Nursing care and the psychology effects on post-care nurses serving COVID-19 patients in Vera Cruz isolation room, Dili, Timor-Leste

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ABSTRACT

Introduction: Coronavirus 2 (SARS-CoV-2) is a syndrome of acute respiration that is serious like corona acid ribonucleic detected, made separation and identification in pneumonia sick patients in Wuhan, China in December 2019 (WHO, 2020). Timor-Leste on May 1, 2020, 24 cumulative cases was confirmed, 16 cases recovered, 12 cases are still being treated, and 12 patients experienced psychological pressure from patients and health professional. This study aimed to determine the knowledge of nurses; nursing service and the psychological influence of nurses after providing care for Covid-19 patients.

Method: Qualitative research with a phenomenological approach has been used in this study, ten nurses who have worked serving Covid-19 patients participated in this study, and data was collected using interview guidelines, voice recorder, deep-interview, data analysis techniques by organizing data, grouping, categorical data, topic and answer formulation, data assessment and writing the results.

Result: The majority of nurses understand and apply Covid-19 prevention, but some are confused the cause. Have not carried out nursing care according to the standards of the International Counsel of Nursing (ICN) and the Timor-Leste Nursing Association, as (assessment, diagnosis, intervention, implementation, and nursing evaluation), reasoned: new job, no format, less manpower, no orientation from senior, emergency time. The majority experienced psychological effects after providing care to the Covid-19 patient.

Conclusion: This study concluded that nurses understand Covid-19, the nursing care implementation is not yet based on ICN and ETNA standards and after returning home the nurses experienced psychological effects.

Keywords: Covid-19, care, effects, nursing, psychological.

INTRODUCTION

Coronavirus 2 (SARS-CoV-2) is a syndrome acute respiratory disease serious that virus Corona acid ribonucleic was detected in Wuhan, China on December 2019. The international commission classified that virus on February 12, 2020, with the name 2019-nCoV.1 This virus give the name Corona because its characters look like “Coroa” in Portuguese language (Covid-19 training Modules MoH, Timor-leste, 2020). Have various name of the Covid-19 as bellow: Corona Virus; Wuhan Coronavirus; COVID-19-nCoV acute respiratory disease or Novel Coronavirus Pneumonia. From December 2019 until this research was carried out, the Covid-19 pandemic has become a global problem so many countries have pursued prevention and treatment strategies ranging from washing hands to intensive care in isolation rooms. Total old case 2.314.621, total new case 72.846, death old case is 157.847 and death new case is 5296.1

Previous research found the experience of nursing care in Covid-19 patients on 4 topics such as: first; negative emotions arisedue to fatigue, discomfort and helplessness caused by high work intensity, second; self-coping patterns include psychological adaptation, third; detection developing pressures compost by increase sens of love and gratitude, professional responsibility development, and self reflection; finally; indicated positive and negative emotion.1 The coronavirus diseases fast transmitted, there is pressure and threats on nurses who provide nursing care to Covid-19 patients.4 The fact based on the Crisis Management Integrated center (Sentru Intergadu Jestaun Krize/SS-CIGC Timor-Leste) on may 1, 2020; mentioned total cumulative confirmed cases 24, no new confirmed cases, total recover 16 cases; still being treated isolation room are 12 persons, total cumulative laboratory test: 671, total cases with laboratory result: 169, total cumulative with laboratory result negative: 478, total cases of people in quarantine in Dili and municipality: 342, total autoquarantine people in Dili and Municipality: 61, health professional stay at quarantine: 40, total people who have finished living in compulsory quarantine in Dili and municipality: 1782.

Nurses around the world present professional principles to perform their duties in all health care facilities. The most...
important task is to provide nursing care based on ICN standards such as conducting assessments, diagnostic formulations, interventions, implementation and evaluation. Therefore, this study aimed to determine the knowledge of nurses; nursing services and the psychological influence of nurses after providing care for Covid-19 patients.

METHODS

Study Design
This qualitative design with phenomenological research was conducted at isolation room of Vera Cruz Dili, Timor-Leste between July to October 2020, and 10 nurses who have completed the mission at isolation and have been in quarantine for 14 days. The research variables is the evaluation of the implementation of nursing care and the psychological effects of handling Covid-19 patients.

Data Collection and Data Analysis
Data collection with instrument interview guideline with interview technic, data analysis with transcription method and modification of interview result from recording form to written form from word to word, grouping data based on the categories, them with answer formulation and data examination. The ethical aspect was taken into consideration Helsinki declaration in three points below: Informed Consent, Anonymity, and Confidentiality.2

RESULT

Characteristic of respondents
The characteristic of respondents in this study was conducted as below:

Knowledge of Covid-19

Nurses’ knowledge of the definition of Covid-19
The majority of nurses knows and understands COVID-19, which was first discovered in China, infects the respiratory system, threatens people’s lives and is the focus of attention from various countries including Timor-Leste, because it has a very high infectious ability and can spread to other countries through individual contact while traveling.

“Covid-19 is a pandemic disease ... originating in China, which makes people panic and afraid, including health workers, but as professional nurses who have attended training on the management of Covid 19 ... take advantage of the knowledge gained to reduce pressure psychologically because the nurses use protective equipment such as... this disease infects the respiratory system, Covid-19 is thought to be caused by bats and has spread to many people”.

Nurses’ knowledge of the causes of Covid-19
Most nurses understand that COVID-19 that caused by the Novel Coronavirus called SARS or MARS, where before the emergence of Covid-19 this virus was detected first”. There are some nurses who do not know the exact cause and say the cause is bacteria.

“The cause of this disease is bacteria, partly because we don’t know in depth about what causes it - what is true because we in the Vera Cruz Isolation Room are more focused on services so we don’t know but this disease may be transmitted by some bacteria”.

Nurses’ knowledge of the sign and symptoms of Covid-19
The nurses explained that the signs and symptoms are coughing, hot body, difficulty breathing, sore throat when swallowing, frequent sneezing, running nose, headaches, and asymptomatics.

“Signs and symptoms of Covid 19 according to theory are such as coughing, running nose, body feeling hot, sore throat when swallowing ... high body temperature, body aches, difficulty breathing, cough accompanied by sneezing and sometimes show no symptoms”.

Nurses’ knowledge of how Covid-19 is transmitted
The mode of transmission of Covid-19 is through saliva (Droplet) which has been contaminated with the Novel Coronavirus Virus, will come out of the body of an infected person when sneezing/talking at a distance of less than 1.5 meters. The nurse also stated that an infected virus contaminated on work equipment of public facilities.

“Transmission through sputum and saliva when someone coughs this virus will come out and hit other people .... Covid-19 can cause transmission, initially starting from saliva and when we talk at close range it will be easy to pass on to other people, , it could also be through sneezing and the fluids that we hold, for example, the fluids in our hands, materials and instruments that we hold, then other friends will hold them so they can cause the spread of Covid-19 “.

Table 1. Respondent’s characteristics who provide nursing services to Covid-19 patients in Vera Cruz isolation room.

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Nurses’ knowledge of the prevention of Covid-19
The nurse stated that prevention of Covid-19 must be through awareness; wash hands, keeping a distance of more than 1.5 meters, covering mouth with elbows when coughing or sneezing, wearing a mask, or goggles, limiting the crowd to more than 10 people, and eat foods that contain nutritional value.

“... prevention Covid-19 for me is easy and simple to wash hands, keep a distance when coughing or sneezing must be covered with elbows, wearing a mask ... consuming foods that contain good nutritional value but are not easy for most people with various reasons such as lack of time, unavailability of water, and lack of self-awareness ”.

Nurses’ knowledge of the complications of Covid-19
The nurse explained that the complications of Covid-19 can cause chronic respiratory system disease and others.

“Causing disease in the chronic respiratory system, urinary system, shock, physical weakness, especially in the extremities and even death, especially in the elderly due to decreased immunity”.

Nursing care on patient with the Covid-19
The application of nursing care to Covid-19 patients is not in accordance with the standards of the International Council of Nursing (ICN) standard adopted by Timor-Leste with five (5) stages such as 1) assessment; 2) diagnosis; 3) intervention; 4) implementation and 5) evaluation.

Nursing assessment
According to standards the first step of the nursing process is to conduct nursing assessments using a standardized format. But said they had not carried out a using assessment for the following reasons: 1) there was no specific assessment format for Covid-19 patients, so it used the HNGV general assessment format; 2) the nurse used the doctor’s note format to fill in the patient’s needs and write down instructions; 3) There is no mentoring from experienced senior nurses.

“... did not formulate a nursing diagnosis ... since the beginning, there was no formulation of a nursing diagnosis, we only served patients according to the problem at hand ... we just continued what was done in the previous rotation....... We collaborate with doctors to complete patient history.... There is no other format that we use.

Nursing interventions
The nursing intervention stage needs to formulate goals, outcome criteria, and nursing intervention is a guideline in providing nursing services to solve the patients is problems but didn't do this.

“... we did not formulate a nursing plans as taught...we don't make nursing plans, just do what the doctor has planned... we make a joint plan for sunbathing the patient in the morning and light exercise, encouraging the patient to drink and take a warm shower”.

Nursing implementation
Nursing implementations that are carried out daily in the Vera Cruz isolation room, such as; 1) giving medication according to the doctor’s instructions; 2) facilitating the patient to sunbate while exercising in the morning; 3) monitoring the general condition of the patient via WhatsApp/Video call; 4) delivering food to the patient; 5) teach the patient to measure their own vital signs and inform the nurse via WhatsApp; 6) allocate patients to each room according to gender.

“... Organizing patients for sunbathing in the morning ... facilitating exercise in the morning for 15 minutes ... reactive patients first sunbathing for 15 minutes followed by positive (+) patients ... between reactive patients and positive patients sleep separately in different rooms as well as men and women also sleep separately ... we communicate with patients only via WA / Video Call to find out the patient's general condition .... deliver food and medicine to the patient. When entering the patient’s room, we have to use PPE, we also deliver food and drugs to be taken are delivered simultaneously, the length of time to visit in the patient’s room is at most one hour ... so about the implementation of honest nursing we do not carry out in accordance with the ICN and AELT’s standards ”.

Nursing Evaluation
The fifth stages of the nursing care process are an evaluation to determine the patient’s progress, but the nurses do not carry out nursing evaluations using subjective, objective, analysis and planning (SOAP) forms, with reason that they are new nurses, just learning, no orientation, no format, emergency situation and didn't have time.

“We have never conducted an evaluation using SOAP on the grounds that we
are just learning. We are new nurses, and the practice is not according with the actual rules...but we always make reports regarding the information as listed below, which has been prepared by the vera Cruz isolation. For example, if a new patient enters the isolation room; we always document the patient’s identity such as (name, age, gender, and from which quarantine). Confirmed or probably cases, date of entry into the isolation room... evaluation using SOAP we did not do it because there was no orientation and at that time it was an emergency situation so we immediately went to the field to take action2.

Psychological effects on nurses who was handle Covid-19 patients

The table above from 10 respondents was interviewed 1 respondent is free from psychological effects on him after carrying out nursing treatment on Covid-19 patients and 9 respondents experienced psychological effects.

DISCUSSION

Nurse’s knowledge about Covid-19 disease

The results of this study have similarities in the knowledge of nurses about Covid-10 with theory. Nurses have known, understood and applied prevention while serving Covid-19 patients in Vera Cruz. Results of the study lead by said that the cause of Covid-19 is Coronavirus disease 2019 (Covid-19), are severe acute respiratory syndrome Coronavirus 2 (SARS-Cov-2) is not correspondence with this study because some respondents said that the cause of Covid-19 is bacteria. According to other study, the level of knowledge comes from knowing, understanding, applying, analyzing and evaluating. This study focuses on nurses’ knowledge of the definition, etiology, signs and symptoms, transmission, prevention and complications, the result is that the majority know and understand Covid-19.1

Nurses’ knowledge of nursing care in Covid-19 patients

According to the nursing assessment is the first stage of a systematic nursing process as long as it collected data from a different source in order to evaluate and identify the patient’s health status. This study shows that nurses have not conducted nursing assessments according to the existing nursing process theory stages.2 Nurses expressed their feeling that they were newly recruited nurses and had not yet received a clear orientation to begin nursing assessments. According to Nanda in Dalami (2011) states that the criteria for the nursing process 1) are formulated from data analysis, data interpretation, identification of patient problems and the formulation of nursing diagnoses; 2) nursing diagnostic formula P+E+S, the actual diagnosis is formulated from P+E, risks, and potential diagnoses; 3) work more closely with patients, other health workers to validate nursing diagnoses; 4) repeat the assessment and revision of the nursing diagnosis. The results of this study indicate that nurses have not implemented the nursing diagnosis formulation process.4 According to Carpenito (2000) in Handyaningsih (2009) is a plan made by nurses in the interests of nurses themselves and other nurses who Write nursing care with the aim: 1) stabilizing and organizing information from patients to solve problems; 2) as a means of communication between nurses and patients to solve problems; 3) as a means of communication between groups of health workers to solve problems. To answer this, Hutahaean (2010) offers two types of nursing intervention plans; 1) autonomous nursing intervention plan and 2) collaborative nursing intervention plan, which determine priority action plans for patients.

Techniques to determine priority problems using Maslow’s basic need hierarchy (physiology, comfort, love, self-esteem to self-actualization); emergency problems (life-threatening/health threatening); level of problem (actual, risk, and potential); expectation from patients. Summarize objective criteria and results according to SMART. The result showed that nurses had not yet SMART. The results showed that nurses had not yet compiled a comprehensive nursing action plan in bio, psychosocial, spiritual, and cultural terms. According to Kozier et al, 2010 in Manullang, 2020, this stage of implementation of nursing care is based on planning to meet the patient’s physical and emotional needs. The results of the study do not correspond to this theory, because nurses do not formulate nursing plans, they only rely on physicians’ plans that focus on clinical treatment.

Griffith and Vhristensen (1986) in Handayaningisih (2009) states that evaluation is an assessment fo the patient’s goal achievement, to determine the effectiveness of nursing actions and reinforced by Dalami (2011) evaluating patient development to determine the achievement of goals and revising baseline data and previous plans.

Nurses need to apply criteria such as: 1) making evaluation plans in a comprehensive, timely and sustainable manner; 2) use basic data in assessing the achievement of goals; 3) validating and analyzing new data; 4) collaborating with patients/families to modify nursing care plan; and 5) documenting evaluation results. However, the result of this study

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Table 2. Psychological effects on nurses after providing nurse care to Covid-19 patients.
is not in line with the concept presented by Nursalam, 2006 regarding the Nursing Note model associated with SOAP.

**Psychological effects**

WHO (2020) states that there are psychological effects that have an impact on health workers including nurses who provide nursing services to patients with Covid-19 such as crying, anxiety, inner pressure, fear, always going out doing vigilance, afraid of something that will arise, nightmares, irritability, feeling of wrongdoing, embarrassment (for example, had time to save, did not have time to help save others, confusion, loss of feeling, feeling unrealistic or unclear, shows such as withdrawing of being silent (not moving), and also according to confirms that there are economic and psychological effects on all populations including health workers. Other researchers found many psychological signs and symptoms affected nurses with SARS, MERS-CoV, Ebola, and H1N1, nurses felt lonely, anxious, fearful, tired, insomnia, and physical and mental health problems. The results showed that there was depression, insomnia, and post-trauma stress among nurses who were directly involved in the handling/treatment of SARS patients, respectively 38.5%, 37% and 33% this research is in accordance with the above reality, these signs and symptoms appear in nurses who provide nursing care to positive Covid-19 patients at the Vera Cruz isolation room.

**CONCLUSION**

The results of the study concluded that: there are some nurses who are still confused about the cause of Covid-19, the implementation of nursing care is carried out in general and does not comply with ICN and AETL standards and they experience psychological effects and one nurse who does not experience psychological pressure. Further studies with different study designs and larger sample sizes are needed to know more about other factors that influence nursing care and the psychology effects on post-care nurses serving COVID-19 patients in Vera Cruz isolation room, Dili, Timor-Leste.

**ACKNOWLEDGMENT**

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**AUTHOR CONTRIBUTION**

All authors contributed to this study’s conception and design, data analysis and interpretation, article drafting, critical revision of the article, final approval of the article, and data collection.

**FUNDING**

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**CONFLICT OF INTEREST**

There is no conflict of interest for this manuscript.

**ETHICAL CONSIDERATION**

This study has been declared ethical by the Ethical Commission Instituto Nacional de Saúde MoH.

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