78	31.5
	Female	170	68.5
Religion	Orthodox	126	50.8
	Muslim	79	31.9

	Protestant	40	16.3
	Others	3	1.2
Marital status	Single	100	40.3
	Married	138	55.6
	Divorced	6	2.4
	Windowed	4	1.6
Level of education	Diploma	61	24.6
	Degree	175	70.6
	MSc and above	12	4.8
Working experience	0-2 years	76	30.64
	2-4 years	125	50.40
	4-6(ref)	47	18.96
Working hours per week	42hrs/wk	181	72.98
	84hrs/wk	67	27.02
Monthly income	(2,628 – 5,000 birr)	165	66.53
	(5001 – 9,028 birr)	83	33.47

5.1. 2. LEVEL OF MORAL DISTRESS

Percentages mean score of the level of moral distress =

Actual mean score ÷ Maximum potential score × 100 = (21.89÷36) × 100 = 60.8

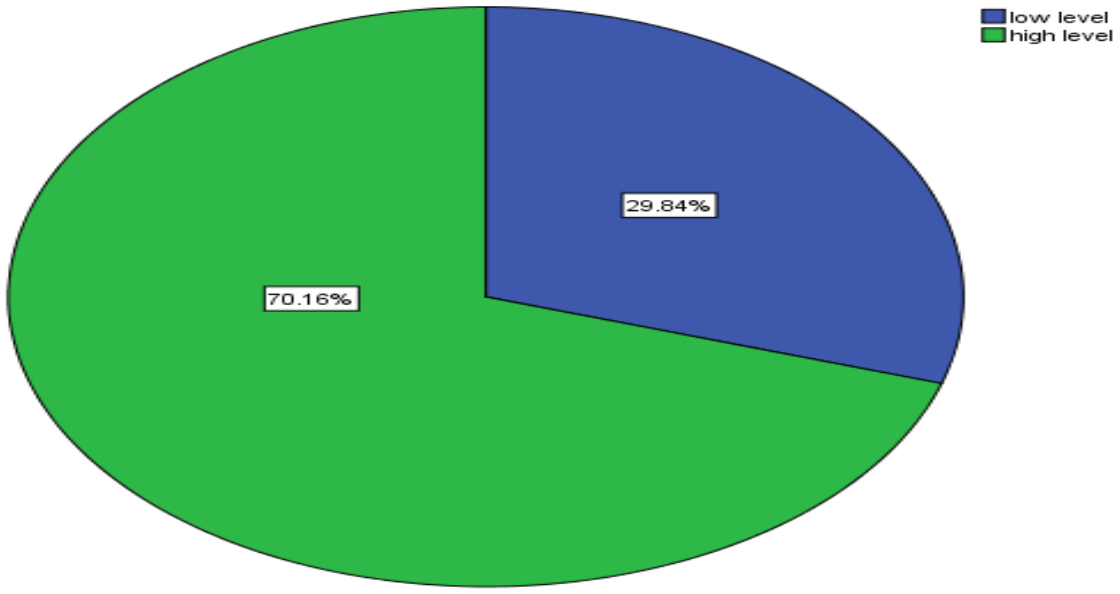

Figure 3: Level of moral distress among nurses working at Jimma university medical center, Jimma Zone, Jimma Town, South West Ethiopia, April, 2019 (n = 248).

Out of 248 participants, (70.16%) of the participants had high level of moral distress. (Figure 3)

5.1.3. PERSONAL FACTORS

Out of 248 participants, (50%) of the nurses had not committed for their profession. At the same time Out of 248 participants, (50.4%) of the nurses had not committed for their organization. Based on autonomy out of 248 participants, (54.8%) of the nurses had notautonomous. Based on empowerment out of 248 participants, (55.6%) of the nurses had not empowered. Out of 248 participants, more than half of the nurses (52.42%) had not satisfied by their job. (Table 2)

Table 2: Personal factors among nurses working at Jimma university medical center, Jimma Zone, Jimma Town, South West Ethiopia, April, 2019 (n = 248).

Variables	**Category**	**Frequency**	**%**
Professional commitment	Not committed	124	50.0
	Committed	124	50.0
Organizational commitment	Not committed	125	50.4
	Committed	123	49.6
Autonomy	Not autonomous	136	54.8
	Autonomous	112	45.2
Empowerment	Not empowered	138	55.6
	Empowered	110	44.4
Job satisfaction	Not satisfied	130	52.42
	Satisfied	118	47.58

5.1.4. ORGANIZATIONAL FACTORS

Out of 248 participants, (52%) of the nurses reported a negative working environment. Out of 248 participants, (55.6%) of the nurses had poor perception towards the quality ofnursingcare. Out of 248 participants, (52.8%) of the nurses had poor perception towards the organizational support. (Table 3)

Table 3: Organizational factors among nurses working at Jimma university medical center, Jimma Zone, Jimma Town, South West Ethiopia, April, 2019 (n = 248).

Variables	**Category**	**Frequency**	**%**
Working environments	Negative	129	52
	Positive	119	48
Perception toward the quality of nursing care	Poor perception	138	55.6
	Good perception	110	44.4
Perception of organizational support	Poor perception	131	52.8
	Good perception	117	47.2

5.1.5. BIVARIATE ANALYSIS FOR SOCIO DEMOGRAPHIC VARIABLES

Socio demographic variables on bivariate analysis with **p** value of**< 0.25 (**sex, level of education, working hours per week and monthly salary) were candidate for the final multivariable logistic regression analysis. The other variables were not candidate for further analysis since **P** value >**0.25**(Table 4)

Table 4:Bivariate analysis for socio demographic variablesamong nurses working at Jimma university medical center, Jimma Zone, Jimma Town, South West Ethiopia, April, 2019 (n = 248).

Variables	**Category**	**Level of moral distress**		**COR(95% CI)**	**P value**
		High (N,%)	Low (N,%)		
Age	Young adult(18-35)	156(73.9)	55(26.1)	1.42(0.25 - 7.96)	.691
	Adult (36 – 45)	14(45.2)	17(54.8)	0.41(0.07 - 2.59)	.344
	Middle age (45 -60)	4(66.7)	2(33.3)	1	
Sex	Male	63(80.8)	15(19.2)	2.23(1.17 - 4.26)	.015
	Female	111(65.3)	59(34.7)	1	
Religion	Orthodox	69(54.8)	57(45.2)	0.00(0.00)	.999
	Muslim	68(86.1)	11(13.9)	0.00(0.00)	.999
	Protestant	34(85.0)	6(15.0)	0.00(0.00)	.999
	Others	3(100.0)	0(0.0)	1	
Marital status	Single	70(70.0)	30(30.0)	1.00(0.24 - 4.13)	1.000

	Married	97(70.3)	41(29.7)	1.01(0.25 - 4.12)	.985
	Divorced	4(66.66)	2(33.33)	1.03(0.58 - 6.75)	.879
	Windowed	3(75)	1(25)	1	
Level of education	Diploma	45(73.8)	16(26.2)	14.06(2.78 - 71.19)	.001
	Degree	127(72.6)	48(27.4)	13.23(2.79 - 62.58)	.001
	MSc and above	2(16.7)	10(83.3)	1	
Working experience	0-2 years	29(38.15)	47(61.85)	0.45(0.07 - 2.66)	.375
	2-4 years	68(54.4)	57(45.6)	0.88(0.41 - 1.89)	.453
	4-6 years	27(57.45)	20(42.55)	1	
Working hours per week	42hrs/wk	97(53.59)	84(45.41)	2.36(1.35 – 4.18)	.063
	84hrs/wk	22(32.84)	45(67.16)	1	
Monthly salary	(2,628 – 5,000 birr)	123(74.5)	42(25.5)	1.84(1.02 - 3.13)	.042
	(5001 – 9028 birr)ref	51(61.5)	32(38.5)	1	

*Odd ratio at (95%) of CI with P value< 0.25 was candidate for the final regression model.

5.1.6. BIVARIATE ANALYSIS FOR PERSONAL FACTORS

Personal factor variables on bivariate analysis with **p** value of**< 0.25 (**professional commitment, job satisfaction, autonomy and empowerment) were candidate for the final multivariable logistic regression analysis. (Table 5)

Table 5:Bivariate analysis for personal factors among nurses working at Jimma university medical center, Jimma Zone, Jimma Town, South West Ethiopia, April, 2019 (n = 248).

Variables	**Category**	**Level of moral distress moral distress**		**COR (95% CI)**	**P value**
		High (N,%)	Low (N,%)		
Professional commitment	Not committed	93(75)	31(25)	1.59 (0.92 - 2.73)	.077
	Committed	81(65.32)	43(34.68)	1	
Organizational commitment	Not committed	88(70.4)	37(29.6)	1.10 (0.66 - 1.97)	.637
	Committed	84(68.29)	39(31.71)	1	
Autonomy	Not autonomous	81(59.55)	55(40.45)	2.75 (1.74–4.57)	.068
	Autonomous	39(34.82)	73(65.18)	1	
Empowerment	Not empowered	103(74.6)	35(25.4)	1.62 (0.94 - 2.79)	.086
	Empowered	71(64.5)	39(35.5)	1	
Job satisfaction	Not satisfied	97(74.6)	33(25.4)	1.57 (0.91- 2.71)	.109
	Satisfied	77(65.3)	41(34.7)	1	

*Odd ratio at (95%) of CI with P value< 0.25 was candidate for the final regression model.

5.1.7. BIVARIATE ANALYSIS FOR ORGANIZATIONAL FACTORS

Organizational factor variables on bivariate analysis with **P** value of< **0.25**only working environment was candidate for the final multivariable logistic regression analysis. (Table 6)

Table 6:Bivariate analysis for organizational factors among nurses working at Jimma university medical center, Jimma Zone, Jimma Town, South West Ethiopia, April, 2019 (n = 248).

Variables	**Category**	**Level of moral distress**		**COR (95% CI)**	**P value**
		High (N,%)	Low (N,%)		
Working environments	Negative	96(74.4)	33(25.6)	1.53 (0.89 - 2.64)	.128
	Positive	78(65.5)	41(34.5)	1	
Perception towards the quality of nursing care	Poor perception	100(72.5)	38(27.5)	1.28 (0.74 - 2.21)	.375
	Good perception	74(67.3)	36(32.7)	1	
Perception of organizational support	Poor perception	92(70.2)	39(29.8)	1.01 (0.58 - 1.74)	.980
	Good perception	82(70.1)	35(29.9)	1	

*Odd ratio at (95%) of CI with P value< 0.25 was candidate for the final regression model.

5.1.8. MULTIVARIABLE LOGISTIC REGRESSION ANALYSIS FOR PREDICTORS OF MORAL DISTRESS AMONG NURSES

According to this study, the nurses who were males 2 times [AOR (95% CI)], [2.42 (1.13 - 5.18)] and (P = .023**)** more likely to develop high level of moral distress than females.

The nurses who were worked for 42hrs/wk were almost 2 times [AOR (95% CI)], [1.96 (1.85 – 2.93)] and (P = .041**)** more likely to develop high level of moral distress than nurses who were worked for 84hrs/wk.

The nurses who were not committed for their profession were 2 times [AOR (95% CI)], [2.01 ((1.08 - 1.92))] and (P = .029**)** more likely to develop high level of moral distress than nurses who were committed for their profession.

The nurses who were not autonomous were 3 times [AOR (95% CI)], [3.20 (1.89 - 2.64)] and (P = .015) more likely to develop high level of moral distress than nurses who were autonomous.

The nurses who were worked in negative working environment were 2 times [AOR (95% CI)], [1.98 (1.05 - 3.72)] and (P = .035) more likely to develop high level of moral distress than nurses who were in positive working environment.

Sex, working hours per week, professional commitment, autonomy and working environment were predictors of moral distress. (Table 7)

Table 7: Multivariable logistic regression analysis for predictors of moral distressamong nurses working at Jimma university medical center, Jimma Zone, Jimma Town, South West Ethiopia, April, 2019 (n = 248).

Variables	**Category**	**Level of moral distress**		**COR.**	**AOR (95% CI)**	**P value**
		High	Low			
Sex	Male	63	15	2.23	2.42 (1.13 – 1.88)	.023
	Female	111	59	1	1	

Monthly salary	(2,628 – 5,000 birr)	123	42	1.84	0.52(0.15 - 1.75)	.288
	(5001 – 9028 birr)	51	32	1	1	
Level of education	Diploma	45	16	14.06	0.89 (0.08 - 10.29)	.925
	Degree	127	48	13.23	0.87 (0.10, 7.22)	.893
	MSc and above	2	10	1	1	
Working hours per week	42hrs/wk	97	84	2.36	1.96 (1.85 – 2.93)	.041
	84hrs/wk	22	45	1	1	
Job satisfaction	Not satisfied	97	33	1.565	1.36 (0.71 - 2.62)	.358
	Satisfied	77	41	1	1	
Professional commitment	Not committed	93	31	1.59	2.01 (1.08 - 1.92)	.029
	Committed	81	43	1	1	
Autonomy	Not autonomous	81	55	2.75	3.20 (1.89 - 2.64)	.015
	Autonomous	39	73	1	1	
Empowerment	Not empowered	103	35	1.62	1.74 (0.91 - 3.34)	.095
	Empowered	71	39	1	1	
Working environments	Negative	96	33	1.53	1.98 (1.05 - 3.72)	.035
	Positive	78	41	1	1	

*Adjusted odd ration at (95%) of CI with **P** value < 0.05 were statistical significance.

5.1.9. BIVARIATE CORRELATION ANALYSIS

Job satisfaction was negatively correlated with moral distress, but it has positively correlated with the personal and organizational factors.

Table 8: Bivariate correlational analysis between level of job satisfaction with level of moral distress, job satisfaction with personal and organizational factors, and level of moral distress with job satisfaction, personal and organizational factors among nurses working at Jimma university medical center, Jimma Zone, Jimma Town, South West Ethiopia, April, 2019 (n = 248).

Variable	**Correlations**	**Pearson Correlation**	**Sig. (2-tailed)**
Job satisfaction	Job satisfaction	1	
	Moral distress	-.433**	.000
	Professional commitment	.424**	.000
	Organizational commitment	.416**	.000
	Autonomy	.399**	.000
	Empowerment	.425**	.000
	Perception toward the quality of nursing care	.365**	.000
	Organizational support	.430**	.000
	Perception of working environment	.409**	.000
Variable	**Correlations**	**Pearson Correlation**	**Sig. (2-tailed)**
Moral distress	Moral distress	1	
	Job satisfaction	-.433**	.000

Professional commitment	-.735**	.000
Organizational commitment	-.571**	.000
Autonomy	-.537**	.000
Empowerment	-.596**	.000
Perception toward the quality of nursing care	-.457**	.000
Perception of organizational support	-.637**	.000
Perception of working environment	-.710**	.000

(**) correlation is significant at the 0.01 level (2-tailed).

CHAPTER SIX: DISCUSSION

6.1. DISCUSSION

According to this study, more than half of the participants had high level of moral distress. The finding of this study was a little bit less than study done in USA (8). This discrepancy might be due to the factors were different.

According to this study among socio demographic variables (age, educational level, marital status, religion, working experience and monthly salary) were not able to predict moral distress. This study was consistent with study done in Iran (22) and study done in Italy (23). However:based on this study sex was the new finding and significant predictor of moral distress. Male nurses were exprienced high level of distress than female nurses. This might be due to the the socio economic status and the traditional views of the socities.

In another ways, this study indicated that working hours per week was also significant predictor of moral distress. This study was consistent with study done in Iran, USA and Netherland (23, 30, 31). This might be due toworking for long times were increased job pleasure and satisfaction.
According to this study based on personal factors, the nurses who were not committed for their profession were experienced high level of moral distress than committed nurses. This study was similar with study done in USA (40, 44). This might be due to professional commitment were positive relationship with the moral behaviour of the nurses. According to this study nurses who were not professionally autonomous were also experienced high level of moral distress than autonomous nurses. This study was also consistent with study done in Iran (30, 31). This might be due to the similar effect of personal factors on nurses.
However; in this study among the personal factors (professional commitment and autonomy) were able to predict moral distress. These variables were the new finding of the current study. These might be due to the difference of working environment, the cultural views of different professionals and societies. It can also lead the professionals to leave their profession due to those influences and a great impact on patient's cares.
According to this study, nurses who were working in negative working environment were experiencedhigh level of moral distress than nurses who were working in positive working environment. In this study, working environment was the significant predictor of moral distress

among nurses. This study was consistent with study done in Sweden (54) and study done in USA (36,59). This situation might be due to poor nurse's manager ability, absence of nurse's participation in the work place, shortage of resources and poor nurse physician relationships.

Regarding on this study job satisfaction was negatively correlated with moral distress. This finding was consistent with study done in Japan (35) and study done in USA (13, 34). This might be due to indirect or reverse relationship of the two variables.

All of the personal (professional commitment, autonomy, empowerment, organizational commitment) and organizational factors (perception toward nursing quality care, working environment and perception of organizational support) did show a significant negative association with moral distress, but job satisfaction was positively correlated with both of the personal and organizational factors.

6.2. LIMITATION OF THE STUDY

- ✓ Absence of local literatures to compare the current studies
- ✓ The finding was limited to the hospital. Thus, the finding did not generalize for health center
- ✓ Recall bias

CHAPTER SEVEN: CONCLUSION AND RECOMMENDATIONS

7.1. CONCLUSION

Moral distress is the current problem and the major challenging issue among nurses working in the hospital. In this study more than two third of the nurses were experienced high level of moral distress. Sex, working hours per week, professional commitment, autonomy and working environment were identified as predictors of moral distress.This problem can be a leading cause of decreasing nurses'sense of well-being, increasing nurses turn over and negative effects on the quality of patient cares.

7.2. RECOMMENDATIONS

Based on the findings the following recommendations are forwarded to the responsible bodies.

1. The responsible bodiesshould pay more attention to this current problem of nurses.
2. According to thisstudy the nursing managers, leaders and authorities in different levels needs to attention to reduce the level of moral distress among the hospital nurses.
3. The Nursing Association should be implement important objectives and strategies for nurses. It should also make strong association and try to mobilize the team for the better outcomes.
4. JUMC School of Nursing and Midwifery to increase ethical education strategies against this issue.
5. The study hospital should give more emphasize for male nurses and maintain the working environment in order to improving professional commitment, professional autonomy and working hours of nurses in the hospital.
6. The hospital also should prepare training and workshops to providing educational programs and emotional supports in order to recognizingand minimizing the factors which leads to developing moral distress.
7. The hospital should focus on the reduction management program of moral distress by applying 4A's (ask, affirm, assess and act) in the hospital working environment.
8. The hospital should also focus on coping strategies on moral distress like speak up, be deliberate, be accountable, build support, , focusing on change in the working environment will be more productive than focusing on the individual patient care,participate in moral education, make it interdisciplinary, find root causes, develop policies and design a workshop. Therefore; implementing those strategies under their responsibility better to improve employees moral behaviours and their wellbeing among hospital nurses.
9. Additional study will be recommended on nurses' turnover and absenteeism.

REFERENCES

1. Rushton, Schoonover-Shoffner & K. exploring moral resilience toward a culture of ethical practice. J Am nurses assoc prof issues moral resilence. 2016;3(1):(S4).
2. Ann B. Hamric, Ph.D., R.N., Walter S. Davis, M.D., and Marcia Day Childress PD, Ann. Moral distress in a nurse and a physician. *J Pharos/Winter*. 2006;3(2):16-22.
3. Wilson MA, Scientist-contractor N, Armitage CN. Barriers and Values of Moral Distress Among Critical Care Nurses. *J Aerosp Med*. 2017;88(6):1-31.
4. Baldwin KMP. Moral distress and ethical decision making. *J Nurs Cent*. 2014;8(6):5.
5. Wy O, Cm Y, Lee A. Ethical dilemmas in the care of cancer patients near the end of life. *J Med*. 2012;53(1):11.
6. Maysa Abdalla Hassan1 HIA and NAR. Moral Distress Related Factors Affecting Critical Care Nurses. *J Am Sci*. 2013;9(6):184-196.
7. Sanguan Lerkiatbundit1 PB. Moral Distress Part I : Critical Literature Review. *Thai J Pharm Pract*. 2009;1(1):640-650.
8. Ameri M, Mirhashemi B, Hosseini SS. Moral distress and the contributing factors among nurses in different work environments. *J Nurs Midwifery Sci*. 2015;2(3):44-49.
9. Sanguan Lerkiatbundit PB. Moral Distress Part II: Critical Review of Measurement. *J Pharm Pract*. 2009;13:17-18.
10. Allen R, Hm MSM, Judkins-cohn T, et al. Moral Distress Among Healthcare Professionals at a Health System. *J Oncol Nurs*. 2013;15(3):111-118.
11. Redman BK, Fry ST. Nurses' ethical conflicts: what is really known about them? Nurse Ethics 2000;7:360-6.
12. . Musto, L. C., Rodney, P. A., & Vanderheide R. barriers and values of moral distress among critical care nurses. *Towar Interv to address moral distress Nurs Ethics*. 2016;22,((1)):91-102.
13. Francke, A. L., Struijs, A., & Willems, D. L. (2013). Determinants of moral distress in daily nursing practice: A cross sectional correlational questionnaire survey. International Journal of Nursing Studies
14. Moral Distress References Hamric, A., Borchers, C., & Epstein, E. (2012). Development and testing of an instrument to measure moral distress in healthcare professionals. *J Nurs Scholarsh*.2015;47(2):117-125.

15. Hatamizadeh M, Hosseini M, Bernstein C, Ranjbar H. Health care reform in Iran : Implications for nurses ' moral distress , patient rights , satisfaction and turnover intention. *J Nurs Midwifery Res*. 2018;17(4):1-8.
16. Corrado AM, Molinaro ML. Moral distress in health care professionals. *Am Assoc Coll Nurs Ethics*. 2017;86(2):32-34.
17. Stratton E. Moral Distress in Nursing Academia Presenting Grounded Theory : Introduction. In: *American Association of Colleges of Nursing. (2013). Special Survey of Vacant Faculty Positions for Academic Year* . ; 2014:4-7.
18. WILKINSON JM. Moral Distress in Nursing Practice , Experience and Effect. *J Nurs forum*. 2011;23(2):13-19.
19. Dalmolin GDL, Luiz E, Barlem D. implications of moral distress on nurses and burn out. *Text Context Nurs*. 2012;21(1):200-208.
20. Rn ZA. Nurse Managers ' Actions (NMAs) Scale to Promote Nurses ' Autonomy : Testing a New Research Instrument Department of Community and Mental Health Nursing Jordan University of Science and Technology Faculty of Nursing Department of Nutrition and Food Technology. 2013;3(8):271-278.
21. Martins H. Minnesota Satisfaction Questionnaire - Psychometric Properties and Validation in a Population of Portuguese Hospital Workers. 2012;(October).
22. Mohammad HoseinVaziri, Moral Distress among Iranian Nurses, Iran Journal Psychiatry 2015; 10(1): 32–36
23. Anke J.E. de Veer a,*, Anneke L. Francke a, b, Alies Struijs c, d, Dick L. Willems d E. Determinants of moral distress in daily nursing practice : A cross sectional correlational questionnaire survey. *Int J Nurs Stud*. 2013;50(1):100-108.
24. Corley, M.C., Minick, P., Elswick, R.K., Jacobs, M., 2005. Nurse moral distress and ethical work environment. Nursing Ethics 12 (5), 381–390
25. Mohammad HoseinVaziri, Moral Distress among Iranian Nurses, Iran Journal Psychiatry. 2015; 10(1): 32–36
26. Hamaideh SH. Moral distress and its correlates among mental health nurses in Jordan. *Int J Ment Health Nurs*. 2014;23(3):33-41.
27. M.C. Paganini, R.S. Bousso Nurses' autonomy in end-of-life situations in intensive care units Nurse Ethics, 22 (7) (2015), p. 803-814

28. E. Gurková, J. Čáp, K. Žiaková, M. ĎurišковáJob satisfaction and emotional subjective well-being among Slovak nursesInt Nurse Rev, 59 (2012), p. 94-100
29. S.O. Adebayo, I.D. EzeanyaTask identity and job autonomy as correlates of burnout among nurses in Jos, Nigeria Int Rev Soc Sci Humanit, 2 (2011), p. 7-13
30. M. Lazzarin, A. Biondi, S. di Mauro Moral distress in nurses in oncology and hematology units Nurse Ethics, 19 (2012), pp. 183-195
31. Zahra Sarkoohijabalbarezi,the relationship between professional autonomy and moral distress among nurses working in children's units and pediatric intensive care wards, International Journal of Nursing Science, 2017 (4) (2), p 117-21
32. Coomber, B., & Barriball, K. L. (2007) Impact of job satisfaction components on intent to leave and turnover for hospital-based nurses: A review of the research literature. International Journal of Nursing Studies, 44, 297-314.
33. Barlem2 ELD, .psycometric characteristics of the moral distress scale características psicométricas damoral distress scale em. *j artig orig*. 2014;1(1):202-208.
34. Ohnishi, K., Kitaoka. Comparison of moral distress and burnout experienced by mental health nurses in Japan and England: A cross-sectional questionnaire survey. Japan Health Medicine Association, (2011), 20, 73-86
35. Ando and Kawano: Association between Moral Distress and Job Satisfaction of Japanese Psychiatric Nurses, Asian/Pacific Island Nursing Journal, 2016, 1(2): 55-60.
36. Hiler CA, Hickman RL. distress in a us s ample. *AJCC Am J Crit CARE*. 2018;27(1):59-66.
37. BlauG.J. The Measurement and Prediction of Career Commitment. J. Occup. Psychol.1985; 58:277–288.
38. Fu J.R. Understanding career commitment of IT professionals: Perspectives of push-pull-mooring framework and investment model. Int. J. Inf. Manag. 2010;31:279–293
39. Meyer J.P., Allen N.J., Smith C.A. Commitment to Organizations and Occupations: Extension and Test of a Three-Component Conceptualization. J. Appl. Psychol. 1993; 78:538–551
40. Gradner D.L. Career Commitment in Nursing. J. Prof. Nurs. 1992; 8:155–160

41. Wang L., Tao H., Ellenbecker C.H., Liu X. Job satisfaction, occupational commitment and intent to stay among Chinese nurses: A cross-sectional questionnaire survey. J. Adv. Nurs. 2012 ;68: 5 39–549.
42. Bahrami MA, Ghasemipanah F, Barati O. The relationship between religious beliefs and organizational commitment among nurses in teaching hospitals of Yazd. J Med History 2016; 7(25): 185-207.
43. Abdollahi B, Karimian H, Namdari Pejman M. Relationship between organizational commitment and spirituality in the workplace with ethical behavior of employees. Ethics Sci Technol 2015; 9(4)
44. Ghayour Baghbani, The relationship between Organizational Commitment, Job Satisfaction and Social Orientation, and the Nurses' Moral Behavior, Medical Ethics Journal, 10,37(2016)
45. Loretta C Regan, RN, MS and Lori Rodriguez, RN, PhD. Nurse Empowerment from a Middle-Management Perspective: Nurse Managers' and Assistant Nurse Managers' Workplace Empowerment Views, Permanente Journal, 2011, 15(1), 101-107
46. Annette M. Browning. Moral Distress and Psychological Empowerment in Critical Care Nurses Caring for Adults at end of Life care, AJCC, 2013, (22), 143-151
47. Abbasi, Ghafari, Effect of moral empowerment program on moral distress in intensive care unit nurses, Journal of Nursing Ethics, 2018
48. Murray, J. S. Creating ethical environments in nursing. American Nurse Today, 2007, 2(10), 48- 49.
49. Schluter. Sherman. Nurses' moral sensitivity and hospital ethical climate: A literature review. Nursing Ethics, 2008, 15(3), 304-321.
50. Sherman, R., & Pross, E. Growing future nurse leaders to build and sustain healthy work environments at the unit level. The Online Journal of Issues in Nursing, 2010
51. Wurzbach ME. Comfort and nurses' moral choices. J Adv Nurs 1996; 24: 260-264.
52. Pendry, P. S. Moral distress: Recognizing it to retain nurses. Nursing Economics,2007, 25(4), 217 – 221.
53. Storch, J., Rodney, P., Pauly, B., Brown, H. & Starzomski, R. Listening to nurses' moral voices: Building a quality health care environment. Canadian Journal of Nursing Leadership, 2009, 15(4), 7 – 15.

54. Silen, M., Svantesson, M., Kjellstrom, S., Sidenvall, B., & Chirstensson, L. Moral distress and ethical climate in a Swedish nursing context: Perceptions and instrument and usability. Journal of Clinical Nursing, 2011, 20, 3483-3493.
55. Vaziri MH. Moral Distress among Iranian Nurses. *Iran J Psychiatry*. 2015;10(1):32-36.
56. Baffoe-mensah F. Sources of Moral Distress Among Reg- istered Nurses Literature Review. *J Clin Ethics*. 2018;20(4):330-342.
57. Moral Problems Experienced by Nurses Hem ş irelerin Deneyimledikleri Ahlaki Sorunlar. *Ankara Medcine J*. 2018;18(1):231-309.
58. Galway nui. understanding emergency nurses â€tm experiences of moral distress. *Acad Emerg Med*. 2016;16(1):48-52.
59. Garcia A. Infl uence of Moral Distress on the Professional Practice Environment During Prognostic Confl ict in. *J TRAUMA Nurs*. 2011;6(1):221-230.
60. Lankshear . The Professional Practice Leader: The role of organizational power and personal influence in creating a professional practice environment for nurses. 2011, P, 152.
61. Ganz, F. D., & Berkovitz, K. Surgical nurses' perceptions of ethical dilemmas, moral distress, and quality of care. Journal of Advanced Nursing, 2011, 68 (7), 1516- 1525
62. Hamric, A. Empirical research on moral distress: Issues, Challenges, and Opportunities. HEC Forum, 2012, 24 (1), 39-49.
63. Rn MC. Moral Distress Causes , Consequences and Strategies for Prevention. *J Trinity Health Webinar*. 2015;15(1):5-26.
64. Ledoux, K. Understanding compassion fatigue: Understanding compassion. *Journal of Advanced Nursing, 2015,* 01;38:5-6.
65. Erlen JA. Moral distress: a pervasive problem. Orthop Nurs. 2001;20 (2):76–80.
66. Liu L, Hu S, Wang L, Sui G, Ma L. Positive resources for combating depressive symptoms among Chinese male correctional officers: perceived organizational support and psychological capital. BMC Psychiatry. 2013;13:89.
67. Cheraghi MA, Salsali M, Safari M. Ambiguity in knowledge transfer: the role of theory-practice gap. Iran J Nurs Midwifery Res. 2010;15(4):155–66.
68. Kwak C, Chung BY, Xu Y, Eun-Jung C. Relationship of job satisfaction with perceived organizational support and quality of care among South Korean nurses: a questionnaire

survey. Int J Nurs Stud. 2010;47(10):1292

69. Moral Distress in Nurses Providing Direct Patient Care on Inpatient Oncology Units. 2013
70. Parker D, Tuckett A, Eley R, Hegney D. Construct validity and reliability of the Practice Environment Scale of the Nursing Work Index (PES- NWI) for Queensland nurses 16(2010):352-358.
71. Vlachopoulos SP, Michailidou S. Development and Initial Validation of a Measure of Autonomy , Competence , and Relatedness in Exercise : The Basic Psychological Needs in Exercise Scale. 2006;10(3):179-201.
72. AHL, While AE, Barriball KL. Job satisfaction among nurses : a literature review. *Int J Nurs Stud*. 2005;42:211-227.
73. Spreitzer, Gretchen M.. Psychological empowerment in the workplace: Dimensions, measurement, and validation. Academy of Management Journal, (1995), 38(5): 1442-1465.
74. Navideh Robaee, Perceived organizational support and moral distress among nurses, BMC Nursing, 2018, 17(2), 4

JIMMA UNIVERSITY

INSTITUTE OF HEALTH

FACULTY OF HEALTH SCIENCE

SCHOOL OF NURSING AND MIDWIFERY

INVESTIGATOR'S NAME: HABTAM ABEBAW BEYAFFERSE

INFORMATION SHEET

Dear respected nurses

My name is_____I am hereby in the behalf ofHabtamAbebaw who is second year masters student in Adult Health Nursing at Jimma University School of Nursing and Midwifery department, undertaking a research on assessment of predictors of moral distress among nurses working in Jimma university medical center, Jimma Zone, Jimma Town, South West Ethiopia, April 2019. This letter serves to ask consent from you to take part in this research. The purpose of this study is to assess predictors of moral distress among nurses working in Jimma university medical center, Jimma Zone, Jimma Town, South West Ethiopia, April 2019.This will be critical input for policy makers and organizations. Your participation in this research is voluntary. If you decide not to participate, there will be no negative consequences for you. Your participation on this study is very important for achievement of the study and for paving the way for analyzing and provision of information about predictors of moral distress among nurses working in Jimma university medical center, thereby reducing the risks for moral distress among nurses. All the responses given by you and results obtained will be kept confidential whereby no one will have access to your response. You are not expected to give your name or phone number. Without permission from you and legal body, any part of this study will not be disclosed to third person. You have full right to refuse and withdrawal to participate in this study if you do not wish. The self-administered questionnaire will take about 30 minutes to be filled. All sampled nurses in Jimma University medical center will be the participants of this research. If you are willing to participate in this study, you need to understand and sign the agreement form, and then you will be asked to give your responses by data collectors.

Name of investigator: HabtamAbebawTelephone:
+251901611127habtam.abebaw2010@gmail.com

CONSENT FORM

Are you voluntary to participate in this study? Yes ☐ No ☐

I approve my consent to take part in the study with my signature.

Signature _____ Date _____

Thank you!

Date of data collection _____ Time started_____ Time finished_____

ANNEXES

Part 1: Socio demographic characteristics: The following questions represent your socio demographic characteristics, and then you put your possible answer in blank space and circle the choice of your answer.

1. Age _____ in years

2. Sex
    1. Male
    2. Female
3. Religion?
    1. Orthodox
    2. Muslim
    3. Protestant
    4. Others
4. Marital status
    1. Single
    2. Married
    3. Divorced
    4. Windowed
5. Level of education completed
    1. Diploma
    2. Degree
    3. MSc and above

6Your working experience in the current unit _____in months or _____years

7. Your current working unit_____

8. Working hours per week
    1. 42 hrs/wk 2. 84 hrs/wk

9. Monthly income_____

Part 2: Moral distress revised scale questions: The following questions are statements that represent the possible feelings of yourmoralbehaviours within the last months or years. Was there any situation faced when you practicedyour professional job in thishospital?With respect to your own feelings about these statements indicate your response by ticking the right sign (✓) on one of the four alternatives beside each statement.

1= strongly disagree 2= disagree 3= agree 4= strongly agree

Sr. No	Number of items	SD=1	D=2	A=3	SA=**4**
1.	I have provided less than optimal care due to pressures from administrators or leaders to reduce the cost of materials.				
2.	I have followed the family's wishes to continue life support even though I believed it is not in the best interest of the patient.				
3.	I have carried out the physician's orders for what I considered unnecessary tests and treatments.				
4.	I have continued to participate in care for a hopelessly ill person who sustained on a ventilator, when no one would make a decision to withdraw support.				
5.	I thought that assist a physician provided incompetent care.				
6.	I did not feel qualified in order to give care for the patients.				
7.	I thought that working with nurses or other healthcare providers who were not competent required for patient cares.				
8.	I have thought that witness diminished patient care				

	quality due to poor team communication.				
9.	I have thought that work with other nurses or other care providers that I considered unsafe				

Personal factor questions are five parts, which has listed below as follows;

Part 3. Professional commitment: The following questions are statements that represent your possible feelings. You might have a commitment towards your profession in the last months or years in this hospital. With respect to your own feelings about these questions indicate your response by ticking the right sign (✓) on one of the four alternatives beside each statement.

SD = **strongly disagree D = disagree A = agree SA = strongly agree**

Sr.No	Number of items	SD=1	D=2	A =3	SA**=4**
1.	My career was a central interest in my life.				
2.	Working in my current profession was important to me.				
3.	My career was important to me to pursuing my self-image.				
4.	I would recommend my profession as a career.				
5.	I think my profession was a rewarding career.				
6.	I would not want to work outside my profession.				

Part 4. Organizational commitment: The following questions are statements that represent your possible feelings. You might have a commitment towards your organization in the last months or years for this hospital. With respect to your own feelings about these questions indicate your response by ticking the right sign (✓) on one of the four alternatives beside each statement.

SD = **strongly disagree D = disagree A = agree SA = strongly agree**

Sr. No	Number of items	SD=1	D=2	A=3	S**=4**
1.	I spoke up about this organization to my friends as a				

	great organization to work.				
2.	This organization really inspired me in the best way of job performance.				
3.	I were extremely glad or happy to chose this organization to work than others				
4.	I really cared about the fate of this organization				
5.	For me this organization was the best to work than others				

Part 5. Autonomy: The following questions are statements that represent your possible feelings. You might have professional autonomy or a right to made decisions your profession in the last months or years with in this hospital. With respect to your own feelings about these questions indicate your response by ticking the right sign (✓) on one of the four alternatives beside each statement.

SD = **strongly disagree D = disagree A = agree SA = strongly agree**

Sr.No	Number of items	SD=1	D=2	A= 3	SA=4
1	The practice I followed is highly compatible with my choices and interests				
2	I felt very strongly that I have opportunity to make choices with respect to the way I practice.				
3	I felt extremely comfortable when other practice participantwere involved				
4	I felt there was open channels of communication when I were with others professionals				

Part 6. Empowerment: The following questions are statements that represent your possible feelings. You might have empowerment to your profession in the last months or years in this hospital. With respect to your own feelings about these questions indicate your response by ticking the right sign (✓) on one of the four alternatives beside each statement.

SD = **strongly disagree D = disagree A = agree SA = strongly agree**

Sr.№	Number of items	SD=1	D=2	A=3	SA=4
1.	I was confident enough about my ability to do my job.				
2.	The work that I didwasimportant to me.				
3.	My impact on what happens in my department was large/great.				
4.	I could decide on my own how to go about doing my own work.				
5.	I hadasignificant influence over what happens in my staff				

Part 7. Job satisfaction: The following questions are statements that represent your possible feelings. You might have satisfied or not satisfied by your own professional jobin the last months or years when you did your job in this hospital. With respect to your own feelings about these questions indicate your response by ticking the right sign (✓) on one of the four alternatives beside each statement.

1= "very dissatisfied, **2="**dissatisfied, **3=**"satisfied, **4 ="**very satisfied

Sr. No	Number of items	1	2	3	4
1.	The way my boss handles his/her workers was good				
2.	The competence or ability of my supervisor in				

	making decisions was great and reasonable				
3.	I have a chance to do the jobusing my abilities				
4.	I washappybecause ofmypayment and the amount of work that I did.				
5.	I had a chance for advancement on my job				
6.	I have felt happiness by the praisethat I got for doing a good job				
7.	I felt a sense of accomplishment that I got from my job				

Organizational factor questions are three parts, which has listed below as follows;

Part 8. Working environment: The following questions are statements that represent your possible feelings. You might have an idea about the condition of your working environmentwhen you practiced in this hospital in the last months or years. With respect to your own feelings about these questions indicate your response by ticking the right sign (✓) on one of the four alternatives beside each statement.

. SD = **strongly disagree D = disagree A = agree SA = strongly agree**

Sr. No	Number of items	SD=1	D= 2	A=3	SA=4
	Nurse manager, ability leadership and support				
1	A nurse manager or immediate supervisor who was a good manager and leader				
2	A nurse manager who backs up the nursing staff in decision making, even if conflict was with a doctor				
3	A supervisory staff that was supportive of the nurses				
4	Hospital administration was listening and respond to employee concerns				

	Nurse participation in the workplace				
1	I had opportunities for advancement				
2	Active staff development or continuing education program for nurses				
3	Nurses involved in the internal governance of the hospital				
	Staffing and resource adequacy				
1	Enough staff to get work done				
2	Adequate support services allowed me to spent time with my patients.				
3	I had enough time and opportunity to discussed patient/client/resident care problems with other nurses.				
4	I have worked with nurses who were clinically competent.				
	Nursing foundations for quality care				
1	I have written, up to date nursing care plans for all patients/clients/residents.				
2	Patients/clients/residents care assignments that foster continuity of care				
3	Nursing care is based on a nursing model, rather than a medical model				
	Collegial Nurse physician Relations				
1	Doctors and nurses have good working relationships				
2	Collaboration has existed between nurses and doctors				

Part 9. Perception of organizational support: The following questions are statements that representyour possible feelings. You might have a perception of your organizational support when you practiced your professional job in this hospital in the last months or years. With respect to your own feelings about these questions indicate your response by ticking the right sign (✓) on one of the four alternatives beside each statement.SD = **strongly disagree D = disagree A = agree SA = strongly agree**

Sr. No	Number of items	SD=1	D=2	A=3	SA=4
1.	The organization that I have worked for have strongly considered my goals and values as an employee				
2.	The organization that I have worked for have really cared about my well-being				
3.	The organization that I have worked for have taken pride of my accomplishment for the best of my work				
4.	The organization that I have worked for have tried to make my job as interesting as possible				
5.	The organization that I have worked for have made me feel that if I have a problem, help is always available				

Part 10. Perception towardsthequality of nursing care: The following question is a phrase that representsyour possible feeling. You might have a perception towards thequality of nursing care as your profession when you gave nursing care for the patients in this hospital in the last months or years. With respect to your own feelings about these questions indicate your response by ticking the right sign (✓)on one of the two alternatives beside one phrase from **1 to 2.**

Sr. No	Number of items	1= poor	2= good
1	My perception towards the quality of nursing care was		

Thanks for your participation!

Declaration

ASSURANCE OF PRINCIPAL INVESTIGATOR

I, the undersigned, declare that this thesis is my original work, has not been presented for a degree in this or any other university and that all sources of materials used for the thesis have been fully acknowledged.

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