pISSN 1410-4490
eISSN 2354-9203

Jurnal Keperawatan Indonesia

Urban Nursing Issues in Low-Middle Income Countries

Volume 23, No. 1
March 2020

Accreditation Number: 51/E/KPT/2017

Volume 23, No. 1, March 2020

pISSN 1410-4490
eISSN 2354-9203

Jurnal KEPERAWATAN INDONESIA

TABLE OF CONTENTS

Jurnal Keperawatan Indonesia, Volume 23, No. 1, March 2020
p-ISSN 1410-4490, e-ISSN 2354-9203

GENERAL INFORMATION

JURNAL KEPERAWATAN INDONESIA

MISSION

Jurnal Keperawatan Indonesia (JKI, or Nursing Journal of Indonesia) has a mission to provide information about science, technology, and nursing research to the nursing and health and other communities interested in nursing.

Jurnal Keperawatan Indonesia publishes articles on science, technology, and nursing research in all fields of nursing and other related areas, complementing national issues and trends.

MANUSCRIPT SUBMISSION, REPLACEMENT OF PRINT COSTS, AND DELIVERY

Detail information about submitting a manuscript refers to author guideline. Manuscripts that have been received by the editors will not be returned.

Replacement of print costs per copy:

* Student	IDR75,000.00
* General	IDR65,000.00
* Foreigner	US$45.00
* Institution	IDR75,000.00

Each copy will be charged for IDR10,000.00 (Jabodetabek), IDR20,000.00 (Java), IDR30,000.00 (Outside Java). For a package of JKI (consists of 10 copies), it will be charged for IDR50,000.00 (Jabodetabek), IDR100,000.00 (Java), IDR150,000.00 (Outside Java).

The payment can be done through money order (pos wesel), sent to JKI secretariat, or through account transfer: acc. no. 127 3000 535 BNI branch office UI Depok on behalf of UI FIK Non BP. Payment receipt should also be submitted via mail, email or fax to the JKI's office: (021) 7864124.

ADVERTISEMENT

For further information, please contact secretariat of JKI: Faculty of Nursing, Universitas Indonesia, 4th Floor, E Building Health Sciences Cluster, Campus UI Depok. Phone. (021) 78849120. Fax. (021) 7864124, E-mail: jurnal.keperawatan@ui.ac.id or redaksi_jki@yahoo.com.

EDITORIAL TEAM

JURNAL KEPERAWATAN INDONESIA

p-ISSN 1410-4490, e-ISSN 2354-9203

Address

Secretariat of Jurnal Keperawatan Indonesia
Faculty of Nursing, 4th Floor, E Building Health Sciences Cluster, Universitas Indonesia
Campus UI Depok 16424
Phone (021) 78849120; Fax (021) 7864124
E-mail: jurnal.keperawatan@ui.ac.idhttp://jki.ui.ac.id

Jurnal Keperawatan Indonesia, 2020, 23 (1), 1–14
DOI: 10.7454/jki.v23i1.598
Received March 2018; Accepted November 2019

pISSN 1410-4490; eISSN 2354-9203

CHANGES IN THE SIGNS, SYMPTOMS, AND ANGER MANAGEMENT OF PATIENTS WITH A RISK OF VIOLENT BEHAVIOR AFTER RECEIVING ASSERTIVE TRAINING AND FAMILY PSYCHOEDUCATION USING ROY'S THEORETICAL APPROACH: A CASE REPORT

Yanuar Fahrizal[1*], Mustikasari Mustikasari[2], Novy Helena Catharina Daulima[2]

1. School of Nursing, Faculty of Medicine and Health Science, Universitas Muhammadiyah Yogyakarta, Yogyakarta 55183, Indonesia
2. Faculty of Nursing Universitas Indonesia, Depok 16424, Indonesia

*E-mail: yanuarfahrizal@umy.ac.id

Abstract

Mental disorders are predicted to increase every year. Patients with severe mental disorders, such as schizophrenia, often engage in violent behavior. The treatment of such patients can use general nursing treatments (anger management with physical therapy, taking medicines regularly, and verbal and spiritual methods) and specialist nursing interventions (assertive training and family psychoeducation). This case report involved 11 patients, with the majority aged between 26 and 60 years, unemployed, high school graduates, unmarried, and with previous inpatient history. Generalist and specialist nursing interventions (assertive training and family psychoeducation) use Roy's adaptation theory and Stuart's stress adaptation approach. Nursing interventions were conducted sequentially, starting with generalist nursing interventions, followed by specialist ones. The method used was a pre–posttest in which each patient received generalist and specialist nursing interventions, assertive training, and family psychoeducation, each consisting of five sessions. Results of assertive training therapy and family psychoeducation showed a decrease in the signs and symptoms of violent behavior as well as an improvement in the patient's ability to overcome the risk of violent behavior. The application of Roy's adaptation theory and Stuart's stress adaptation approach is potentially appropriate for the treatment of patients with a risk of violent behavior.

Keywords: assertive training, family psychoeducation, risk for violence, schizophrenia

Abstrak

Perubahan Tanda, Gejala, dan Manajemen Marah pada Pasien dengan Risiko Perilaku Kekerasan Setelah Menerima Pelatihan Asertif dan Psikoedukasi Keluarga Menggunakan Pendekatan Teori Roy: Studi Kasus. *Gangguan jiwa secara keseluruhan diprediksikan akan semakin meningkat setiap tahunnya. Pasien dengan masalah gangguan jiwa berat seperti skizofrenia seringkali melakukan perilaku kekerasan. Penanganan pasien dengan perilaku kekerasan dapat menggunakan tindakan keperawatan generalis (mengontrol marah dengan cara fisik, minum obat teratur, cara verbal dan cara spiritual) dan tindakan keperawatan spesialis (latihan asertif dan psikoedukasi keluarga). Laporan kasus ini melibatkan 11 pasien dengan karakteristik mayoritas usia 26–60 tahun, tidak bekerja, tingkat pendidikan SMA, belum menikah, dan memiliki riwayat dirawat sebelumnya. Tindakan keperawatan yang diberikan adalah tindakan keperawatan generalis dan ners spesialis latihan asertif dan psikoedukasi keluarga dengan menggunakan pendekatan teori adaptasi Roy dan adaptasi stress Stuart. Tindakan keperawatan dilakukan secara berurutan/ bertahap dimulai dengan tindakan keperawatan generalis kemudian dilanjutkan dengan tindakan keperawatan ners spesialis. Metode yang digunakan adalah pre-posttest dimana setiap pasien mendapatkan tindakan generalis serta tindakan ners spesialis latihan asertif dan psikoedukasi keluarga yang masing-masing terdiri dari 5 sesi. Hasil penerapan terapi latihan asertif dan psikoedukasi keluarga menunjukkan terjadinya penurunan tanda dan gejala risiko perilaku kekerasan serta terjadinya peningkatan kemampuan pasien dalam mengatasi risiko perilaku kekerasan. Penggunaan pendekatan teori adaptasi Roy dan teori adaptasi stress Stuart berpotensi sesuai diterapkan pada penanganan pasien dengan risiko perilaku kekerasan.*

Kata Kunci*: latihan asertif, psikoedukasi keluarga, risiko perilaku kekerasan, skizofrenia*

Introduction

The number of patients with mental disorders worldwide is estimated at 450 million, with adults accounting for 10% (WHO, 2009); this number is predicted to increase every year. Major mental disorders that are prevalent in ASEAN countries include psychotic disorders, such as schizophrenia, followed by bipolar disorder and depression (ASEAN, 2016). Based on the 2013 basic health research data in Indonesia, 0.17% of 240 million people in Indonesia suffer from severe mental disorders or schizophrenia. In West Java, the number of people with severe mental disorders accounts for 0.16% of the total population with mental disorders (National Institute of Health Research and Development, 2013).

Schizophrenia is a psychotic or psychiatric reaction characterized by setbacks in cognition, feelings, perceptions, and abnormal behavior that affect the genetic, physical, social, and cultural aspects of an individual (Videbeck, 2011; Varcarolis, 2014). These setbacks can cause patients with schizophrenia to commit violent behavior because they cannot control their emotions, mind, and behavior. Many families hide their family members who have mental disorders at home for several years and only bring them to the hospital when they cannot take care of them or when the patient behaves aggressively or acts violently.

WHO (2009) states that 1.6 million people have died due to violent behavior. Victims of violent behavior include family members or close friends. Based on the data of patients treated from February 13 to April 14, 2017 in Marzoeki Mahdi Hospital, a total of 344 patients, especially those in the Bratasena ward, were with a risk of violent behavior. The patients in the Bratasena ward had received generalist nursing interventions by the ward nurses.

Patients who demonstrate violent behavior are treated using generalist nursing interventions by nurses in hospitals. The administration of generalist nursing interventions can help reduce the cognitive, social, and physical signs and symptoms of patients with a risk of violent behavior and improve their ability to manage such risk (Komala, Keliat & Wardani, 2016; Wahyuningsih, Keliat & Hastono, 2011). Patients with a risk of violent behavior, in addition to requiring generalist nursing interventions, should also be given interventions by specialist nurses in the form of assertive exercise psychotherapy and family psychoeducation.

Assertive training is an act of training some-one to achieve assertive behavior (Sadock & Sadock, 2013). Assertive communication is an ability to talk and interact by paying attention and respecting the rights and opinions of others without ignoring personal rights, needs, and limitations (Pipas & Jaradat, 2010). Assertive behavior training includes practicing direct communication with others, daring to say no to unreasonable requests, being able to express objections and appreciation appropriately, and receiving praises properly (Stuart, 2013).

Patients with severe mental disorders, such as schizophrenia can put a burden on themselves and their families. Maladaptive behavioral problems in patients also increase family stress levels (Shah & Latoo, 2010). Family intervention, in the form of family psychoeducation, is needed to manage stress and family burdens. Family psychoeducation can improve patient symptoms and social functioning, overcome family burdens, and provide family coping strategies. Family psychoeducation can enhance the experience of taking care of the patient and the quality of life and can reduce the stress of family members (Udechuku et al., 2015).

Generalist and specialist nursing interventions are performed using theory of Roy's adaptation and Stuart's stress adaptation. Roy's adaptation theory views humans as a system that is always interrelated with their environment to achieve adaptation. Roy explains that the reciprocal relationship is divided into four parts, namely, input (focal, contextual, and residual

stimuli), control processes (coping mechanisms regulated by regulators and cognators), effectors (physiological functions, self-concept, role functions, and interdependence), and output (adaptive or maladaptive). Roy's adaptation theory combined with Stuart's stress adaptation theory fits well with the biopsychological component found in predisposing and precipitation factors, assessment of stress, and the coping sources and mechanisms of patients. Stuart's adaptation theory holds that mental disorders can emerge due to biological, psychological, and socio-cultural aspects. These three aspects are found in predisposing and precipitation factors. In the assessment of Stuart's stress adaptation theory, precipitation factors seem to trigger a problem; this finding is in accordance with the focal stimulus in Roy's adaptation theory and the predisposing factor as a contextual stimulus. Nursing planning and intervention involve cognators and regulators that are included in individual coping mechanisms. Nursing interventions that are in accordance with planning produce output in the form of adaptive behavior.

The combination of Roy's adaptation theory (input, process control, effector, and output) with Stuart's stress adaptation theory can potentially be applied in the Bratasena Ward of Marzoeki Mahdi Hospital as a maintenance inpatient ward starting from the assessment stage which is a form of applying the input stages to Roy's theory therein are focal, contextual and residual stimuli. Focal stimuli are those that must be faced directly by the client; such stimuli, including biological, sociocultural, and psychological factors, are under study. Contextual stimuli are those that result from focal stimuli, and its biological, psychological, and sociocultural predisposing factors should be studied. Nursing planning involves the application of the stages of the control process, the implementation of nursing interventions, and the evaluation of results as output. Patients in the Bratasena ward are diagnosed with nursing problems of risk of violent behavior. These patients have begun to interact with others and are prone to conflict. They are also in the process of preparation for discharge from the hospital. Through assertive training and family psychoeducation, patients are expected to be able to behave adaptively, as exhibited by a decrease in the signs and symptoms of risk of violent behavior and an increase in the patient's ability to overcome the problem of such risk.

This case report aims to present the changes in the signs, symptoms, and ability of patients to manage the risk of violent behavior after being given assertive exercise therapy and family psychoeducation using Roy's theoretical approach.

Case Illustration

The Bratasena ward in the Marzoeki Mahdi Hospital is a third-class male inpatient/ recovery ward. The patients in this ward have a risk of violent behavior. The problems and diagnoses of the risk of violent behavior are determined through an assessment using the advanced mental assessment scanning device developed by the Faculty of Nursing of Universitas Indonesia and an assessment of patient symptoms, which consist of cognitive, affective, physiological, behavioral, and social aspects that have been used in many previous studies. Generalist and specialist nursing interventions are conducted sequentially.

Patients in the Bratasena ward of Marzoeki Mahdi Hospital only receive generalist nursing interventions and not specialist ones; thus, the author felt the need to provide the latter. Specialist nursing interventions include assertive exercise therapy and family psychoeducation.

The 11 patients included in this case report are diagnosed with risk of violent behavior and have received specialist nursing interventions in the form of assertive exercise therapy, with four patients receiving family psychoeducation interventions. This case report uses Roy's adaptation theory and Stuart's stress adaptation theory in handling the cases. The first thing to do in accordance with Roy's and Stuart's theory

Table 1. Distribution of Patient Characteristics in The Bratasena Ward (n= 11)

Characteristics	n	%
Education		
a. None	1	9.09
b. Elementary School	1	9.09
c. Junior High School	1	9.09
d. Senior High School	8	72.72
Profession		
a. Working	1	9.09
b. Not working	10	90.9
Marital Status:		
a. Unmarried	9	81.81
b. Married	1	9.09
c. Widow/ Widower	1	9.09
No. Admission		
a. 1	3	27.27
b. >1	8	72.72
Illness Duration		
a. <1 year	4	36.36
b. 1–5 years	2	18.18
c. >5 years	5	45.45

is to conduct a study. The process of assessing patients is into the input section. Studies on patients include patient demographic data, focal stimuli (precipitation factors in the form of biological, psychological, and sociocultural factors), contextual stimuli (predisposing factors, consisting of biological, psychological, and sociocultural factors), and residual stimuli (Stuart, 2013; Alligood, Hamid & Ibrahim, 2017).

The results of the assessment of the input of the 11 patients show that all the patients are adults (26–60 years old). The patients' characteristics are presented in Table 1.

Table 1 shows that the eight patients with the highest risk of violent behavior have the highest level of education of senior high school (72.72%). Ten patients (90.9%) are unemployed. Nine patients (81.81%) are unmarried. Based on the number of admissions, eight patients (72.72%) have already been admitted to the hospital more than once. Based on the duration of illness, five patients (45.45%) have been sick for more than 5 years.

Subsequent studies were conducted to investigate focal stimuli (precipitation factors), contextual stimuli (predisposing factors), and residuals. The results of the assessment of predisposing and precipitation factors are shown in Tables 2 and 3.

Table 2 shows that majority of the biological predisposing factors are the history of previous mental disorders and smoking by 10 patients (90.9%) respectively. The majority of psychological factors are unpleasant experiences and parenting (authoritarian/permissive) by 11 people (100%) respectively. Then, the most sociocultural factors are losing some special by 10 patients (90.9%).

Table 3 shows that majority of biological precipitation factors are stopping medication by 9 patients (81.18%), the most psychological precipitation factors are the presence of unpleasant experiences by 10 patients (90.9%), and the most sociocultural factors the most are not working by 10 patients (90.9%). The results of contextual stimulus assessment (biological, psycho-

logical, and sociocultural predisposing factors) show that 11 patients (100%) are influenced by psychological predisposing factors, namely, unpleasant experiences and authoritarian/permissive parenting. Meanwhile, those of the focal stimulus assessment (biological, psychological,

Table 2. Distribution of Biological, Psychological, and Sociocultural Predisposing Factors of Patients in The Bratasena Ward (n= 11)

Predisposing Factors	Yes		No	
	n	%	n	%
Biological Factors				
a. History of Previous Mental Disorder	10	90.9	1	9.09
b. Previous Hospitalization	8	72.72	3	27.27
c. Smoking	10	90.9	1	9.09
d. Use of Drugs	8	72.72	3	27.27
e. Genetic	6	54.54	5	45.45
f. Head Injury	9	81.81	2	18.18
g. Chronic Disease	1	9.09	10	90.9
Psychological Factors				
a. Introvert	9	81.81	2	18.18
b. Negative Self-Concept	10	90.9	1	9.09
Social Factors				
a. School Dropout	8	72.72	3	27.27
b. Not working	4	36.36	7	63.63
c. Economic Problem	9	81.81	2	18.18
d. Losing Someone Special	10	90.9	1	9.09
e. Conflict of Family/ Environment	7	63.63	4	36.36
f. Unmarried	9	81.81	2	18.18
g. Having No Close Friend	3	27.27	8	72.72
h. Not Joining Religious Activities	9	81.81	2	18.18
i. Not Joining Social Activities	8	72.72	3	27.27

Table 3. Distribution of Biological, Psychological, and Sociocultural Precipitation Factors of Patients in The Bratasena Ward (n= 11)

Precipitation Factors	Yes		No	
	n	%	n	%
Biological Factors				
a. Stop Medication	9	81.81	2	18.18
b. Smoking	8	72.72	3	27.27
c. Use of Drugs	2	18.18	9	81.81
Psychological Factors				
a. Unpleasant Experience	10	90.9	1	9.09
b. Unfulfilled Desire	3	27.27	8	72.72
Social Factors				
a. School Dropout	3	27.27	8	72.72
b. Not working	10	90.9	1	9.09
c. Economic Problem	9	81.81	2	18.18
d. Losing Someone Special	1	9.09	10	90.9
e. Conflict of Family/ Environment	7	63.63	4	46.46
f. Unmarried	9	81.81	2	18.18

Table 4. Signs and Symptoms of Patients with A Risk of Violent Behavior (n= 11)

Signs and symptoms	Pre		Post		Decrease
	Yes	No	Yes	No	
	n	n	n	n	n
Cognitive Aspect					
a. Unable to Control Violent Behavior	8	3	0	11	8
b. Negative Thinking in Dealing with Stress	11	0	3	8	8
c. Flight of idea	5	6	2	9	3
d. Dominating Conversation	8	3	2	9	6
e. Blaming Others	7	4	3	8	4
f. Wanting to Beat Others	6	5	0	11	6
g. Introvert	5	6	1	10	4
h. Aggressive	1	10	0	11	1
Affective Aspect					
a. Angry	1	10	0	11	1
b. Labile Affect	10	1	8	3	2
c. Feeling Annoyed	9	2	0	11	9
d. Feeling Insecure and Uncomfortable	2	9	0	11	2
e. Easily Offended	4	7	0	11	4
f. Suspicious	8	3	4	7	4
g. Underestimating Something	1	10	0	11	1
h. Less Confident	1	10	0	11	1
Physiological Aspect					
a. Looking Sharply	7	4	1	10	6
b. Holding Jaws Firmly	1	10	0	11	1
c. Tense Faced	5	6	1	10	4
d. Red Faced	3	8	0	11	3
e. Making a Fist	1	10	0	11	1
f. Headache	1	10	0	11	1
g. Increased Defecating	1	10	1	10	0
Behavioral Aspect					
a. Cynical	3	8	1	10	2
b. Loud Voice	2	9	0	11	2
c. Loitering	6	5	4	7	2
Social Aspect					
a. Self-Withdrawal	8	3	5	6	3
b. Indifferent to the Environment	4	7	2	9	2

and sociocultural precipitation factors) show that 10 patients (90.9%) are influenced by the sociocultural precipitation factor of not working.

The control process experienced by the patient therein is a coping mechanism. In this section, the author implemented generalist and specialist nursing interventions. All the patients received generalist nursing interventions and assertive training, and four patients received family psychoeducation interventions. The initial data of the signs, symptoms, and ability of patients were collected during initial assessment, that is, before nursing interventions. After specialist nursing interventions, assertive training, and family psychoeducation, final data were collected to determine changes in the signs, symptoms, and abilities of patients.

Table 5. Ability of Patients with A Risk of Violent Behavior (n= 11)

Ability	Pre		Post		Increase
	Yes	No	Yes	No	
	n	n	n	n	n
a. Physical Method (Taking a deep breath and hitting the pillow)	8	3	11	0	3
b. Taking Medicines	11	0	11	0	0
c. Verbal Method	0	11	11	0	11
d. Spiritual Method	4	7	11	0	7
e. Identifying Cause and Response when Angry	0	11	11	0	11
f. Expressing Needs and Desires Assertively	0	11	11	0	11
g. Expressing Anger Assertively	0	11	11	0	11
h. Reject Irrational Requests	0	11	10	1	10
i. Accepting and Expressing Differences of Opinions	0	11	6	5	6

The implementation of generalist and specialist nursing interventions, assertive training, and family psychoeducation decreased the signs and symptoms of risk of violent behavior and increased the ability of patients to overcome such risk. In Roy's adaptation theory, these results are included in the output. Changes in the signs, symptoms, and abilities of the patients are presented in Tables 4 and 5.

Table 4 reveals that the affective aspect, particularly the inability to control violence, wanting to beat others, and being aggressive, obtained the highest decrease (100%) among the signs and symptoms.

Table 5 reveals that verbal ability, particularly identifying causes and responses when angry, expressing needs and desires assertively, and expressing anger assertively, obtained the greatest improvement (100%) among other items.

Discussion

Patient Characteristics. Based on data found in the input (focal, contextual, and residual stimuli), 100% of the patients are aged between 26 and 60 years. Based on Erikson's stages of development, this age range covers adulthood, the stage of human generativity in which many responsibilities are held; moreover, this stage is characterized by economic stability and good social interaction. If these characteristics cannot be achieved, then a person can experience dependence in terms of work and finances, thereby causing maladaptive behavior (Keliat, Daulima, & Farida, 2011). Mehta, Mehta, and Shah (2016) mentioned that patients with schizophrenia at the age of 25–31 years exhibit physically aggressive behavior more than normal people of the same age. Violent behavior in schizophrenic patients is more common in young adults (Bo et al., 2011; Varshney, Mahapatra, Krishnan, Gupta, & Deb, 2016). Adult patients become more vulnerable to mental disorders and at risk of violent behavior because humans at this age are in a stage of having big responsibilities and high stress level.

The risk of violent behavior is highest (72.72%) in patients with a high school education level. Oladepo, Yusuf, and Arulogun (2011) stated that violent behavior is high for people with high school education. This finding is related to a person's coping abilities in dealing with stress. A person with a high level of education is more likely to be able to think of various strategies to manage problems rather than taking a form of resistance, such as violent behavior.

Ten (90.9%) of the patients are unemployed. Zhang and Bhavsar (2013) stated that someone who is unemployed has an increased risk of developing mental disorders. Poverty is related

to insecurity, lack of education level, inadequate housing, and malnutrition, which can affect the emergence of mental disorders (Kuruvilla & Jacob, 2007). This finding is related to the role of men in providing for the family. If a man is unemployed, then feelings of inferiority, shame, and social withdrawal emerge, ultimately leading to mental disorders and risk of violent behavior.

Nine (81.81%) of the patients are unmarried. Loneliness is an important factor in the etiology of mental disorders (Martens, 2010). The risk of violent behavior increases in unmarried patients (Bowers et al., 2011). Being an unmarried adult is a stressor. Stressors that are not handled properly increase a person's risk of self-withdrawal, and if they feel threatened, then they resort to violent resistance physically and psychologically.

Predisposing Factors. Prediposing factors can consist of modifiable and nonmodifiable risk factors (Samy, Khalaf & Low, 2015). Violent behavior reflects various biological, psychodynamic, and social factors (Rueve & Welton, 2008).

Data on biological predisposing factors show that majority of the patients have a history of previous mental disorders and smoking behavior (90.9%). Smoking prevalence in patients with schizophrenia is higher than that in patients with other mental disorders and the general population (De Leon & Diaz, 2005; Zhang et al., 2012; Royal College of Physicians & Royal College of Psychiatrists, 2013; Yee et al., 2014). A major factor that influences smoking is addiction (Ahmed et al., 2014). Smoking behavior appears as an individual coping mechanism to deal with stress and boredom, whereas with smoking, patients need high doses of antipsychotics.

Smoking behavior increases when a patient is discharged from the hospital; thus, the drugs brought from the hospital become less therapeutic and increase the occurrence of violent behavior. Some patients with violent behavior have a history of violent behavior/mental disorders. Mehta and Shah (2016) mentioned that patients with experiences of hospitalization because of violent behavior show more verbal and physical aggressive behavior compared with those who have not been hospitalized. Other predisposing factors are psychological factors.

Data on psychological predisposing factors show that for all the patients (100%), violent behavior is caused by unpleasant experiences and parenting. Keyes, Pratt, Galea, and McLaughlin (2014) stated that the unexpected death of a close person is the most common traumatic experience and is deemed as the worst experience. Conflicts cause a traumatic experience that can affect a person's mental health and his cognitive, emotional, social, and behavioral aspects, thus causing violent behavior (Rueve & Welton, 2008; Hassan et al., 2015).

A number of 90.9% of the sociocultural factor is most commonly found in the loss of a special/loved one. The loss of a loved one, which is related to the grieving process, is one of the factors that cause mental disorders. Delalibera et al. (2015) stated that family conflicts make the grieving process complex and prolonged. Loss is an actual/potential situation in which a valuable change no longer exists (Kozier, Erb, Berman & Snyder, 2011). The grieving reaction is influenced by culture, age, and time when loss occurs (Howarth, 2011). Traumatic loss is a risk factor of PTSD, depression, complex grieving, and deviant behavior (crime and drug abuse), which result in mental disorders and violent behavior in low economic groups (Smith, 2014). Grieving periods are associated with an increased risk of the onset of various mental disorders (Keyes et al., 2014).

Precipitation Factors. The biological precipitation factor mostly found is the medication stop by 9 patients (81.81%). A significant relationship was observed between patients' violent behavior and noncompliance with medication (Aldridge, 2011; Witt, Dorn & Fazel, 2012).

Noncompliance with medication is also associated with poor outcomes, prolonged hospitalization, violent behavior, suicide, and death.

The psychological precipitation factor was found in an unpleasant experience by 10 patients (90.9%). This result is consistent with the statement that victims of violent behavior or sexual harassment from a spouse or parent have an increased risk of violent behavior (World Health Organization & PAHO, 2012; Wilkins et al., 2014).

The sociocultural precipitation factor is mostly in not working by 90.9%. The unemployed condition of patients is closely related to low economic problems. Furthermore, patients with low socioeconomic levels tend to exhibit physically violent behavior (Mehta et al., 2016). Patients often have difficulty being hired due to the stigma that patients with mental disorders cannot work, are ashamed, and have to rest at home.

Process

Patient Ability. Generalist and specialist nursing interventions are conducted in stages where the first generalist intervention precedes. Assertive training interventions by specialist nurses can be completely administered and have a positive effect because assertive training is a communication therapy that focuses on developing assertive behavior in patients. Keliat, Totoliu, Daulima, and Erawati (2015) mentioned that assertive training therapy is strongly related to assertive knowledge and assertive behavior before and after assertive training. Assertive training therapy increases the ability of clients to overcome the problem of violent behavior (Wahyuningsih et al., 2011). Alini (2010) reported a decrease in the symptoms of violent behavior and an increase in the ability to control violent behavior of clients who receive assertive training and progressive muscle relaxation. In generalist nursing interventions, patients are trained to control anger. Anger management is administered through physical therapy, medication, and verbal and spiritual methods. Assertive training plays a role in increasing a patient's ability to communicate with others and solve problems without harming others.

Family Ability. In addressing this case, the challenge lies in the fact that not all patients are visited by their families; thus, family intervention is not optimal. Nursing interventions that focus on the family can have a positive effect not only on the patient but also the family. Udechuku et al. (2015) mentioned that interventions that focus on the family can improve the experience of caring and the quality of life and reduce psychological stress due to caring for sick family members. Families who receive family psychoeducation increase cognitive, affective, and psychomotor abilities (Gajali, Mustikasari & Putri, 2014; Wiyati, Hamid & Gayatri, 2009). Family psychoeducation can significantly reduce family burden and increase the ability of families to care for patients (Wardaningsih, Keliat, & Daulima, 2007; Sari, Keliat, & Mustikasari, 2009).

As a family-focused therapy, family psychoeducation can reduce the incidence of relapses and hospitalizations, as well as increase patient compliance with medication, improve the ability of family coping strategies, and reduce family burden (Fiorillo et al., 2013). Family psychoeducation also increases knowledge about the illness and health resources (Pasadas & Manso, 2015).

Output

Changes in Signs and Symptoms. Decreased signs and symptoms occur in the cognitive, affective, physiological, behavioral, and social aspects. The highest decrease (100%) in cognitive signs and symptoms is found in the inability to control violent behavior, wanting to hit others, and being aggressive. In the affective aspect, the highest decrease (100%) is found in anger, annoyance, feeling uncomfortable, being easily offended, underestimating something, and lacking confidence. In the physiological aspect, the highest decrease (100%) is found in jaws closed tightly, red face, hand in

fist, and headache. In the behavioral aspect, the highest decrease (100%) is found in loud voice. In the social aspect, self-withdrawal by 37%.

The administration of generalist nursing interventions can help reduce cognitive, social, and physical signs and symptoms of patients with a risk of violent behavior and increase the ability to control such behavior (Wahyuningsih et al., 20; Komala, Keliat & Wardani, 2016).

Patients in the calm stage are recommended for psychosocial interventions, such as assertive training, to improve patient care outcomes for the risk of violent behavior because it is proven effective (Mancini et al., 2009). Patients with violent behavior feel they have the power to compensate for feelings of helplessness and anxiety and usually have limited ability to overcome the frustrations they face and sometimes their violent behavior to meet their needs (Queensland Government, 2010). Assertive training teaches patients to meet their needs based on priorities and in an assertive manner.

Assertive training focuses on training patients to communicate with others. Koolaee, Baighi, and Navidian (2015) stated that the quality of life of patients improves, and aggressive behavior decreases remarkably after receiving communication training interventions. Assertive training can reduce anxiety, aggression, and fatigue in social interactions among patients (Mousa, Imam & Sharaf, 2011; Karimi, Mahmoodi & Hashemi, 2014). Sodikin, Wihastuti, and Supriati (2015) said assertive training can reduce the signs and symptoms of violent behavior, thus shortening the acute phase.

The decrease in signs and symptoms is also influenced by family psychoeducation. Family psychoeducation therapy focuses on handling communication problems in the family, lack of information about the illness, and lack of skills in dealing with conflicts (Volavka, 2013). Family psychoeducation involves a multi-dimensional viewpoint that covers family, social, biological, and psychopharmaceutical aspects; information and support and strategy management is provided to the family (Economou, 2015). Family psychoeducation can also help families and friends in preventing the development of negative behavior among patients due to stigma or stereotypes (Bhattacharjee et al., 2011). Family psychoeducation has a positive effect on the family.

Family psychoeducation not only benefits the family but also the patient by reducing recurrence and violent behavior (Batista, Baes & Juruena, 2011; Harvey & O'Hanlon, 2013). Rahayu, Hamid, and Sabri (2011) reported that families who recieve family psychoeducation improve in their ability to provide psychosocial support to sick family members. Family psychoeducation is much needed by patients to prevent recurrence (Sariah, 2012) because families who receive family psychoeducation can further provide family support to patients in administering the treatment. Desousa, Kurney, and Sonavane (2012) mentioned that family psychoeducation can effectively reduce the incidence of patient recurrence. This finding shows that violent behavior can be controlled in families who receive family psychoeducation because a patient's recurring disorder is evident from his violent behavior. Families who receive family psychoeducation can solve family problems, overcome family burdens, and utilize support resources outside the family; thus, they can treat patients with a risk of violent behavior better than those who do not undergo psychoeducation.

Conclusions

Assertive training therapy and family psychoeducation can reduce the signs and symptoms of the risk of violent behavior and improve the ability of patients to control their anger. Thus, this therapy can be applied in a maintenance ward in accordance with Roy's adaptation and Stuart's stress adaptation theory.

This case report recommends that patients with a risk of violent behavior be given generalist

nursing interventions (controlling anger through physical therapy, regular medication, and verbal and spiritual methods) and assertive training interventions in a sequential/gradual manner.

This case report also recommends that nurses conduct routine health education and family psychoeducation activities every month in the mental ward. Moreover, patients' families should be required to attend.

Acknowledgement

We express our gratitude to the supervisors for their guidance during the practice of advanced mental nursing clinics, Marzoeki Mahdi Hospital Director, Nursing Department, Diklit and all Bratasena ward nurses for the opportunity given to learn to apply the theory and practice of advanced mental nursing. Thanks to patients and families who have provided opportunities to practice assertive training and family psychoeducation.

References

Ahmed, S., Reena, M.D., Nuzhat Hussain, M.D., Ahmed, R., Amin, S., & Ahmed, S. (2014). Nicotine addiction in schizophrenia, availability of better treatment options as are in general population, *Int J Emergency Ment Health Hum Resilience, 17*(1), 156–160.

Aldridge, M.A. (2011). Addressing non-adherence to antipsychotic medication: A harm-reduction approach. *Journal of Psychiatric and Mental Health Nursing, 19*(1), 85–96.

Alligood, M.R., Hamid, A.Y., & Ibrahim, K. (2017). *Pakar teori keperawatan dan karya mereka* (Terjemahan, Edisi 8). Singapore: Elsevier.

Association of Southeast Asian Nations. (2016). *ASEAN mental health systems*. Retrieved from https://asean.org/storage/2017/02/55.-December-2016-ASEAN-Mental-Health-System.pdf

Atri, A., & Sharma, M. (2007). Psychoeducation: Implications for the profession of health education. *Californian Journal of Health Promotion, 5*(4), 32–39.

Batista, T.A., Baes, C.V.W., & Juruena, M.F. (2011). Efficacy of psychoeducation in bipolar patients: Systematic review of randomized trials. *Psychology & neuroscience*, *4*(3), 409–416.

Bhattacharjee, D., Rai, A.K., Singh, N.K., Kumar, P., Munda, S.K., & Das, B. (2011). Psychoeducation: A measure to strengthen psychiatric treatment. *Delhi Psychiatry Journal, 14*(1), 33–39.

Bo, S., Abu-Akel, A., Kongerslev, M., Haahr, U. H., & Simonsen, E. (2011). Risk factors for violence among patients with schizophrenia. *Clinical Psychology Review*, 31, 711–726.

Bowers, L., Stewart, D., Papadopoulos, C., Dack, C., Ross, J., & Khanom, H. (2011). *Inpatient violence and aggression: A literature review*. London: Section of Mental Health Nursing Health Servi and Population research Institute of Psychiatry Kings College London.

De Leon, J., & Diaz, F.J. (2005). A meta-analysis of worldwide studies demonstrates an association between schizophrenia and tobacco smoking behaviors. *Schizophrenia research*, 76(2–3), 135–157.

Desousa, A., Kurvey, A., & Sonavane, S. (2012). Family Psychoeducation for Schizophrenia: A clinical review. *MJP Online Early*, *21*(2). Retrieved from https://www.mjpsychiatry.org/index.php/mjp/article/view/196.

Delalibera, M., Presa, J., Coelho, A., Barbosa, A., & Franco, M.H.P. (2015). Family dynamics during the grieving process: A systematic literature review. *Ciencia & Saude Colectiva*, *20*(4), 1119–1134.

Douglas, K.S., & Ogloff, J.R. (2003). Violence by psychiatric patients: The impact ofarchival measurement source on violence base rates and risk assessment accuracy. *Can J Psychiatry*, *48*(11), 734–740.

Economou, M.P. (2015). Psychoeducation: A Multifaceted Intervention. *International Journal of Mental Health,* 44, 259–262.

Fiorillo, A., Sampogna, G., Del Gaudio, L., Luciano, M., & Del Vecchio, V. (2013). Efficacy of supportive family interventions in bipolar disorder: A review of the literature. *Journal of Psychopathology*, 19, 134–142.

Gajali, G., Mustikasari, M., & Putri, Y.S.E. (2014). *Pengaruh family psichoeducation therapy terhadap kemampuan keluarga merawat pasien skizofrenia dengan halusinasi di Kota Samarinda Kalimantan Timur* (Master Thesis, Degree in Nursing). Depok: Faculty of Nursing Universitas Indonesia.

Harvey, C., & O'Hanlon, B. (2013). Family psycho-education for people with schizophrenia and other psychotic disorders and their families. *Australian & New Zealand Journal of Psychiatry, 47*(6), 516–520.

Hassan, G., Kirmayer, L.J., MekkiBerrada A., Quosh, C., el Chammay, R., Deville-Stoetzel, J.B., Youssef, A., Jefee-Bahloul, H., Barkeel-Oteo, A., Coutts, A., Song, S. & Ventevogel, P. (2015). *Culture, context and the mental health and psychosocial wellbeing of syrians: A review for mental health and psychosocial support staff working with syrians affected by armed conflict*. Geneva: UNHCR.

Howarth. R.A. (2011). Concepts and Controversies in Grief and Loss. *Journal of Mental Health Counseling*, 33(1), 4–10.

Karimi, S., Mahmoodi, M., & Hashemi, L. (2014). Effectiveness of assertiveness group training on reducing anxiety, aggression and burnout. *Journal of Applied Science Research, 10*(5), 370–375.

Keliat, B.A., Tololiu, T.A., Daulima, N.H.C., & Erawati, E. (2015). Effectiveness assertive training of bullying prevention among adolescents in West Java Indonesia. *International Journal of Nursing, 2*(1), 128–134.

Keliat, B.A., Daulima.N.H.C., & Farida, P. (2011). *Manajemen keperawatan psikososial & kader kesehatan CMHN (Intermediate Course).* Jakarta: EGC.

Keyes, K.M., Pratt, C., Galea, S., McLaughlin, K.A. (2014). The burden of loss: Unexpected death of a loved one and psychiatric disorders across the life course in a national study. *Am J Psychiatry, 171*(8), 864–871.

Komala, E., Keliat, B.A., Wardani, I.Y. (2016). Efektifitas program edukasi pasien, terapi penerimaan komitmen, psikoedukasi keluarga terhadap insight, tanda, gejala serta kemampuan klien mengontrol perilaku kekerasan (Master Thesis, Degree in Nursing). Depok: Faculty of Nursing Universitas Indonesia.

Koolaee, A.K., Baighi, H.E., & Navidian, A. (2016). Effects of communication skills training on aggressionand quality of life of male patients with chronic mental illnesses. *Journal of Client-Centered Nursing Care, 2*(1), 3–10.

Kozier, B., Erb, G., Berman, A., & Snyder, S. (2011). *Buku ajar fundamental keperawatan konsep proses & praktik* (Edisi 7, Volume 1). Jakarta: EGC

Kuruvilla, A., & Jacob, K.S. (2007). Poverty, social stress & mental health. *Indian Journal of Med,* 126, 273–278.

Mancini, A.D., Moser, L.L., Whitley, R., McHugo, G.J., Bond, G.R., Finnerty, M.T., & Burns, B.J. (2009). Assertive community treatment: Facilitators and barriers to implementation in routine mental health settings. *Psychiatric Services, 60*(2), 189–195.

Martens, W.H.J. (2010). Schizoid personality disorder linked to unbearable and inescapable loneliness. *Eur. J. Psychiat, 24*(1), 38–45.

Mehta, R.J., Mehta, R.Y., & Shah, N.D. (2016). A case control study of aggressive behavior in stable patients of schizophrenia who have

improved on treatment and in normal and its effect on quality of life at government medical college surat. *International Journal of Medical Science and Clinical Inventions, 3*(2), 1565–1574.

Mousa, A.A., Imam, S.A., & Sharaf, A. (2011). The effect of an assertiveness training program on assertiveness skills and social interaction anxiety of individuals with schizophrenia. *Journal of American Science. 7*(12), 454–466.

National Institute of Health Research and Development, The Ministry of Health Republic of Indonesia. (2013). *Hasil riset kesehatan dasar 2013*. Jakarta: The Ministry of Health Republic of Indonesia.

Oladepo, O., Yusuf, O.B., & Arulogun, O.S. (2011). Factors influencing gender based violence among men and women in selected states in Nigeria. *African Journal of Reproductive Health, 15*(4), 78–86.

Pasadas, C., & Manso, F. (2015). Psychoeducation: A strategy for preventing relapse in patients with schizophrenia. *International Journal of Nursing, 2*(1), 89–102.

Pipas, M.D., & Jaradat, M. (2010). Assertive communication skills. Annales Universitatis Aqulensis Series *Oeconomica. 12*(2), 649–656.

Queensland Government. (2010). *Queensland Mind essentials.* Queensland: State of Queensland.

Rahayu, D.A., Hamid, A.Y., Sabri, L. (2011). *Pengaruh psikoedukasi keluarga terhadap dukungan psikososial keluarga pada anggota keuarga dengan penyakit kusta di kabupaten Pekalongan* (Master Thesis, Degree in Nursing). Depok: Faculty of Nursing Universitas Indonesia.

Royal College of Physicians, Royal College of Psychiatrists. (2013). *Smoking and mental health*. London: RCP.

Rueve, M.E., & Welton, R.S. (2008). Violence and mental illness. *Psychiatry, 5*(5), 35–48.

Sadock, B.J., & Sadock, V.A. (2013). *Buku ajar psikiatri klinis edisi 2*. Jakarta: EGC.

Samy, A.L., Khalaf, Z.F., & Low, W.Y. (2015). Mental health in the asia pacific region: An overview. *International Journal of Behavioral Science, 10*(2), 9–18.

Sari, H., Keliat., B.A., & Mustikasari, M. (2009). *Pengaruh family psychoeducation therapy terhadap beban dan kemampuan keluarga dalam merawat klien pasung di Kabupaten Bireuen Nanggroe Aceh Darussalam* (Master Thesis, Degree in Nursing). Depok: Faculty of Nursing Universitas Indonesia.

Sariah, A. (2012). *Factors influencing relapse among patients with schizophrenia in muhimbili national hospital: The perspectives of patients and their caregivers* (Doctoral Dissertation, Degree of Master of Science Nursing). Tansania: Muhimbili University of Health and Allied Sciences

Shah, A.J., Wadoo, O., & Latoo, J. (2010). Psychological distress in carers of people with mental disorders. *British Journal of Medical Practitioners, 3*(3), a327. Retrieved from https://www.bjmp.org/content/psychological-distress-carers-people-mental-disorders.

Smith, S.S. (2014). Traumatic loss in low-income communities of color. *Focus*, *31*(1), 32–34.

Sodikin, M.A., Wihastuti, T.A., & Supriati, L. (2015). Pengaruh latihan asertif dalam memperpendek fase intensif dan menurunkan gejala perilaku kekerasan di ruang Intensive Psychiatric Care Unit RSJ Dr Radjiman Wediodiningrat. *Jurnal Ilmu Keperawatan*, *3*(2), 168–182.

Stuart, G.W. (2013). *Priciples and practice of psyciatric nursing* (10th Ed.). St Louis Missouri: Elsivier Mosby.

Udechuku, A.Y., Harrison, B., Mayo-Wilson, E., Young, N., Woodhams, P., Shiers, D., ... & Kendall, T. (2015). Interventions to improve the experience of caring for people with severe mental illness: Systematic review and

meta-analysis. *The British Journal of Psychiatric*, *206*(4), 268–274.

Varcarolis, E.M. (2014). *Psychiatric mental health nursing: A clinical approach*. St. Louis: Elsevier.

Varshney, M., Mahapatra, A., Krishnan, V., Gupta, R., & Deb, K.S. (2016). Violence and mental illness: what is the true story. *J Epidemiol Community Health, 70*(3), 223–225.

Videbeck, S.L. (2011). *Psyciatric mental health nursing* (5th Ed.). Lippincott Williams & Wilkiins: Wolter Kluer Health.

Volavka, J. (2013). Violence in schizophrenia and bipolar disorder. *Psychiatria Danubina, 25*(1), 24–33.

Wardaningsih, S., Keliat, B.A., Daulima, N.H.C. (2007). *Pengaruh family psychoeducation terhadap beban dan kemampuan keluarga dalam merawat klien dengan halusinasi di kabupaten Bantul Yogyakarta* (Master Thesis, Degree in Nursing). Depok: Faculty of Nursing Universitas Indonesia.

Wahyuningsih, D., Keliat, B.A., & Hastono, S.P. (2011). Penurunan perilaku kekerasan pada klien skizoprenia dengan assertiveness training. *Jurnal Keperawatan Indonesia, 14*(1), 51–56.

Wiyati, R., Hamid, A.Y., Gayatri, D. (2009). *Pengaruh psikoedukasi keluarga terhadap kemampuan keluarga dalam merawat klien isolasi social* (Master Thesis, Degree in Nursing). Depok: Faculty of Nursing Universitas Indonesia.

World Health Organization. (2009). *Improving Health System and service for mental health: WHO library cataloging in publication.* Geneva: World Health Organization. Retrieved from https://apps.who.int/iris/bitstream/handle/10665/44219/9789241598774_eng.pdf

World Health Organization & PAHO. (2012). *Understanding and addressing violence against women.* Retrieved from https://apps.who.int/iris/bitstream/handle/10665/77432/WHO_RHR_12.36_eng.pdf

Wilkins, N., Tsao, B., Hertz, M.F., Davis, R., & Klevens, J. (2014). *Connecting the dots: an overview of the links among multiple forms of violence.* Retrieved from https://stacks.cdc.gov/view/cdc/31552/cdc_31552_DS1.pdf

Witt, K., Dorn, R.V. & Fazel, S. (2013). Risk factors for violence in psychosis: systematic review and meta-regression analysis of 110 studies. *PLoS ONE, 8*(2), 1–15.

Yee, A., Mohamed, B.N., Nasyrah, N., Binti Hashim, A.H., Loh, H.S., Singh, H., ... & Jambunathan, S.T. (2015). The effect of nicotine dependence on psychopathology in patients with schizophrenia. *BioMed Research International, 2015*, 1–6.

Zhang, S., & Bhavsar, V. (2013). Unemployment as a risk faktor for mental illness: combining social and psychiatric literature. *Advances in Applied Sociology, 3*(2), 131–136.

Zhang, X.Y., Liang, J., Da Chun Chen, M.H. X., He, J., Cheng, W., Wu, Z., ... & Kosten, T.A. (2012). Cigarette smoking in male patients with chronic schizophrenia in a Chinese population: Prevalence and relationship to clinical phenotypes. *PLoS ONE, 7*(2), 1–6.

Jurnal Keperawatan Indonesia, 2020, 23 (1), 15–22
DOI: 10.7454/jki.v23i1.900
Received March 2019; Accepted January 2020

pISSN 1410-4490; eISSN 2354-9203

EFFECTIVENESS OF OTAGO EXERCISE ON HEALTH STATUS AND RISK OF FALL AMONG ELDERLY WITH CHRONIC ILLNESS

Stefanus Mendes Kiik*, Antonius Rino Vanchapo, Maria Fitrya Elfrida, Muhammad Saleh Nuwa, Siti Sakinah

Maranatha Kupang School of Health Sciences, Kupang 85361, Indonesia

*E-mail: stefanusmendeskiik@maranatha-ntt.ac.id

Abstract

Falls are a serious consequence of declining physical function. Otago exercise is a strength and balance training program designed to prevent falls and enhance health status among the elderly. This study aimed to investigate the effect of a 12-week Otago exercise intended to reduce the risk of falls and health status among the elderly with chronic illness in the social elderly institution. This quasi-experimental study employed a pre- and post-test design using a control group. The study involved an intervention group (21 respondents) and a control group (21 respondents). The sample used in this study were elderly living in a social elderly institution. The sample was selected using simple random sampling. The data were analyzed using Mann–Whitney test, independent t-test, and Chi-square test. Otago exercise significantly reduced the respondents' risk of falling and enhanced their health status. Significant differences were observed between the two groups in terms of the risk of fall (p= 0.041) and health status (p= 0.011). Otago exercise significantly improves the health status and reduces the risk of falling among elderly with chronic illness. The exercise can be recommended for older adults with chronic illness in social elderly institutions and communities.

Keywords: chronic illness, health status, older adults, Otago exercise, risk of fall

Abstrak

Efektivitas Latihan Otago terhadap Status Kesehatan dan Risiko Jatuh pada Lansia dengan Penyakit Kronik. *Jatuh adalah konsekuensi serius dari penurunan fungsi fisik. Latihan Otago adalah program latihan kekuatan dan keseimbangan yang didesain untuk mencegah jatuh dan meningkatkan status kesehatan pada lansia. Penelitian ini bertujuan untuk menginvestigasi efek 12 minggu latihan Otago untuk menurunkan risiko jatuh dan meningkatkan status kesehatan pada lansia dengan penyakit kronik di Panti Sosial lansia. Penelitian Quasi-eksperimental ini menggunakan pre-post dengan kelompok kontrol. Kelompok intervensi dan kontrol masing-masing terdiri dari 21 responden. Sampel dalam penelitian ini adalah lansia yang tinggal di UPT Kesejahteraan Sosial Lanjut Usia Budi Agung Kupang. Teknik sampling yang digunakan adalah simpel random sampling. Data dianalisis menggunakan Mann-Whitney test, Independent t-test dan Chi-square test. Latihan Otago secara signifikan menurunkan risiko jatuh dan meningkatkan status kesehatan. Ada perbedaan signifikan antara kedua kelompok dalam hal risiko jatuh (p= 0.041) dan status kesehatan (p= 0.011). Latihan Otago secara signifikan menurunkan risiko jatuh dan meningkatkan status kesehatan pada lansia dengan penyakit kronik.*

Kata Kunci*: lansia, latihan Otago, penyakit kronik, risiko jatuh, status kesehatan*

Introduction

The elderly population aged 60 years and above globally increased from 901 million in 2015 to 2.1 billion in 2050 (Dimitroff, 2015; Seah et al., 2019). Indonesian elderly population also increased, following the global trend. Data estimated 23.66 million senior citizens for the 2017 population projections in Indonesia (9.03%). The number of senior citizens are predicted to reach 27.08 million in 2020, 33.69 million in 2025, 40.95 million in 2030, and 48.19 million in 2035 (Statistics Indonesia, 2013; The Ministry of Health Republic of Indonesia, 2017). The increase in the elderly population can provide positive and negative impacts. The positive im-

pact arises if the elderly are healthy, active, and productive. The elderly population can experience burden given their health problems that result in increased health care costs, decreased revenue, increased disability, lack of social support, and non-conducive environment (The Ministry of Health Republic of Indonesia, 2017). The negative impact of such condition poses a burden for the government and the family, who bear the high cost of treatment and care for the elderly.

The elderly are populations at risk of various health problems because of their declining health status with age. The morbidity in the elderly amounted to 24.8% in 2013, increased to 25.05% in 2014, and continually rose to 28. 62% in 2015 (The Ministry of Health Republic of Indonesia, 2017). Most of the elderly population experiences pain in less than a week, with the disease duration of 1–3 and 4–7 days for 36.44% and 35.05% of the population, respectively. Meanwhile, the number of elderly who suffer for more than three weeks remains large (14.5%). Elderly visit health facilities generally due to chronic illnesses.

Chronic diseases and decline in health status may be risk factors for falls in the elderly. Various chronic diseases that affect the elderly, such as hypertension, diabetes mellitus, and osteoarthritis, are important risk factors for falls. Every year, approximately 646,000 people die from falls globally, with more than 80% occurring in low- and middle-income countries. Although not fatal, approximately 37.3 million severe falls that require medical attention occur each year (WHO, 2018).

Fall is a preventable event. One way to prevent falls is through training. Otago training is one of the trainings proven to reduce falls by 35% (Abdulrazaq et al., 2018). Otago training focuses on progressive balance, muscle strength, and endurance. Otago trainings conducted in groups are more effective than training Otago performed alone at home (Kyrdalen, Moen, Røysland, & Helbostad, 2014). Otago training-based training program can improve physical health; however, such programs cannot significantly increase the mental health status (Bjerk, Brovold, Skelton, Liu-Ambrose, & Bergland, 2019). Otago training is helpful, but it has not been studied in Indonesia. Therefore, this study was conducted to determine the effect of Otago training on the health status and risk of falls among the elderly with chronic diseases.

Methods

This study used a quasi-experimental design with pre- and post-approach with control group design. Intervention and control resides in the same location. The sampling technique used in this study was simple random sampling. The calculations provided a sample size of 22 elderly people, but because the study used a control group, the total sample comprised 22 control and 22 treatments. After the intervention of two elderly dropouts, each group included 21 respondents. An elderly of the treatment group left their home and returned to their family, whereas one person from the control group refused to continue participating in the research.

The inclusion criteria for this study were willingness to become respondents, age of 60 years and over, absence of visual impairment, lack of hearing loss, no experience of postural hypotension, regular training, independently (Katz index of independence in activities of daily living= 6), and prior experience of a chronic disease.

Otago training was conducted with 12 movements: (1) warming-up; (2) front knee strengthening; (3) back knee strengthening; (4) side hip strengthening; (5) calf raises; (6) toe raises; (7) sit to stand; (8) heel walking; (9) toe walking; (10) one leg stand; (11) side ways walking; (12) cooling-down. Otago training was conducted twice a week (Tuesdays and Fridays) every 06.30 pm for 12 weeks. Each session was conducted for 40 min including warm-up and cooling-down.

Table 1. Otago Training Procedure

No.	Practice	Description
1.	Warming-up	✓ Sit on a chair and take a deep breath through the nose with both arms raised to the top of the stretch. ✓ Lower the arms and exhale. ✓ Repeat the exercise 10 times.
2.	Front Knee Strengthening	✓ Sit on a chair with a backrest ✓ Gently lift the leg and then lower it; repeat this step 10 times ✓ Perform the same exercise on the other foot
3.	Back Knee Strengthening	✓ Stand while facing a chair ✓ Hold on to the seat and lift the leg backwards while the knees are bent ✓ Repeat the exercise on each leg 10 times
4.	Side Hip Strengthening	✓ Stand while holding on to a chair ✓ Expand the leg to the side and then return to its original position ✓ Repeat the exercise for each leg 10 times
5.	Calf Raises	✓ Stand while holding on to a chair ✓ Strengthen the rests on the calf ✓ Tiptoe and lower the heel hold ✓ Repeat the exercise 10 times
6.	Toe Raises	✓ Stand while holding on to a chair ✓ Slowly raise and then lower the toes ✓ Repeat the step 10 times
7.	Sit to Stand	✓ Start the procedure by asking the elderly to sit on a chair. ✓ Seniors are asked to stand with unaided hand. ✓ This procedure can be repeated 10 times.
8.	Heel Waking	✓ Walk forward heel ✓ Perform 10 steps ✓ Repeat the exercise 10 times
9.	Toe Walking	✓ Walk forward using the toes ✓ Perform 10 steps ✓ Repeat the exercise 10 times
10.	One Leg Standing	✓ Stand on one leg with the other foot placed in the mid-calf. ✓ Hold for 10 s if possible. ✓ Repeat the exercise 5 times on each leg.
11.	Side Ways Walking	✓ Stand with feet pressed together with the knees slightly bent ✓ Spread the legs to the side slowly and with control, and slide one foot first to one side ✓ Move the other leg that has moved closer to the foot ✓ Perform 10 steps each while shifting to one side, and shift back 10 steps to the opposite side. This procedure is repeated 10 times.
12.	Cooling-down	✓ Sit on a chair and take a deep breath through the nose with both arms raised to the top of the stretch. ✓ Lower the arms and exhale. ✓ Repeat the exercise 10 times.

(Liston et al., 2014; Skelton, Skelton, Gawler, & Hannah, 2018)

As many as 24 sessions were performed. Before data collection, each respondent received an explanation of the research objectives, advantages, and possible negative effects of the study and gave their informed consent. The short from 12 health survey (SF-12) was used to measure the health status of the elderly. The instrument consists of 12 question items that can measure the health status, including physical health status (physical component summary or PCS) and mental health status (mental component summary or MCS) (Ware, Kosinski, Turner-Bowker, & Gandek, 2009). The validity and reliability were 0.363–0.685 and 0.890

(Rekawati, 2014), respectively. The test on 30 elderly people in the community (Riasmini, Kamso, Sahar, & Prasad, 2013) demonstrated a validity of between 0.370–0.732 and 0.863 reliability. SF-12 has been translated and validated in several languages, including Indonesian, and has been used to test the validity and reliability of the general population; it can be applied to cross-cultures, elderly, and internationally tested (Falah, Putranto, Setyohadi, & Rinaldi, 2017). The risk of falling was measured using the observation sheet of Timed Up and Go Test (TUGT). Respondents who perform TUGT procedure begin by sitting on a chair. When the examiner says "start," then the respondent stands up from a chair, walks to the marked line (within 3 m of the seat), turns and walks back to the previous chair after arriving at the line, and sits down as before. The start and stopped when the elderly sits back. Scores ≥ 12 indicate high risk of falls, whereas scores < 12 denote a low risk of falling (Chow et al., 2019).

The data were analyzed by independent t-test, Chi-square test, and the Mann–Whitney test. Independent t-test was used to determine differences in the mean age and physical and mental health status of the treatment and control groups before and after treatment. Chi-square test was used to determine the different categories of gender, education level, marital status, and disease. Mann–Whitney test was used as an alternative to independent t-test for the data with non-normal distribution. Mann–Whitney test was used to determine differences in the risk of falling, physical health status of the treatment and control groups before treatment, and the risk of falling after treatment (Grove & Gray, 2019; Polit & Beck, 2018).

Results

No difference was observed in the mean age, the risk of falling, health status, and physical and mental health status in both groups of respondents prior to treatment. The mean age was 76.41 years for the treatment group and 71.55 years for the control group. The risk of falls in both groups was greater than 12 s, indicating a high risk of falling. The average health status of the elderly in the treatment group was 42.40, whereas that for the control group was 44.14. No difference was observed in the categories of gender, education level, marital status, and chronic disease suffered. Slightly more women than men were included in the treatment group. However, in the same treatment group, most respondents achieved primary school education and were widow/widower; both groups suffered from hypertension.

Otago training significantly reduced the risk of falling among the studied elderly (p= 0.041). The risk of falls in the intervention group decreased from 14.26 s to 12.05 s and increased from 12.94 s to 13.26 s in the control group. Otago training increased the health status (p= 0.011), with the scores in the treatment group increasing from 42.40 into 47.10, and that in the control group decreasing from 44.14 into 42.48. The mental health status scores in the treatment group increased from 43.24 to 49.42 (p= 0.002), whereas the physical health status showed no significant increase (p= 0.556).

Discussion

Otago training significantly improved the health status of the elderly. The average health status increased in the treatment group compared with the control group. This finding is consistent with the previous study (Wati, Sahar, & Rekawati, 2018) on Lafiska (elderly physical exercise), which consisted of a range of motion trainings, balance trainings, strength training, game sessions, and deep breathing, that can improve the health status of the elderly; however, further analysis of the results showed that Otago training only improved the mental health status, whereas the physical health status did not increase significantly. Results of the analysis showed the increased mental health status (MCS), from 43.24 to 49.42 (6.18 points), observed by the authors. This finding is due to the frequent meeting and interaction of elderly people who follow the Otago training. This condition reduces

Table 2. Characteristics of Respondents Before Otago Training in Social Wefare Institution at Kupang (n= 44)

Characteristics of Respondents	Treatment group (n= 22)	Control group (n= 22)	p
Age (Years): mean (SD)	76.41 (9.26)	71.55 (7.79)	0,066 *
Gender			
Male: n (%)	9 (40.9)	11 (50.0)	0.762 **
Women: n (%)	13 (59.1)	11 (50.0)	
Level of education			
Not schools: n (%)	3 (13.6)	4 (18.2)	
Elementary school (SD): n (%)	11 (50.0)	12 (54.5)	0.925 **
Junior high school (SMP): n (%)	4 (18.2)	3 (13.6)	
High school (SMU): n (%)	4 (18.2)	3 (13.6)	
Marital status			
not Married	3 (13.6)	8 (36.4)	0.135 **
Widow/widower	14 (63.6)	8 (36.4)	
Married	5 (22.7)	6 27.3)	
Chronic diseases			
Hypertension	12 (54.5)	10 (45.5)	0.925 **
Diabetes mellitus	3 (13.6)	3 (13.6)	
Arthritis	5 (22.7)	6 (27.3)	
Other chronic diseases	2 (9.1)	3 (13.6)	
Risk of falling: mean (SD)	14.26 (4.30)	12.94 (2.66)	0,452 ***
Health status: mean (SD)	42.40 (5.25)	44.14 (5.88)	0.306 *
Physical health status (PCS): mean (SD)	41.57 (7.97)	44.84 (10.31)	0.353 ***
Mental health status (MCS): mean (SD)	43.24 (7.96)	43.45 (8.21)	0.932 *

SD (standard deviation); * Independent t-test; ** Chi-square test; *** Mann–Whitney test

Table 3. Effect of Otago Training on The Risk of Fall, Physical Health Status (PCS), Mental Health Status (MCS), and Health Status of Social Wefare Institution at Kupang (n= 42)

Variables	Group	Mean	SD	p
Risk of Falling	Treatment	12.05	2.96	.041
	Control	13.26	2.35	
PCS	Treatment	44.76	9.82	.556
	Control	43.03	9.19	
MCS	Treatment	49.42	7.80	.002
	Control	41.92	7.19	
Health Status	Treatment	47.10	6.36	.011
	Control	42.48	4.74	

SD (standard deviation)

the time of the elderly for training alone, thereby increasing their mental health capacity through increased social functioning and emotional role. According to Albornos-Muñoz et al., (2018), Otago training can improve independence and social activities.

The physical health usually declines drastically with age, whereas mental health decreases slowly. Therefore, a variety of training programs are attempted in the early elderly age (60–74 years) for various body systems that can still be maintained and improved. In this study, physical health status (PCS) showed no significant increase, with scores ranging from 41.57 to 44. 76 (3.19 points). This finding is attributed to the chronic disease experience of the elderly, which is not a physical training that can improve physical health status significantly. Otago training has no effect on the reduction of symptoms of chronic diseases affecting the elderly.

In this study, the chronic diseases that affected the elderly included hypertension, diabetes mellitus, and arthritis. These conditions are in line with research (Mat et al., 2018) indicating that Otago training for six months caused no reduction in the symptoms of chronic diseases, such as osteoarthritis, affecting the elderly. These results differ from those of other studies (Bjerk et al., 2019) which reported that Otago training-based training programs can improve physical health but cause no significant increase in the mental health status.

Otago training also significantly reduced the risk of falls. The decreased risk of falling was demonstrated through the impairment determined by TUGT. The smaller of TUGT value indicated the lower the risk of falling. Otago training can enhance muscle strength and body balance, thus increasing the speed of the elderly. This result is in line with research by Kiik, Sahar, and Permatasari (2019), showing that 8 weeks of training interventions that focus on body balance can reduce the risk of falls. This training can improve lower extremity muscle strength, body flexibility, balance, and walking speed. Otago training effectively improves balance, functional mobility, lower extremity muscle strength, and functional independence (Kocic et al., 2018).

The analysis showed that the average TUGT value in the treatment group decreased by 2.19 s based on the measurement results 3 months after the intervention, implying that the risk of falling decreased in this group; meanwhile, the control group had increased TUGT value of 0.32 s, indicating the increased risk of falling.

Another research (Shubert et al., 2017) showed that the Otago training conducted for 6 months decreased TUGT value by 4.3 s. Changes in the TUGT value indicates that prolonged Otago training decreases the risk of falls as indicated by the increased or decreased running speed obtained through TUGT.

Otago training needs to be conducted regularly and sustained as a training program to prevent falls in the elderly (Martins et al., 2018). Day (2011) mentioned that good understanding of obedience training sessions and trainings will greatly affect the outcomes of this training. Regularly and dutifully following such practice will result in desirable outcomes. Conversely, failure to train in accordance with the program and guide yields unsatisfactory results.

All the elderly people who follow the Otago training experience chronic diseases. Approximately 91% of elderly experience chronic disease, and 73% suffer from two chronic conditions, such as diabetes, arthritis, hypertension, and pulmonary diseases, seriously endangering the elderly quality of life (Sahar, Setiawan, & Riasmini, 2019), Although the elderly experience chronic diseases, Otago training is still recommended because it is easy to perform and will not result in severe chronic disease conditions.

Conclusions

Otago training improves health status and reduces the risk of falling among the elderly. This training can be recommended for the elderly with chronic illnesses in social institutions and in the community. A long period of Otago training will improve physical health status and will decrease the risk of falling.

Acknowledgement

We extend our gratitude to East Nusa Tenggara Maranatha Foundation for funding this research.

References

Abdulrazaq, S., Oldham, J., Skelton, D.A., O'Neill, T., Munford, L., Gannon, B., … Stanmore, E.K. (2018). A prospective cohort study measuring cost-benefit analysis of the Otago Exercise Programme in community dwelling adults with rheumatoid arthritis. *BMC Health Services Research*, *18*(1), 1–9. https://doi.org/ 10.1186/s12913-018-3383-4.

Albornos-Muñoz, L., Moreno-Casbas, M.T., Sánchez-Pablo, C., Bays-Moneo, A., Fernández-Domínguez, J.C., Rich-Ruiz, M., … Rivera-Álvarez, A. (2018). Efficacy of the Otago Exercise Programme to reduce falls in community dwelling adults aged 65–80 years old when delivered as group or individual training. *Journal of Advanced Nursing*, *74*(7), 1700–1711. https://doi.org/10.1111/jan.13583.

Bjerk, M., Brovold, T., Skelton, D.A., Liu-Ambrose, T., & Bergland, A. (2019). Effects of a falls prevention exercise programme on health-related quality of life in older home care recipients: A randomised controlled trial. *Age and Ageing*, *48*(2), 213–219. https://doi.org/10.1093/ageing/afy192.

Chow, R.B., Lee, A., Kane, B.G., Jacoby, J.L., Barraco, R.D., Dusza, S.W., … Greenberg, M.R. (2019). Effectiveness of the "Timed Up and Go" (TUG) and the chair test as screening tools for geriatric fall risk assessment in the ED. *American Journal of Emergency Medicine*, *37*(3), 457–460. https://doi.org/10.1016/j.ajem.2018.06.015.

Day, L. (2011). The Otago strength and balance exercise programme lowers the risk of death and falls in the older people at 12 months. *Evidence-Based Nursing*, *14*(3), 76–78. https://doi.org/10.1136/ebn1157.

Dimitroff, G. (2015). *Singapore's fiscal strategies for growth*. Singapore: World Scientific. Retrieved from https://doi.org/10.1142/9789813228016_0019.

Falah, N.M., Putranto, R., Setyohadi, B., & Rinaldi, I. (2017). Uji keandalan dan kesahihan kuesioner kualitas hidup short form 12 Berbahasa Indonesia pada pasien Artritis Reumatoid. *Jurnal Penyakit Dalam Indonesia*, *4*(3), 105–111.

Grove, S.K., & Gray, J.R. (2019). *Understanding nursing research: Building an evidence-based practice* (7th Ed.). Philadelphia: Elsevier Ltd.

Kiik, S.M., Sahar, J., & Permatasari, H. (2019). Effectiveness of balance exercise among older adults in Depok City, Indonesia. *Enferm Clin*, S1130-8621(19), 30047–6. doi: 10.1016/j.enfcli.2019.01.004.

Kocic, M., Stojanovic, Z., Nikolic, D., Lazovic, M., Grbic, R., Dimitrijevic, L., & Milenkovic, M. (2018). The effectiveness of group Otago exercise program on physical function in nursing home residents older than 65 years: A randomized controlled trial. *Archives of Gerontology and Geriatrics*, *75*(2018), 112–118. https://doi.org/10.1016/j.archger.2017.12.001.

Kyrdalen, I.L., Moen, K., Røysland, A.S., & Helbostad, J.L. (2014). The Otago exercise program performed as group training versus home training in fall-prone older people: A randomized controlled trial. *Physiotherapy Research International*, *19* (2), 108–116. https://doi.org/10.1002/pri.1571.

Liston, M.B., Alushi, L., Bamiou, D.E., Martin, F.C., Hopper, A., & Pavlou, M. (2014). Feasibility and effect of supplementing a modified OTAGO intervention with multisensory balance exercises in older people who fall: A pilot randomized controlled trial. *Clinical Rehabilitation*, *28*(8), 784–793. https://doi.org/10.1177/0269215514521042.

Martins, A.C., Santos, C., Silva, C., Baltazar, D., Moreira, J., & Tavares, N. (2018). Does modified Otago Exercise Program improves balance in older people? A systematic review.

Preventive Medicine Reports, 11, 231–239. https://doi.org/10.1016/j.pmedr. 2018.06.015

Mat, S., Ng, C.T., Tan, P.J., Ramli, N., Fadzli, F., Rozalli, F.I., … Tan, M.P. (2018). Effect of modified otago exercises on postural balance, fear of falling, and fall risk in older fallers with knee osteoarthritis and impaired gait and balance: A secondary analysis. *PM and R, 10*(3), 254–262. https://doi.org/10.1016/j.pmrj.2017.08.405

Polit, D., & Beck, C. (2018). *Essentials of nursing research appraising evidence for nursing practice* (9th Ed.). Philadelphia: Wolters Kluwer Health.

Rekawati, E. (2014). *Efektivitas model keperawatan keluarga santun lansia dalam upaya peningkatan kualitas asuhan keluarga pada lansia di Depok, Jawa Barat* (Doctoral Dissertation, Degree in Nursing). Depok: Faculty of Nursing Universitas Indonesia.

Riasmini, N.M., Kamso, S., Sahar, J., & Prasetyo, S. (2013). *Efektivitas model kelompok keluarga mandiri untuk meningkatkan kualitas hidup lanjut usia di masyarakat wilayah DKI Jakarta*. Universitas Indonesia (Doctoral Dissertation, Degree in Nursing). Depok: Faculty of Nursing Universitas Indonesia. Retrieved from http://lib.ui.ac.id/file?file=digital/20350880-D1448-NiMade Riasmini.pdf.

Sahar, J., Setiawan, A., & Riasmini, N.M. (2019). *Keperawatan kesehatan komunitas dan keluarga, edisi bahasa Indonesia*. Singapura: Elsevier Singapura Pte Ltd.

Seah, B., Kowitlawakul, Y., Jiang, Y., Ang, E., Chokkanathan, S., & Wang, W. (2019). A review on healthy ageing interventions addressing physical, mental and social health of independent community-dwelling older adults. *Geriatric Nursing, 40*(1), 37–50. https://doi.org/10.1016/j.gerinurse.2018.06.002.

Shubert, T.E., Goto, L.S., Smith, M.L., Jiang, L., Rudman, H., & Ory, M.G. (2017). The otago exercise program: Innovative delivery models to maximize sustained outcomes for high risk, homebound older adults. *Frontiers in Public Health, 5*, 1–8. https://doi.org/10.3389/fpubh.2017.00054.

Skelton, G., Skelton, H., Gawler, S., & Hannah, S. (2018). *Home exercise*. Retrieved from http://www.laterlifetraining.co.uk/llt-home-exercise-booklets/.

Statistics Indonesia. (2013). *Indonesia population projection*. Jakarta: BPS-Statistics Indoensia. Retrieved from https://www.bappenas.go.id/files/5413/9148/4109/Proyeksi_Penduduk_Indonesia_2010-2035.pdf.

Ware, J.E., Kosinski, M., Turner-bowker, D.M., & Gandek, B. (2009). *User 's manual for the SF-12 health survey*. *Health (San Francisco)*. Lincoln, Rhode Island: QualityMetric Incorporated.

Wati, D.N.K, Sahar, J., & Rekawati, E. (2018). Effectiveness of Lafiska exercise on risk of fall, balance, and health status in the elderly. *Enfermeria Clinica*, 28(S1), 337–342. https://doi.org/10.1016/S1130-8621(18)30181-5.

The Ministry of Health Republic of Indonesia. (2017). *Analisis Lansia di Indonesia*. Jakarta: The Ministry of Health Republic of Indonesia. Retrieved from www.depkes.go.id/download.php?file=download/.../infodatin lansia 2016.pdf%0A.

WHO. (2018). *Falls*. Geneva: WHO. Retrieved from https://www.who,int/news-room/fact-sheets/detail/falls.

Jurnal Keperawatan Indonesia, 2020, 23 (1), 23–30
DOI: 10.7454/jki.v23i1.1173
Received February 2020; Accepted March 2020

pISSN 1410-4490; eISSN 2354-9203

"I DO NOT FEEL CONFIDENT AND UNCOMFORTABLE DISCUSSING PATIENTS' SEXUALITY CONCERNS": A THEMATIC ANALYSIS OF INDONESIAN NURSES' EXPERIENCES IN DISCUSSING SEXUALITY WITH PATIENTS

Hayuni Rahmah, Yati Afiyanti*, Imami Nur Rachmawati, Titin Ungsianik, Tri Budiati, Wiwit Kurniawati

Faculty of Nursing Universitas Indonesia, Depok 16424, Indonesia

*E-mail: yatikris@ui.ac.id

Abstract

Despite the increasing complexity of the tasks and responsibilities in providing nursing care to patients, many Indonesian nurses may not possess adequate knowledge and skills to discuss sexuality with their patients. The purpose of this study is to explore the experience of Indonesian nurses in providing nursing care to patients regarding sexual problems. This research adopted a descriptive qualitative design to explore the experiences of Indonesian nurses in solving their patient's sexual problems. Ten nurses working in a general hospital in Indonesia participated in this work. These nurses were interviewed extensively, and the data were transcribed and analyzed thematically. Four main themes were identified in this study: (1) Nurses believe that discussing a patient's sexual problems as part of their professional responsibility, (2) discomfort and embarrassments are barriers to providing adequate solutions to help resolve a patient's sexual problems, (3) nurses assume that most patients are not interested in discussing sexual problems because of illness, and (4) nurses do not have the confidence to discuss the patient's sexual problems. The findings of this study confirm that many nurses feel hesitant and uncomfortable when addressing patients' sexual problems. Thus, Indonesian nurses require more training related to providing nursing care to patients with sexual problems.

Keywords: descriptive qualitative, Indonesian nurses, sexual care, sexual problem

Abstrak

"Saya Merasa Tidak Percaya Diri dan Tidak Nyaman dalam Mendiskusikan Masalah Seksual": Analisis Tematik Pengalaman Perawat Indonesia Mendiskusikan Masalah Seksual Pasien. *Terlepas dari meningkatnya kompleksitas tugas dan tanggung jawab dalam memberikan asuhan keperawatan kepada para pasien, banyak perawat Indonesia mungkin tidak memiliki pengetahuan dan keterampilan yang memadai untuk membahas seksualitas dengan pasien mereka. Tujuan dari penelitian ini adalah untuk mengeksplorasi pengalaman perawat Indonesia dalam memberikan asuhan keperawatan kepada pasien terkait masalah seksual. Penelitian ini mengadopsi desain deskriptif kualitatif untuk mengeksplorasi pengalaman perawat Indonesia dalam menyelesaikan masalah seksual pasien mereka. Sepuluh perawat yang bekerja di rumah sakit umum di Indonesia berpartisipasi dalam penelitian ini. Perawat diwawancarai, kemudian data ditranskripsi dan dianalisis secara tematis. Empat tema utama diidentifikasi dalam penelitian ini: (1) Perawat percaya bahwa mendiskusikan masalah seksual pasien adalah bagian dari tanggung jawab profesional mereka, (2) ketidaknyamanan dan rasa malu adalah hambatan untuk memberikan solusi yang memadai untuk membantu menyelesaikan masalah seksual pasien, (3) perawat menganggap bahwa sebagian besar pasien tidak berminat mendiskusikan masalah seksual karena penyakitnya, dan (4) perawat tidak memiliki percaya diri untuk mendiskusikan masalah seksual pasien. Temuan penelitian ini mengkonfirmasi bahwa banyak perawat merasa ragu dan tidak nyaman ketika menangani masalah seksual pasien. Oleh karena itu, perawat Indonesia membutuhkan lebih banyak pelatihan terkait memberikan asuhan keperawatan kepada pasien yang memiliki masalah seksual.*

Kata Kunci*: deskriptif kualitatif, masalah seksual, perawat Indonesia, perawatan seksual*

Introduction

Sexuality is a basic human need. Sexual health is defined as a state of physical, mental, and social well-being concerning sexuality. It requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination, and violence (WHO, 2013). Promoting sexual health may improve the quality of life and well-being of an individual and their family (Khosla, Say, & Temmerman, 2015). Sexuality is a complex issue that nurses should consider among their concerns (Hendry, Snowden, & Brown, 2018). Nurses should promote sexual health as a basic aspect of holistic nursing care (Evans, 2013). Holistic nursing is defined as "developing a relationship with patients in which the nurse honors and promotes consideration of the wholeness of persons, authentic presence, and facilitation of healing while incorporating the physical, emotional, spiritual, social and psychological aspects of the patient's existence in supporting, guiding, and assisting patients in gaining self-knowledge and in co-creating a plan of care" (Kinchen, 2015). Holistic nursing care is provided when nurses acknowledge the significance and meaning of sexuality to their patients.

Despite the emerging significance of fulfilling the sexual needs of patients, incorporating sexual health assessment and intervention in basic clinical health services remains a challenging issue. Assessments and interventions to overcome sexual problems are not often implemented by professional healthcare providers, including nurses, in spite of the increasing frequency of patients reporting sexual issues or dysfunction (Hendry et al., 2018).

There is an unmet need for healthcare providers to help patients overcome sexual problems. Professional healthcare providers often assume that sexual issues are unimportant or taboo; thus, they do not discuss such issues with their patients. Other care providers are unable to perform assessments and interventions for sexual problems because of limited knowledge on the matter. Social constraints and internalized values also present barriers to seeking and providing care for sexual problems in many countries, including Indonesia (Fitch, Beaudoin, & Johnson, 2013; Ferreira, Gozzo, Panobianco, Santos, & Almeida, 2015; Hordern & Street, 2007; Saunamäki, Andersson, & Engström, 2010).

As an Eastern culture, Indonesia adopts many Eastern values, including humility and personal conduct. In Eastern values, sexuality is considered a shameful and sensitive topic that should not be discussed openly; indeed, sexuality is regarded as a private matter between partners (Lieber et al., 2009). Indonesian nurses grow with these values and, hence, adopt the beliefs of their culture in their nursing practice. This situation contributes to the complex experience of nurses practicing in Indonesia. Despite the increasing complexity of their experiences, many Indonesian nurses may not possess adequate knowledge and skills to discuss sexuality with their patients (Afiyanti, 2017). However, patients with sexual problems need help, regardless of their culture (Afiyanti & Milanti, 2013; Afiyanti, Setyowati, Milanti, & Young, 2020). In light of these challenges to the implementation of sexual health nursing assessment and intervention in Indonesia, improving the understanding of current practices and identifying gaps between ideals and reality in the field is of great importance. Hence, the purpose of this study is to explore the experiences of Indonesian nurses in providing sexuality care.

Methods

Design. We applied a qualitative descriptive (QD) approach to capture and understand the experiences of nurses in providing sexuality care. Sandelowski and Barroso (2006) described this approach as one with a naturalist perspective that assumed the data as the truthful index of reality, therefore, producing data-near interpretations. The QD approach has been used extensively in evaluation studies to achieve a clear

and detailed narration of actual events concerning participants and refine their experiences. Ten nurses were recruited from a general hospital in Indonesia. Data were collected through in-depth interviews for around 60–90 minutes during which the field notes were also made, which were audio-recorded after the participants provided consent.

Data Analysis. This study employed the thematic analysis technique (Braun & Clarke, 2006). We reviewed all recorded interviews to ensure the accuracy of their transcripts. During data analysis, the researchers attempted to bracket their personal interpretations of the experiences of nurses in addressing the sexual concerns of their patients. Each narrative in the transcribed interviews was carefully and systematically examined for emerging themes through data coding. Data were transcribed verbatim in Bahasa Indonesia after each interview. The transcribed text of the interviews was read and reread to capture patterns of meaning and reveal the experience of nurses participating in this study.

Ethical Considerations. Ethical clearance was provided by the Ethical Committee of the Faculty of Nursing, Universitas Indonesia. We adhered to all required ethical principles, including the right to self-determination, anonymity, and confidentiality, and protection from discomfort and harm. Information sheets were provided, and nurses completed written consent forms prior to the interviews. Voluntary participation in the interviews was emphasized. The nurses were reminded that they could withdraw from the study at any time they chose. It contained a thorough explanation of the objectives and procedures of this qualitative study, including the risks and benefits of participation. Transcripts were made anonymous through coding.

Rigor. In enhancing the trustworthiness of the findings, a number of means of credibility were established. The credibility of this study is established by prolonged engagement with the participants and member checking. Furthermore, the participants are considered as experts in accurately describing and interpreting their data (Leech & Onwuegbuzie, 2007), so they were asked to verify the accuracy of the findings to enhance data credibility, confirmation, and member-checking of the established themes.

Results

Participant Background. Using a purposive sampling method, we invited the ten participants. They are nurses from General Hospital in North Jakarta. The inclusion criteria were: married and ranged in age from 25 years to 45 years with a mean age of 40 years. The educational background of the participants showed some variation. Five participants graduated with a nursing diploma, while five graduated with a bachelor's degree in nursing. The number of years of service of the participants was between 3 and 20 years. The participants worked in different hospital units, namely, the surgical inpatient, neurology inpatient, obstetric and neonatal emergency, hemodialysis, and internal medicine units.

Four themes describing the participants' experiences of sexual assessment and intervention were elicited: (1) Nurses believe that sexuality care is part of their professional responsibility, (2) discomfort and embarrassment are barriers to providing adequate solutions to patient's sexual problems, (3) nurses assume that most patients lack interest in sexuality-related areas because of illness, and (4) nurses are not confident discussing patients' sexuality concerns.

Nurses Believe that Sexuality Care is Part of Their Professional Responsibility. All participants stated that providing sexual care is part of a nurse's responsibilities. All nurses believed that they could not be considered professional nurses if they are unable to resolve their patients' sexual problems despite not knowing if they could correctly assess these problems to begin. One participant (P2) said: "… providing nursing care to overcome the sexual problem is my professional responsibility as a nurse mmm (laugh). ..."

Discomfort and Embarrassment are Barriers to Providing Adequate Solutions to Patient's Sexual Problems. Without exception, all participants shared their discomfort and feelings of embarrassment when conducting assessment and intervention to address their patients' sexual problems. The nurses felt uncomfortable when talking about sex because they were not accustomed to talking about reproductive organs. They expressed discomfort when exposing sexual problems and feared they would be considered rude. Below are the thoughts of two nurses:

> *"… there is just discomfort ... when I said vagina mmm or that (small laugh) mentioning male genitalia mmm afraid to be viewed as rude by the patient …" (P10)*

> *"… since small, I was prohibited from mentioning genital mmm taboo from the parents, eh so sometimes uncomfortable when talking about the sexual problem of patient mmm because having to mention that …" (P8)*

Nurses Assume that Most Patients Lack of Interest in Sexuality-Related Areas Because of Illness. Without exception, the participants believed that their patients do not think about their sexual problems because they are more focused on their illness and symptoms. Three nurses working in the cancer unit opined that many of their patients are frequently breathless and powerless; as such, these patients are unlikely to be thinking of their sexual needs. Below is an experience expressed by a participant (P5):

> *"… cancer patients in my unit mmm many are already not active, mmm instead many are out of breath... would they still think about sexual relations... I don't think so mmm they are more focused on their physical complaints …"*

Nurses are Not Confident Discussing Patients' Sexuality Concerns. Besides feeling discomfort and fearing taboos when discussing their patients' sexual problems, most participants expressed a lack of confidence. They stated that sexual topics were not taught over the course of their education. Thus, they do not feel confident discussing sexual problems with their patient, even when they are certain that the patient has such a problem. A nurse (P6) working in the postpartum ward revealed:

> *"… me at school before there was no course about sexual assessment, there were only learning reproduction organs... that's it mmm, so I am often not confident when going to help patients asking when can engage in sex again after giving birth. I was not confident to talk about it; my theory is lacking ... (laugh)."*

Discussion

The description of discussion of the sexuality concern by the Indonesian nurses in General Hospital in Jakarta extends our understanding of the experiences of Indonesian nurses in providing sexual care. Four themes were identified in this study. First, all participants in this study were aware that providing care for a patient's sexual problems as part of their professional responsibility as a nurse. This finding shows that sexuality is gradually being acknowledged as an essential part of the provision of care for patients and a fundamental need that must be met. Participants indicated a positive attitude toward discussing sexual problems even when they doubted their competence in meeting patients' needs. Studies exploring the attitudes and beliefs of nurses in Indonesia and Turkey showed similar findings (Afiyanti, 2017; Oskay, Can, & Basgol, 2014). For example, Turkey's study reported that 87.4% of the participants considered discussing a patient's sexual health as part of the nursing profession, and 88.5% of the participants expressed through of patients' sexual health in practice

The contradiction between their sense of responsibility and non-action toward discussing sexual problems is an issue faced by nurses in

many settings (Fitch et al., 2013; Oskay et al., 2014; Zeng, Li, Wang, Ching, & Loke, 2011). Nurses are beginning to understand the sexual aspect of their patient's conditions, and this awareness could pave the way for efforts to include sexual problem assessment and intervention in primary healthcare practices and make these services available in general healthcare facilities. These findings highlight the urgency of bridging the gap between ideal and actual nursing practices.

The related theme, "Discomfort and embarrassment are barriers to providing adequate solutions to patient's sexual problems," was used to explain the challenges of the nurses participating in this study. The participants expressed difficulties in helping patients solve their sexual problems because they felt uncomfortable and embarrassed discussing them. Several studies on nurses in various settings revealed similar results (Dyer, & das Nair, 2013; 2013; Fitch et al., 2013; Saunamäki et al., 2010). The participants in this study admitted that discomfort and feelings of embarrassment were the main factors preventing them from conducting sexual problem assessment and intervention.

The discomfort and embarrassment felt by nurses could be caused by various factors. Recent research revealed that values; social, cultural, and religious influences; and a lack of knowledge, coaching, and experience could contribute to the discomfort of nurses in discussing sexual problems with their patients (Bdair & ConsTantino, 2017; Ferreira et al., & Almeida, 2015; Abimbola & Margaret, 2018).

A study by Bdair and ConsTantino in 2017 showed that the internalized values of nurses influence the way they view sexual problems. Nurses believing in a set of values that consider sexual problems as taboo are likely to be averse to discussions on sexual issues. The dissonance between accepted values and the obligations of a nurse's duty could result in an internal dilemma and give birth to feelings of discomfort. A study in 2013 (Saunamäki et al., 2013) observed that values and beliefs influence nurses' views on sexuality.

Besides, values, social, cultural, and religious factors contribute to barriers preventing nurses from conducting assessment and nursing interventions for sexual problems. Certain cultures and religions identify sexuality as a sensitive topic (Bdair & ConsTantino, 2017; Zeng et al., 2011). Consequently, some nurses with a particular cultural or religious background are likely to feel uncomfortable and embarrassed when discussing sexual problems. The Indonesian social construct, in combination with the Malay and Islamic cultures, considers sexuality a sensitive topic inappropriate for open discussion (Jong, 2016; Muñoz & Qureshi, 2017). In this study also reported that nurses in Indonesia might feel embarrassed and uncomfortable when talking about sexual problems with patients because their beliefs limit their perceptions of sexuality.

A lack of knowledge, coaching, and experience in addressing sexual health problems contributes to the discomfort felt by nurses performing assessment and intervention for sexual problems (Zeng et al., 2011). This issue is particularly evident among interning nursing students, young nurses, and nurses working in units or clinics that do not specialize in resolving sexual health problems.

Besides feelings of discomfort and embarrassment, this study found that nurses often assume that clients do not feel sexual interest as a consequence of illness. A study in China involving nurses in oncology units showed that nearly two-thirds of the participants assume that their patients lack sexual interest because of their illness (Zeng et al., 2011). This assumption is harmful and directly contradicts the expectation of patients. Patients with illness still possess sexual interest and need the help of healthcare professionals, including nurses, to solve their problems (Fitch et al., 2013; Zeng et al., 2011). Because of their belief, the participants of this study described how they often form the opi-

nion that patients with serious illnesses would not think about sexual problems and focus instead on the illness at hand when they are admitted to the hospital.

Sexuality is a basic human need and contributes to the quality of life and well-being of an individual (Khosla et al., 2015; Tucker, Saunders, Bulsara, & Tan, 2016). Regardless of an individual's state of health, their sexual needs are still present and must be fulfilled. Sexual health needs are not limited to penetrative sex and may include problems related to intimacy, emotional closeness, and other sexual activities. Patients expect to be able to fulfill their sexual health needs even when changes in their sexual interest or reproductive organs occur. Thus, nurses, as health professionals with the most contact with patients, must understand these needs and find ways to help their patients express and solve their problems. Moreover, nurses must work together with their patients to find solutions or alternative actions to address the latter's sexual problems.

The fourth theme identified in this study reveals that nurses do not feel confident when discussing patients' sexual problems. Participants openly admitted that they were uncertain about discussing sexual issues with their patients because their theoretical knowledge is lacking; thus, they feel that they will be unable to help their patients effectively. Earlier studies reported similar findings and indicated that nurses feel a lack of confidence in helping their patients address sexual health problems (Arikan, Meydanlioglu, Ozcan, & Canli Ozer, 2014).

The lack of confidence felt by nurses is directly related to their level of knowledge, experience, and competence. A lack of knowledge of the pathophysiology of an illness negatively contributes to the self-confidence of nurses trying to help patients meet their needs. The age gap between nurses and patients could generate a difference in values that may influence the former's confidence. The participants of this study were aged between 25 and 45 years. Younger nurses generally have shorter clinical experiences than older nurses; hence, when faced with older patients, the former are likely to feel that their experience is lacking and may lose confidence in their ability to provide solutions to problems.

These combined factors raise concerns among nurses. The worry of being unable to answer patients' questions or provide solutions to their problems, feeling that sexuality is an unfamiliar topic, and lack of experience in performing nursing care for sexual problems, whether directly or in a coaching setting, can generate feelings of incompetence when nurses care for patients with sexual problems. The findings also indicate how Indonesian social culture influences the nurse's experiences.

This study has limitations: The first includes, in general, sexual care remains an uncommon practice for Indonesian nurses, especially those who have the educational level of at least diploma of nursing. The participants of this study might be unfamiliar and failed to express their feelings freely when discussing their experiences and preferences related to sexual concerns. Furthermore, discussion on sexuality issues is taboo and sensitive and tend to be ignored in Eastern culture, including for Indonesian nurses. The second is the small sample size, which may cause the study to be limited to a certain population, that is, in nurses who attending the sexual training at the hospital and also have a similar demographical background, which may not represent the general population that limits the transferability of the findings.

Conclusions

This study highlights Indonesian nurses' experiences in providing sexual care to their patients. The participants strongly emphasized their responsibility for delivering sexual care despite the presence of barriers. The findings of this study confirm that most nurses feel hesitant and uncomfortable when addressing patients' sexuality concerns. Although they are professional healthcare providers, nurses are often embar-

rassed to talk about sexual issues with their patients. Unfortunately, the sexual problems of a patient cannot be identified if this situation persists. Thus, Indonesian nurses require more training related to sexuality care, so they have more confidence, having knowledge, and skills to be able to provide sexual assessment and intervention, but the sociocultural and religious elements should be considered in the training of sexual care. Future studies to evaluate the effectiveness of the strategies and training of sexual care for nurses to enhance good nursing practices would be important.

Acknowledgment

We thank all the participants in this study. The study was supported financially by the grant from Directorate of Research and Community Engagement Universitas Indonesia/DRPM UI (No. NKB-1264/UN2.R3.1/HKP.05.00/2019).

References

Abimbola, D.A. & Margaret, O.O. (2018). Sexuality: Assessment, challenges, and way forward in nursing profession. *Educational Research, 9*(01), 16–20. doi: 10.14303/er.2018.017.

Afiyanti, Y., & Milanti, A. (2013). Physical sexual and intimate relationship concerns among Indonesian cervical cancer survivors: A phenomenological study. *Nursing Health Sciences. 15*(2), 151–156. doi: 10.1111/nhs.12006.

Afiyanti, Y. (2017). Attitudes, belief, and barriers of Indonesian oncology nurses on providing assistance to overcome sexuality problem. *Nurse Media Journal of Nursing, 7*(1), 15–23.

Afiyanti, Y., Setyowati, Milanti, A. & Young, A. (2020). "Finally, I get to a climax": The experiences of sexual relationships after a psychosexual intervention for Indonesian cervical cancer survivors and husbands. *Journal of Psychosocial Oncology*, 1–17. doi: 10.1080/07347332.2020.1720052.

Arikan, F., Meydanlioglu, A., Ozcan, K., & Canli Ozer, Z. (2014). Attitudes and beliefs of nurses regarding discussion of sexual concerns of patients during hospitalization. *Sexuality and Disability*, *33*(3), 327–337.

Bdair, I., & ConsTantino, R. (2017). Barriers and promoting strategies to sexual health assessment for patients with coronary artery diseases in nursing practice: A literature review. *Health, 9*(3), 473–492. doi: 10.4236/health.2017.93034.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77–101. doi: 10.1191/1478088706qp063oa.

Dyer, K., & das Nair, R. (2013). Why don't healthcare professionals talk about sex? A systematic review of recent qualitative studies conducted in the United Kingdom. *The Journal of Sexual Medicine*, *10*(11), 2658–2670.

Evans, D.T. (2013). Promoting sexual health and well-being: The role of the nurse. *Nursing Standard*, *28*(10), 53–57. doi: 10.7748/ns2013.11.28.10.53.e7654.

Ferreira, S., Gozzo, T., Panobianco, M., Santos, M., & Almeida, A. (2015). Barriers for the inclusion of sexuality in nursing care for women with gynecological and breast cancer: Perspective of professionals. *Revista Latino-Americana de Enfermagem*, *23*(1), 82–89.

Fitch, M., Beaudoin, G., & Johnson, B. (2013). Challenges having conversations about sexuality in ambulatory settings: Part II—Health care provider perspectives. *Canadian Oncology Nursing Journal, 23*(3), 182–188.

Hendry, A., Snowden, A., & Brown, M. (2018). When holistic care is not holistic enough: The role of sexual health in mental health settings. *Journal of Clinical Nursing*, *27*(5–6), 1015–1027. doi:10.1111/jocn.14085.

Hordern, A., & Street, A. (2007). Communicating about patient sexuality and intimacy after cancer: Mismatched expectations and unmet

needs. *The Medical Journal of Australia*, *186*(5), 224–7.

Jong, H.N. (2016, May 20/ 02:41 pm). Islam had open approach to sexuality in the past, says activist, News. *The Jakarta Post*. Retrieved from https://www.thejakartapost.com/news/2016/05/20/islam-had-open-approach-to-sexuality-in-the-past-says-activist.html.

Khosla, R., Say, L., & Temmerman, M. (2015). Sexual health, human rights, and law. *The Lancet*, 386(9995), 725–726. doi: 10.1016/S0140-6736(15)61449-0.

Kinchen, E. (2015). Development of a quantitative measure of holistic nursing care. *Journal of Holistic Nursing*, *33*(3), 238–246. doi: 10.1177/0898010114563312.

Leech, N.L., & Onwuegbuzie, A.G. (2007). An array of qualitative data analysis tools: A call for data analysis triangulation. *School Psychology Quarterly*, *22*(4), 557–584.

Lieber, E., Chin, D., Li, L., Rotheram-Borus, M. J., Detels, R., Wu, Z., … National Institute of Mental Health (NIMH) Collaborative HIV Prevention Trial Group. (2009). Sociocultural contexts and communication about sex in China: Informing HIV/STD prevention programs. *AIDS education and prevention*, *21*(5), 415–429. doi: 10.1521/aeap.2009.21.5.415.

Muñoz, E.S., & Qureshi, S.Q. (2017). Islam and sexuality by two Latin American converts in the US. *The Journal of Sexual Medicine*, *14*(5), 259–260. doi: 10.1016/j.jsxm.2017.04.275.

Oskay, U., Can, G., & Basgol, S. (2014). Discussing sexuality with cancer patients: Oncology nurses attitudes and views. *Asian Pacific Journal of Cancer Prevention*, *15*(17), 7321–7326.

Sandelowski, M.J., & Barroso, J. (2006). *Handbook for synthesizing qualitative research* (1st Ed.). New York: Springer Publishing Company.

Saunamäki, N., Andersson, M., & Engström, M. (2010). Discussing sexuality with patients: Nurses' attitudes and beliefs. *Journal of Advanced Nursing*, *66*(6), 1308–16. doi: 10.1111/j.1365-2648.2010.05260.x.

Tucker, P.E., Saunders, C., Bulsara, M.K., & Tan, J.J., Salfinger, S.G., Green, H., & Cohen, P.A. (2016). Sexuality and quality of life in women with a prior diagnosis of breast cancer after risk-reducing salpingo-oophorectomy. *Breast*, 30, 26–31. doi: 10.1016/j.breast.2016.08.005.

World Health Organization. (2013). *World health organization violence prevention alliance: Global campaign for violence prevention*. Retrieved from http://www.who.int/violenceprevention/approach/public_health/en/.

Zeng, Y., Li, Q., Wang, N., Ching, S., & Loke, A. (2011). Chinese nurses' attitudes and beliefs toward sexuality care in cancer patients. *Cancer Nursing*, *34*(2), 14–20.

Jurnal Keperawatan Indonesia, 2020, 23 (1), 31–40
DOI: 10.7454/jki.v23i1.551
Received September 2017; Accepted November 2019

pISSN 1410-4490; eISSN 2354-9203

ORAL CARE PREVENTS LATE-ONSET SEPSIS IN RISK PRETERM INFANTS

Fitri Wahyuni[1*], Yeni Rustina[2], Defi Efendi[2]

1. School of Health Sciences Mercubaktijaya Padang, Padang 25173, Indonesia
2. Faculty of Nursing Universitas Indonesia, Depok 16424, Indonesia

*E-mail: fitriwahyuni@mercubaktijaya.ac.id

Abstract

The incidence of infections in preterm infants is still quite high. In this study, oral care with human breast milk was implemented in risk preterm infants as a precaution. The study was conducted using a quasi-experimental method with a non- equivalent control group and posttest only design in 40 risk preterm infants. The participants were divided into two groups of 20. The data were analyzed using independent t-test and a Wilcoxon test. The results show that this intervention has an effect on the incidence of late-onset sepsis in preterm infants. The effect is based on symptoms: body temperature instability (p= 0.021), C-reactive protein (p= 0.006), and leukocytes (p= 0.020) all indicated differences between the two groups. It is recommended that this practice be adopted as a routine therapy program in perinatology.

Keywords: exclusive breastfeeding, late-onset sepsis, oral care, risk preterm infants, sepsis

Abstrak

Perawatan Mulut Mencegah Sepsis Neonatorum Awitan Lambat pada Bayi Prematur Risiko Tinggi. *Angka kejadian infeksi setelah lahir pada bayi prematur masih cukup tinggi. Pelaksanaan intervensi pemberian oral care menggunakan air susu ibu pada bayi prematur risiko tinggi telah dilakukan sebagai pencegahan. Penelitian dilakukan menggunakan metode kuasi eksperimen dengan desain post-test only, kelompok kontrol non ekuivalen, pada 40 bayi prematur risiko tinggi sebagai sampel. Responden dibagi menjadi dua kelompok, masing-masing kelompok 20 responden. Data dianalisis menggunakan uji t independen dan wilcoxon. Hasil Intervensi ini terbukti memiliki manfaat terhadap dalam menurunkan kejadian sepsis neonatorum awitan lambat pada bayi prematur berdasarkan tanda klinis seperti ketidakstabilan suhu tubuh (p= 0,021), hasil pemeriksaan C-Reaktif Protein (p= 0,006) dan leukosit (p= 0,020) yang menunjukkan adanya perbedaan yang bermakna antara kelompok kontrol dan kelompok intervensi. Intervensi ini diharapkan dapat dilanjutkan menjadi program terapi rutin yang akan dilakukan di ruang rawat perinatologi.*

Kata Kunci: *ASI eksklusif, bayi prematur, oral care, sepsis, sepsis neonatorum awitan lambat*

Introduction

Neonatal sepsis contributes to neonatal morbidity and mortality (Qazi & Stoll, 2009). Neonatal sepsis that occurs 72 hours after birth is known as late-onset neonatal sepsis and is caused by the contamination of the infants' environment (Hammoud, Al-Taiar, Thalib, Al-Sweih, Pathan, & Isaacs, 2012).

The incidence of late-onset neonatal sepsis increases with the survival of preterm infants, especially in those with a very low birth weight (Kinney, Lawn, Howson, & Belizan, 2012). As a result of the immaturity of organs, preterm infants with low or very low birth weight often experience some problems in the period immediately after birth. This condition is a high-risk factor for the incidence of late-onset neonatal sepsis because it is related to invasive action, long-term use of medical equipment (including central venous access and mechanical ventilation), and failure of early enteral feeding using breast milk. It can also affect the duration of parenteral nutrition and length of treatment (Troger et al., 2014).

Bekhof, Reitsma, Kok, and Van Straaten (2013) revealed that early diagnosis of late-onset neonatal sepsis is quite tricky, especially in preterm infants who often have non-specific signs. However, the most common symptoms are the reduction of spontaneous activity, the lack of sucking, periods of respiratory arrest (apnea), pulse rate of less than 100 per minute (bradycardia), pulse rate of over 180 per minute (tachycardia), and instability of body temperature (hypothermia).

Some researchers rely on the results of laboratory tests, such as leukocytes, C-reactive protein (CRP), procalcitonin (PCT), and blood cultures to diagnose sepsis (Stemberger & Tesovic, 2012). However, blood culture examinations often produce negative results due to the limited amount of blood obtained (Bekhof et al., 2013). According to Downey, Smith, and Benjamin (2010), infection control in preterm infants remains a foundation in the prevention of late-onset neonatal sepsis.

Pre-term newborns need treatment that can prevent sepsis after birth. Rodriguez, Vento, Claud, Wang, and Caplan (2015) reveal a strategy in the form of oral care using breast milk/colostrum as soon as the infant is born. According to Pammi and Abrams (2011), the lactoferrin in breast milk is an important component in defense against infection. Breast milk also contains bioactive substances (immune and trophic) that provide antimicrobial, anti-inflammatory, antioxidant, and immunomodulatory functions, thereby increasing intestinal microbiota and accelerating intestinal maturation. These bioactive substances are mostly found in breast milk from mothers who give birth to preterm infants. Under normal conditions, during the womb, the fetus will obtain bioactive materials from the amniotic fluid until 40 weeks' gestation. If the infant is born in insufficient months or prematurely, then the bioactive material will be produced through breast milk (Rodriguez & Caplan, 2015).

According to a preliminary study conducted on the number of occurrences of infection in the perinatology room of a hospital in Jakarta in 2016, the incidence of diseases is high at around 16.7% to 18.9% due to the installation of central venous access or peripherally inserted central venous catheter (PICC) and associated pneumonia (VAP) ventilator. The incidence of this infection is most common in infants weighing <1499 grams. Once observed, the intervention of oral care with ASI/colostrum can be applied to newborns. This intervention is expected to provide a significant reduction in the incidence of infection so that premature newborns are not affected by sepsis. This is achieved by monitoring the hemodynamic and laboratory indicators, such as oxygen saturation, respiration, pulse, thermoregulation, perfusion, CRP, PCT, Immature to Total neutrophil ratio (IT ratio), and baby leukocytes in the Hospital Perinatology room in the Jakarta area.

Methods

The implementation of evidence-based nursing (EBN) through the provision of oral care was carried out using a quasi-experimental research method with a non-equivalent control group, post-test only design (Sugiyono, 2015). The sampling technique was consecutive sampling. The sample in this study consisted of 40 high-risk preterm infants. The sample was divided into two groups: 20 infants in the intervention group and 20 infants in the control group. The inclusion criteria for the infants who are the respondents in this study are high-risk preterm infants with a gestational age of fewer than 37 weeks, while the exclusion criteria include infants born with congenital abnormalities, born to mothers infected to the Human Immunodeficiency Virus (HIV), drug abuse, and chorioamnionitis pregnancy.

This study was conducted in a general hospital in Jakarta and had been approved administratively and carried out by applying the principles of research ethics. The implementation of EBN involved nurses who worked in the care room, especially the special care nursery (SCN) room four, a high-risk newborn transition space.

Every preterm newborn included in the inclusion criteria was immediately given oral care using breast milk (0.2 mL) eight times a day (every 3 hours).

The variables measured to determine the success of this intervention included gestational age and birth weight identified through the patient's medical record data. Each infant's condition was also assessed from several sepsis indicators, including hemodynamic status and laboratory examination result.

The hemodynamic status was assessed using the oxygen saturation (normal: more than 88%), as measured by oximetry (calibrated). The frequency of breath was calculated in one minute (normal: 40–60 times/minute) by looking at the movements of the infants' chest and abdomen during inspiration, followed by the expiration process (normal pulse or heart rate: 100–140 times/minute) as measured using a stethoscope. Peripheral perfusion was measured by calculating the capillary refill time (CRT, normal: less than 2 seconds) and infants' body temperature (normal: 36.5^{o}C–37.5^{o}C) using a thermometer (calibrated). The laboratory results assessed include leukocytes (normal: 6–14 × 103/µL), CRP (normal: <5.0 mg/L), IT ratio (normal: 0.00–0.20), and PCT (normal: <0.05). The laboratory normal value guidelines were adjusted to the reference values of the hospital laboratory.

Oral care was performed using a 1 mL syringe by dripping it slowly on the right and left sides of the infant's buccal mucosa and paying attention to the infant's response. Dropping the breast milk in the infant's buccal mucosa can prevent the colonization of pathogenic bacteria, which can cause sepsis in infants, especially in the infant observed to have nothing per oral (NPO) status and has not drunk the breast milk orally. Breast milk given during oral care is preferably derived from the colostrum of the infant's mother. However, if breast milk is not available yet, then donor breast milk can be used as an alternative. The control group in the implementation of EBN consisted of infants who were not given oral care via breast milk since the first 24–48 hours after birth.

Results

Respondents' Characteristics. The characteristics of each variable in this study consisted of gestational age and birth weight, which are described in Table 1.

The results in Table 1 showed that the mean gestation time of the most severe preterm infants in the perinatology room of a hospital was 31.95–32.75 weeks with a standard deviation of 2.438 and 2.268. The youngest respondent was 26 weeks, and the oldest respondent was 36 weeks. The results of processing Table 5.1 also show that the mean weight of the premature babies was 1528.75–1764.75 grams with a standard deviation of 339.093–500.732. The lowest pre-term birth weight was 800 grams, and the highest pre-term birth weight was 3080 grams.

Table 1. Respondents' Characteristics Based on the Infants' Gestational Age and Birth Weight in the Intervention and Control Groups (n1= 20, n2= 20)

Variable	Mean	Standard Deviation (SD)	Range (Min-Max)	p
Gestational Age (Weeks)				
Intervention	31.9	2.44	26–36	0.289
Control	327	2.27	29–36	
Birth Weight (Gram)				
Intervention	1528.7	339.09	800–1955	0.089
Control	1764.7	500.73	1100–3080	

Information: *Independent t-test* result using *Levene's Test*
$p < 0.05$, there is a significant difference

Table 2. Comparison of Infants' Oxygen Saturation, Breath Frequency, Pulse Frequency, CRP Value, and IT Ratio in the Intervention and Control Groups (n1= 20, n2= 20)

Variable	Mean	Standard Deviation (SD)	Range (Min-Max)	p
Oxygen Saturation (%)				
Intervention	95.53	0.993	94–98	0.010
Control	94.15	1.981	90–97	
Breath (times/minute)				
Intervention	49.95	2.212	45–54	0.099
Control	51.4	3.136	45–58	
Pulse (times/minute)				
Intervention	143.75	12.590	104–164	0.833
Control	144.5	9.545	127–163	
CRP (mg/L)				
Intervention	0.315	0.232	0.1–0.9	0.006
Control	4.482	5.975	0.1–18.2	
IT Ratio				
Intervention	0.098	0.056	0.02–0.2	1
Control	0.098	0.050	0.02–0.2	

Information: *Independent t-test* result using *Levene's Test*
$p < 0.05$, there is a significant difference

As shown in the results in Table 2, the data were normally distributed, and the difference in comparison was based on oxygen saturation, respiration, perfusion, pulse, CRP value, and IT ratio by using an unpaired independent t-test that first looks at the data variants using Levene's test. The results of the difference in the ratio of preterm infant oxygen saturation showed that the mean oxygen saturation of pre-term infants in the intervention group was 95.53% higher than the mean oxygen saturation in the control group, which was 94.15% with p= 0.010. These results indicate that there are significant differences between the two groups.

In the perfusion variable, the data obtained from the patients were constant, and there was no variation in every preterm infant. In comparison, in the respiratory variable, the average respiratory frequencies of the respondents in the intervention and control groups were 49.95 and 51.40 times per minute, respectively, with p= 0.099. These results indicated that there were no significant differences between the two groups.

As shown in Table 2, the average pulse frequency in the preterm infants in the intervention group was 143.75, while that in the control group was 144.50 times per minute with p= 0.833. These results indicated that there were no significant differences between the two groups. For CRP values, based on the results in Table 2, the mean CRP of preterm infants in the intervention group was 0.315 lower than that of preterm infants in the control group 4.481 mg/L with p= 0.006. These results indicated that there were significant differences between the two groups. Meanwhile, the mean IT Ratio value of preterm infants in the intervention group and the control group was 0.098 with p= 1. These results indicated that there were no significant differences between the two groups.

The results of the analysis in Table 3 using the Wilcoxon test showed that the mean thermoregulation of preterm infants treated in the perinatology room of the hospital was 16 (80%) in the intervention group and 8 (40%) in the control group with p= 0.021. These results indicated

Table 3. Comparison of the Thermoregulation Status, Perfusion, and Leukocyte Value in the Intervention and Control Groups (n1= 20, n2= 20)

Variable		Intervention		Control		p
		n	%	n	%	
Thermoregulation (^{0}C)	Stable	16	80	9	40	0.021
	Unstable	4	20	12	60	
	Total	20	100	20	100	
Perfusion	Lengthen	0	0	4	20	0.157
	Does not lengthen	20	100	16	80	
	Total	20	100	20	100	
Leukocyte	Normal	16	80	9	45	0.020
	Leukopenia/ Leukocytosis	4	20	11	55	
	Total	20	100	20	100	

Information: *Wilcoxon Test* result
p< 0.05, there is a significant difference

that there were significant differences between the two groups. Likewise, the number of leukocyte levels in the intervention group showed that 16 (80%) had normal levels of leukocytes, in contrast to the results obtained in the control group, only 8 (40%) with p= 0.020. Thus, it can be concluded that there were also significant differences between the two groups.

Discussion

Respondents' Characteristics. The result shows that infants in this research are preterm infants with the gestational age ranging between 26 and 36 weeks. Most infants in this research have a birth weight ranging from 1100–1955 grams.

Pre-term infants with low birth weight have a risk of experiencing late-onset neonatal sepsis. This is due to their immature immune system, which facilitates the translocation of pathogenic bacteria to the barrier epithelium of the intestinal mucosa (Gephart & Weller, 2014).

Late-onset neonatal sepsis in preterm infants is also caused by a large number of invasive procedures performed during the infant's treatment, including the installation of invasive catheters, such as the central venous access, which can provide access to the entry of blood vessel pathogens and cause late-onset neonatal sepsis in preterm newborns (Rodriguez et al., 2015).

Kinney, Lawn, Howson, and Belizan (2012) reveal that a preterm infant with low birth weight are susceptible to infection as soon as the infant is born. The condition of infants born with immature organ function due to fewer months of birth causes the infants to receive several invasive procedures of treatments to support their body condition compared to infants who are born with appropriate gestational age who received fewer procedures.

Pre-term infants are not exposed to bioactive substances that act as immunostimulant contained in the amniotic fluid. The bioactive material is produced until 40 weeks of gestation (Rodriguez & Caplan, 2015). Infants born to an earlier gestational age cannot perform anoral intake properly because the coordination of reflex sucking and swallowing is not yet perfect. This condition causes the infants to be directly attached to the orogastric tube, which prevents the normal flora of the infants' oropharyngeal canal from developing. This results in the colonization of pathogenic bacteria in the oropharyngeal canal, which can increase late-onset neonatal sepsis (Rodriguez & Caplan, 2015).

The incidence of late-onset neonatal sepsis, which tends to occur in preterm infants at high risk due to invasive procedures received after birth, can be prevented by applying evidence-based interventions. Such intervention can come in the form of giving oral care using breast milk, which is dripped on the infant's buccal mucosa as soon as the infant is born. The provision of oral care using breast milk can be a complement to trophic feeding in preterm infants (Morgan, Bombell, & McGuire, 2013).

On the basis of the preliminary study conducted by Rodriguez et al. (2010), Rodriguez et al. (2015), and Sohn, Kalanetra, Mills, and Underwood (2015), this intervention (i.e., giving the mother's breast milk/ colostrum through the buccal mucosa to the oropharynx as soon as the infant is born) is considered safe and feasible when applied to preterm newborns. Early breastfeeding is protective against infection. The lactoferrin and glycoprotein contents of breast milk have antimicrobial characteristics, thus protecting the infant from the risk of infection (Downey et al., 2010; Pammi & Abrams, 2011).

Comparison of Sepsis Incidence Based on Oxygen Saturation, Respiratory, Pulse Rate, Perfusion, Thermoregulation, Leukocyte, CRP, PCT, and IT Ratio Indicators in the Intervention and Control Groups. The results of this study indicate a significant difference between oxygen saturation in the intervention group and the control group. However, when it is viewed from the oxygen saturation values of both groups (ranging from 90% to 98%), these indicate that the infants' oxygen saturation rates in both groups are in the healthy category and are not indicators of sepsis (Lee et al., 2015).

The results of this study also show the leukocyte, CRP, and thermoregulation values that have significant differences in both groups. The CRP values in the two groups range from 0.1–18.2 mg/L, indicating the presence of infants who experienced sepsis. If it is viewed in more detail, the control group shows CRP values of 0.1–18.2 mg/L, which are far above the value in the intervention group ranging from 0.1–0.9 mg/L. This is an essential finding in the implementation of this EBN, which indicates that the provision of oral care using breast milk can have an impact on the low CRP value in the intervention group. The average amount of CRP is fewer than 5 mg/L. This is consistent with the opinion of Rodriguez and Caplan (2015) and Lee et al. (2015) who stated that clinical instability (e.g., the instability of body temperature, desaturation, and perfusion) and an increase in infection markers (e.g., CRP, leukocyte, and IT ratio) can be indicators of sepsis. To overcome this, biochemical and immunology research have been conducted showing that oral care using breast milk, especially colostrum, can provide the highest level of protection against nosocomial infections in infants.

Gomella, Cunningham, and Eyal (2013) revealed that body temperature instability, such as hypothermia, is a clinical sign of sepsis in preterm infants, while hyperthermia is more common in term infants after the first 24 hours of life. Moreover, perfusion problems, cyanosis, and respiratory problems, such as tachypnea and apnea occurring in the early 24 hours after birth or after one week of age can also be used as a marker of sepsis (Dong & Speer, 2015). However, this problem is not observed in the implementation carried out in the current work.

Bekhof et al. (2013) added that the first enforcement of a late-onset neonatal sepsis diagnosis in neonates is quite tricky, especially in preterm infants who often show symptoms that are difficult to recognize. Common symptoms commonly found in infants who experience sepsis are reduced infant activity, weak muscle tone, a period of persistent breathing stops, decreased or increased pulse rate, and body temperature instability (Downey et al., 2010).

According to Rodriguez et al. (2011), if during the procedure of giving oral care the infant shows signs of agitation, has desaturation with <88% saturation, or shows changes in vital signs, then the procedure must be stopped because it could

indicate that the infant experiences worsened conditions and the intervention does not provide any benefit to improve his/her condition.

The result of this evidence-based implementation also aligns with the research conducted by Thibeau and Boudreaux (2013), Lee et al. (2015), and Rodriguez et al. (2015) who reported that infants given oral care did not experience decreased oxygen saturation, bradycardia, cyanosis, hypotension, thermoregulation instability, or other side effects. All infants who received oral care showed a sucking response to the orogastric tube during oral care.

Rodriguez et al. (2010) added that the implementation of oral care is safe and can be easily performed because it does not endanger the infants' condition. Moreover, the provision of oral is an alternative for infants who have an NPO status. This means that, for the time being, the infant does not receive fluid intake orally for specific reasons, and this oral care is applied as a complement to trophic feeding in the first-day infant's life (Morgan et al., 2013).

The Comparison of Late-Onset Neonatal Sepsis Events Based on Laboratory Results between the Intervention and Control Groups. Some indicators that are used as markers of sepsis are in accordance with the study of Lee et al. (2015) who categorized the clinical signs of sepsis into three groups: (a) general signs (fever, apnea/tachypnea, respiratory disorder, and fluid imbalance), (b) laboratory results (leukopenia/leukocytosis and increased CRP), and (c) hemodynamic changes (hypotension, tachycardia, perfusion changes, and decreased urine output).

To prove the occurrence of sepsis, some researchers relied on the results of laboratory tests, such as leukocytes, CRP, PCT, and blood cultures (Stemberger & Tesovic, 2012). However, some of the results of blood culture examination are not accurate due to the limited amount of blood obtained during the blood collection (Bekhof et al., 2013; Stemberger & Tesovic, 2012).

Intestinal atrophy in infants can also prevent enteral feeding in the first days of the infant's life due, which increases the risk of enteral eating intolerance and necrotic enterocolitis (NEC) (Rodriguez & Caplan, 2015).

Providing oral care has a good impact on enteral drinking tolerance in preterm newborns. Infants who are routinely given oral care tend to drink faster and do not experience NEC compared to infants who are not given oral care (Pammi & Abrams, 2011). This is consistent with previous studies, which reported that giving colostrum or breast milk to preterm infants immediately after birth can cause systemic immunostimulatory effects (Gephart & Weller, 2014).

This evidence-based implementation aims to reduce the incidence of late onset neonatal sepsis in preterm newborns basically using maternal colostrum or mother's breast milk. However, due to the limitation of child nursing residents who are unable to properly collect maternal colostrum immediately after birth, and coordination problems with the parties concerned, the provision of oral care is modified using donor breast milk for infants who do not get breast milk from their mothers (Møller, Fink, Sangild, & Frøkiær, 2011).

The American Academy Association of Pediatrics (2012) has submitted a policy related and recommends that all preterm infants should receive breast milk. Pasteurized donor breast milk can be an alternative if the mother cannot produce enough milk instead of giving formula milk to the infant. This recommendation is based on several proven benefits of breastfeeding, including a decrease in the incidence of late-onset neonatal sepsis, NEC, retinopathy of prematurity, shorter days of care, and improvement of neural development compared with preterm infants receiving formula milk (Underwood, 2013).

Previous studies related to the provision of breast milk derived from donors in preterm newborns have revealed that there is a low incidence of sepsis, enteral eating intolerance, NEC, and acceleration of intestinal maturation compared to the use of formula milk (Gibbins, Wong, Unger, & O'Connor, 2013).

The previous studies that reported the benefits of breast milk in preterm infants compared giving breast milk to giving formula. The women who provided breast milk were not just biological mothers but also donors. Donor breast milk contributed to an increase in body weight and reduced the incidence of NEC in preterm infants compared to formula milk feeding, which is known to provide increased growth in infants in the short term, but also increases the rate of NEC in preterm infants (Bertinov et al., 2013).

According to Gibbins et al. (2013), the provision of donor breast milk for preterm infants, whose mothers cannot produce breast milk, also has several challenges, such as nutritional composition, safety, supply, and immune protection. Most donor breast milk supplies are obtained from mothers who gave birth to mature babies and who have already weaned their babies but still pump their milk and then donate. Such breast milk usually has a lower protein and fat content and many bioactive molecules compared with the breast milk of mothers in the first weeks of giving birth to their preterm infants.

The process of sending a breast milk donor can minimize the potential contamination of breast milk with infectious agents. Therefore, milk banks have rigid standards for the early detection of donor breast milk and carry out the pasteurization process before distributing the breast milk supplies. This is because pasteurization is very useful in reducing the risk of transmission of HIV, CMV, Hepatitis B, and Hepatitis C. However, this pasteurization process also harms the milk by reducing the amounts of oligosaccharides and lactoferrin found in breast milk (Underwood, 2013).

Nevertheless, donor breastfeeding is a good alternative because it also provides benefits in stimulating biofactor substances in the mucous membrane compared to giving formula milk or fasted babies (NPO), which can trigger the colonization of pathogenic bacteria in the oral cavity (Underwood, 2013).

The implementation of oral care using breast milk may face several obstacles. Some limitations include the difficulty in coordinating to provide maternal colostrum immediately after childbirth, the problem in collaborating with doctors in charge of the room, and problems with the providers of donor breast milk. The small number of samples and research time, which is too short, may have also affected the results of this study, which are not significantly different from those of the control group.

Conclusions

There are significant differences in oxygen saturation, CRP, thermoregulation, and leukocytes in the intervention and control groups after the provision of 8 × 0.2 mL of oral care using breast milk. Oxygen saturation rates in both groups were in the normal range, indicating that oral care has an impact on maintaining oxygen saturation in preterm infants. The CRP value in the intervention group is lower than that in the control group, showing that oral care using milk provided the infants' bodies some line of defense against infection. The provision of oral care using breast milk has also been proven to maintain the stability of body temperature in the intervention group. This finding shows that the leukocyte values in the normal range can be maintained by performing oral care using breast milk.

In the implementation of the EBN of oral care in pre-term infants, child nursing residencies encountered several obstacles. However, overall, the results of the EBN implementation provided benefits to the preterm infants in the prevention of late-onset neonatal sepsis. Hence, the nurses in the perinatology room can provide

oral care for the preterm newborns, especially with maternal colostrum. If the maternal colostrum is not available, it can be safely replaced by oral care using donor breast milk.

References

American Academy of Pediatrics. (2012). Breastfeeding and the use of human milk. *Pediatrics, 129* (3), e827–e841. doi: 10.1542/peds.2011-3552.

Bekhof, J., Reitsma, J.B., Kok, J.H., & Van Straaten, I.H. (2013). Clinical signs to identify late onset sepsis in preterm infants. *Europe Journal Pediatric, 172* (4), 501–508. http://doi.10.1007/s00431-012-1910-6.

Bertinov, E., Giuliani, F., Baricco, M., Di Nicola, P., Peila, C., Vassia, C., … Coscia, A. (2013). Benefits of donor milk in the feeding of preterm infants. *Early Human Development, 89* (S2), 8–11. http://doi.10.1016/j.earlhumdev.2013.07.008.

Dong, Y., & Speer, C.P. (2015). Late onset sepsis: Recent developments. *Archives of Disease in Childhood-Fetal Neonatal Edition, 100* (3), 257–263. http://doi.10.1136/archdischild-2014-306213.

Downey, L.C., Smith, P.B., & Benjamin, D.K., Jr. (2010). Risk factors and prevention of late-onset sepsis in premature infants. *Early Hum Dev, 86* (1), 7–12. doi:10.1016/j1.earlhumdev.2010.01.012.

Gephart, S., & Weller, M. (2014). Colostrum as oral iImmune therapy to promote neonatal health. *Advances in Neonatal Care, 14*(1), 44–51. doi:10.1097/ANC.0000000000000052.

Gibbins, S., Wong, S.E., Unger, S., & O'Conner, D. (2013). Donor human milk for preterm infants: Practice considerations. *Journal of Neonatal Nursing, 19*(4), 175–181. http://dx.doi.org/10.1016/j.jnn.2013.04.002.

Gomella, T.L., Cunningham, M.D., & Eyal, F. (2013). *Neonatology: Management, procedures, on-call problems, disease, and drugs.* New York: Mc Graw Hill Education.

Hammoud, M.S., Al-Taiar, A., Thalib, L., Al-Sweih, N., Pathan, S., & Isaacs, D. (2012). Incidence, etiology and resistance of late onset sepsis neonatal sepsis: A five year prospective study. *Journal of Pediatric Child Health, 48*(7), 604–609. http://doi.10.1111/j.1440-1754.2012.02432.x.

Kinney, M.V., Lawn, J.E., Howson, C.P., & Belizan, J. (2012). 15 million preterm births annually: What has change this year? *Reproductive Health, 9*, 1–4. http://doi.10.1186/1742-4755-9-28.

Lee, J., Kim, H.S., Jung, Y.H., Choi, K.Y., Shin, S.H., Kim, E.K., & Choi, J.H. (2015). Oropharyngeal colostrum administration in extremely premature infants: An RCT. *Journal World Review of Nutrition and Dietetic*s, *114* (2), 358–366. http://doi./10.1159/000441922.

Møller, H.K., Fink, L.N., Sangild, P.T., & Frøkiær, H. (2011). Colostrum and amniotic fluid from different species exhibit similar immunomodulating effects in bacterium-stimulated dendritic cells. *Journal of Interferon & Cytokine Research, 31* (11), 813–823. http://doi.10.1089/jlr.2010.0070.

Morgan, J., Bombell, S., & McGuire, W. (2013). Early trophic feeding versus enteral fasting for very preterm or very low birth weight infants. *Cochrane Database System Review*, 3, CD000504.

Pammi, M., & Abrams, S.A. (2011). Oral lactoferrin for the prevention of sepsis and necrotizing enterocolitis in preterm infants. *Cochrane Database System Review*, 10, CD007137.

Qazi, S.A., & Stoll, B.J. (2009). Neonatal sepsis: A major global public health challenge. *Pediatr Infect Dis J.*, 28 (1 Suppl), S1–2. doi: 10.1097/INF.0b013e31819587a9.

Rodriguez, N.A., & Caplan, M.S. (2015). Oropharyngeal administration of mother's milk to prevent necrotizing enterocolitis in extremely low-birth-weight infants. *Journal of Perinatal & Neonatal Nursing*, *29*(1), 81–90. http://doi.org/10.1097/JPN.0000000000000087.

Rodriguez, N.A., Groer, M.W., Zeller, J.M., Janet, L., Fogg, L., Du, H., & Caplan, M. (2011). A randomized controlled trial of the oropharyngeal administration of mother 's colostrum to extremely low birth weight infants in the first days of life. *Journal of Perinatology-Neonatology*, *24*(4), 31–35.

Rodriguez, N.A., Meier, P.P., Groer, M.W., Zeller, J.M., Engstrom, J.L., & Fogg, L. (2010). A pilot study to determine the safety and feasibility of oropharyngeal administration of own mother's colostrum to extremely low-birth-weight infants. *Journal Advances in Neonatal Care, 10* (4), 206–212. http://doi.org/10.1097/ANC.0b013e3181e94133.

Rodriguez, N.A., Vento, M., Claud, E.C., Wang, C.E., & Caplan, M.S. (2015). Oropharyngeal administration of mother's colostrum, health outcomes of premature infants: Study protocol for a randomized controlled trial. *Journal Trials, 16* (1), 1–14. http://doi.org/1186/s13063-015-0969-6.

Sohn, K., Kalanetra, D., Mills, D.A., & Underwood, M.A. (2015). Buccal administration of human colostrum: Impact on the oral microbiota of premature: Study protocol for a randomized controlled trial. *Journal of Perinatology, 36* (2), 106–111. http://doi.org/10.1038/jp.2015.157.

Stemberger, L., & Tesovic, G. (2012). Neonatal sepsis. *Pediatric Today, 8*(2), 91–99. http://doi.10.5457/p2005-114.44.

Sugiyono. (2015). *Metode penelitian pendidikan (Pendekatan Kuantitatif, Kualitatif dan R&D)*. Bandung: CV. Alfabeta.

Thibeau, S., & Boudreaux, C. (2013). Exploring the use of mothers' own milk as oral care for mechanically ventilated very low-birth-weight preterm infants. *Journal Advances in Neonatal Care, 13* (3), 190–197. http://doi.org/10.1097/ANC.0b013e318285f8e2.

Troger, B., Gopel, W., Faust, K., Muller, T., Jorch, G., Felderhoff-Muser, U., … Hartel, C. (2014). Risk for late onset blood culture proven sepsis in very low birth weight infants born small for gestational age: A large multicenter study from the German Neonatal Network. *Pediatric Infection Disease Journal, 33*(3), 238–243. http://doi.org/10.1097/INF.0000000000000031.

Underwood, M.A. (2013). Human milk for premature infant. *Journal Pediatric Clinical North Am, 60* (1), 189–207. http://doi.org/10.1016/j.pcl.2012.09.08.

Jurnal Keperawatan Indonesia, 2020, 23 (1), 41–47
DOI: 10.7454/jki.v23i1.843
Received November 2018; Accepted November 2019

pISSN 1410-4490; eISSN 2354-9203

PAP TEST PRACTICE AND BARRIERS OF NURSES IN BANDUNG, WEST JAVA

Putu Inge Ruth Suantika[1]*, Yanti Hermayanti[2], Titis Kurniawan[2]

1. Institute of Technology and Health Bali, Bali 80225, Indonesia
2. Faculty of Nursing Universitas Padjajaran, Sumedang 45363, Indonesia

*E-mail: ingeruth@itekes-bali.ac.id

Abstract

The lack of interest from the public and health workers, such as nurses to carry out a pap test, is one of the triggers of cervical cancer cases. The purpose of this study was to identify the implementation of pap tests and barriers of nurses in Bandung, West Java. This study used a cross-sectional descriptive study design with a sample of 286 married nurses. Data collection was conducted during two months. The analysis was conducted by the Fisher exact test or chi-square test. The results showed that the level of education and religion had a significant relationship with the pap test behavior (p= 0.000; p= 0.031). The most perceived barrier was that respondents felt uncomfortable with the male examiners. So it was recommended to provide female examiners in the ob-gyn section in the hospitals and to improve the nurses' perceptions with pap test.

Keywords: barrier, nurse, pap smear, practice

Abstrak

Perilaku dan Hambatan Pap Smear pada Perawat di Kota Bandung, Jawa Barat. *Fenomena yang terjadi pada kasus kanker serviks adalah minimnya minat dari masyarakat bahkan petugas kesehatan seperti perawat untuk melakukan pap smear sebagai bentuk pencegahan kanker serviks. Tujuan penelitian ini adalah untuk mengidentifikasi pelaksanaan pap smear serta hambatannya pada perawat di Kota Bandung, Jawa Barat. Penelitian ini menggunakan desain studi deskriptif cross-sectional dengan jumlah sampel 286 perawat yang sudah menikah. Pengumpulan data dilakukan pada Februari hingga Maret 2018. Analisis menggunakan fisher exact test atau chi-square test. Hasil penelitian menunjukkan bahwa tingkat pendidikan dan agama memiliki hubungan yang signifikan dengan perilaku pap smear (p= 0,000; p= 0,0301). Hambatan yang paling dirasakan adalah responden merasa kurang nyaman dengan pemeriksa laki-laki sehingga direkomendasikan untuk penyediaan pemeriksa perempuan pada bagian obgyn di rumah sakit serta memperbaiki persepsi perawat yang salah terhadap pap smear.*

Kata Kunci*: hambatan, pap smear, perawat, perilaku*

Introduction

Cervical cancer is the most common cancer affecting women and the leading cause of mortality in women throughout the world (WHO, 2014). One prevention method is a pap smear. Routine Pap test has been shown to reduce mortality from cervical cancer by 70–80% in all countries and 90% in almost all developing countries (Sasieni, Castanon, & Cuzick, 2009). Pap smear examination is more effective than another test such as visual acetic acid (IVA) inspection due to pap smear examination into the vaginal part to see the cervical surface cells so that it can distinguish pre-cancerous cells and cancer (Spencer, 2007).

Cervical cancer has the potential to be prevented by early detection because to develop into cancer takes approximately 15–20 years (WHO, 2014). However, the problem that occurs is the low participation of women to do a pap test. A study conducted in Indonesia reported that out of 80.991 women given cervical cancer edu-

cation, only 22.989 were screened with 17,534 normal results, 970 showed pre-cancerous results, and 19 people had positive cervical cancer (Nuranna et al., 2012). Besides that Nuranna et al. (2012) revealed that people tend to seek treatment when they experience symptoms of advanced cancer and are difficult to treat. It also illustrates that the public does not understand the importance of early prevention compared to treatment after being diagnosed with cervical cancer. It is also experienced by health workers such as nurses.

A study conducted in India showed that out of 253 nurses, only 16.6% (24 people) were aware of pap smears and had ever undergone a pap smear test. 76% of staff only did pap smears once, 21.4% twice, and 2.4% three times. As many as 83.4% of nurses did not do pap smears because they did not feel the symptoms of cervical cancer (41%), feeling uncomfortable about the examination procedure as much as 25%, and fear when knowing the results of the examination as much as 16% (Kar & Rahman, 2015). Also, the pap smear examination performed on genital organs makes women feel uncomfortable because it is related to privacy, so women are reluctant to do pap smears (Jain, Bagde, & Badge, 2016).

The problem that occurs among nurses is undoubtedly contrary to the role of nurses as role models and female nurses also have the probability of infected by HPV. In providing nursing care, one of which is preventive, nurses have more time to interact with the community, so it will be easy to change people's behavior by making themselves a role model. The purpose of this study was to describe the implementation of pap tests and the obstacles felt by health workers, especially nurses, in the city of Bandung, West Java.

Methods

This study used a cross-sectional method with a descriptive design. The research took place at three hospitals in Bandung City, West Java for two months. This research was using cluster sampling with 286 nurses. The inclusion criteria were the female nurses who had been married for at least one year or had sex before marriage. The exclusion criteria in this study were female nurses who were pregnant. This study applied questionnaires, namely a questionnaire respondent's characteristics to measure barriers pap test used health belief model scale. The characteristics of respondents contain respondent code, address, origin of the hospital, age, marital status, last education level, the number of children, behavior of pap smear. Characteristics respondents were analyzed using frequency distribution. As for the barrier questionnaire containing 11 statements have been tested the validity and reliability of data using Pearson and Alpha Cronbach 0,88. These questionnaires were developed by the researchers by using a Likert scale with references from Guvenc (2011), Abotchie and Shokar (2009), and Eze, Umeora, Obuna, Egwuatu & Ejikeme (2012) about health belief model in cervical cancer and pap test. Before collecting data, ethical clearance from Medical Research Ethics Committee of Universitas Padjadjaran Faculty of Medicine was held on February 14, 2018, number: 59/UN6.KEP/EC/2018. Univariate analysis was used to find out the frequency of each variable. In the univariate analysis stage, variable barriers, nurses' behavior on pap smear, and characteristics of respondents were analyzed descriptively (rate and percentage). Bivariate test used Chi-square test or Fisher exact test.

Results

This study showed that from 286 respondents of large respondents less than 40 years (91.3%), had the last level of education DIII (58%). Almost all respondents are Muslim (75.2%). Almost all respondents were married (96.6%) and had fewer than two children (89.5%). Some 41.3% of respondents said they did not use contraception. The majority of respondents claimed that they did not carry out a pap test for at least the last one year (88.5%). Whereas

from the factors associated with nurse pap smear assignment (p= 0.000; 0.031) (Table 1).

The results of this study also illustrated that 80.4% of nurses know the latest information about the importance of pap tests and updated information on cervical cancer from mass media, advertisements, doctors, and discussions with colleagues (Table 2).

Associated with the barriers to do pap test, the majority of respondents answered that they tended to want to be examined by female doctors (54.6%), shame (50.2%), forgetfulness (39. 2%), inspection procedures that made respondents uncomfortable (37.6%), worried about results (37.1%), lazy (34.3%), too old age (30%), no friend support (29.7%), and no time for a pap test (26.9%) (Table 3).

Tabel 1. The Characteristics of The Respondent and Factor Associated with The Practice of Pap Test

Variable	*f*	%	Pap Smear Behavior				p
			Yes		No		
			f	%	f	%	
Age							
≤40	261	91.3	28	10.70	233	89.30	0.145
>40	25	8.7	5	20	20	80	
Marital status							
Marriage	282	98.6	32	11.30	250	88.70	0.389
Divorce	4	1.4	1	25	3	75	
Education level							
SPK	12	4.2	6	50	6	50	0.000
Diploma	166	58	16	9.60	150	90.40	
Bachelor	108	37.8	11	10.20	97	89.80	
Children							
≤2	256	89.5	28	10.90	228	89.10	0.253
>2	30	10.5	5	16.70	25	83.30	
Religion							
Christian	61	21.3	5	8.20	56	91.80	0.031
Catolic	10	3.5	4	40	6	60	
Moeslem	215	75.2	24	11.20	191	88.80	
Contraception							
None	118	41.3	13	11.20	103	88.80	0.160
Oral	32	11.2	7	21.90	25	78.10	
Injection	26	9.1	2	7.70	24	92.30	
IUD	93	32.5	7	7.50	86	92.50	
Condom	17	5.9	4	23.50	13	76.50	

Tabel 2. Practice Towards Pap Test Among The Study Participants

Variable	No		Yes	
	f	%	f	%
Newest information (mass media, doctor consul, advertisements)	56	19.6	230	80.4
Pap test for at least the last year	253	88.50	33	11.50

Tabel 3. Barriers Towards Pap Test

Variabel	Disagree		Agree	
	f	%	f	%
Worry	180	62.9	106	37.1
Embarassment	142	49.8	144	50.2
Don't have time	209	73.1	77	26.9
Feel uncomfortable for pelvic examination	178	62.4	108	37.6
Forget	174	60.8	112	39.2
Too old	200	70	86	30
Prefer female doctors	130	45.4	156	54.6
Lazy	188	65.7	98	34.3
No friends	201	70.3	85	29.7

Discussion

There have been many studies on cervical cancer aimed at women in general, but the research that determines the behavior of pap test in nurses, especially in Indonesia, is still rare. The results of this study focus on planning prevention of cervical cancer, especially for health workers in terms of the perceived barriers by nurses. Nurses who, in fact, have more knowledge about cervical cancer turned out to have quite low pap smear behavior (88.5%). It is comparable with the research of Jain et al. (2016), Kar and Rahman (2015), Yoshino et al. (2012), which shows the lack of participation of nurses to do pap test. Although information related to pap tests and cervical cancer they get from various media or discussions with doctors and colleagues, it is not able to encourage individuals to do pap tests (Awodele et al., 2011). Even though we know that nurses are the front line in the prevention process both as educators and as role models.

In this study, the level of education is a factor associated with pap smear behavior among nurses. For respondents who have more than ten years of work experience, nurses are more often exposed to information related to pap tests that encourage them to be able to do pap tests. However, respondents who did not do pap tests were not influenced by the level of education, but there were obstacles that allowed them not to do pap tests. This research is not in line with previous research, which states that individuals with a high level of education do not necessarily have high knowledge and awareness of their health (Rahayu & Ochoa, 2015). However, it should be noted that the significant results in this study are more due to the proportion of each level of education that is disproportionate. It showed that the proportion of respondents who have SPK education level is less than other education levels. So it is necessary to study further the relationship between the level of education and the behavior of pap tests.

Another factor, religion also has a significant relationship with pap smear behavior (p= 0.031). The respondents in this study were mostly Muslim (75.2%), with 191 people who did not do pap tests (88.8%) and 24 people who wanted to do pap tests (11.2%). In the other research show that an individuals beliefs are associated with their perspective on health as a punishment or a blessing from God, then they tend not to do a pap test (Aasim, Monica, Crista, Zahra, & Far, 2014). Some people see that illness is obtained absolutely because of God's gift and only God can cure the disease. But in this research, it showed that the pap test relates to the privacy of women so that married women who have confidence that it is important for them to get permission in advance to check the parts with their husbands. It is very important the role of

the husband as a support for women to do pap tests. It is important for churches and mosques to hold special forums to discuss health issues as important information obtained from spiritual institutions.

In this study, it was also found that marital status did not have a significant relationship with pap smear behavior. Of course, this is inversely proportional to previous research, which states that marital status has a significant relationship with the practice of pap test because in almost most women experience the process of pregnancy so that women will visit the doctor for preparation for pregnancy or after pregnancy (Al-Naggar, 2012). Married women will start thinking about going through the pregnancy phase and beginning to be more responsible for their reproductive organs. It usually women to visit a gynecologist to prepare for conception or examine the reproductive organs. It also encourages women to do pap smears that aim to see the condition of the cervix (Savas & Taskin, 2011). But not all women have the same reason for pap smears. Married women who have a relatively young age are often associated with the inability of individuals to make pap smears. In this study, almost all married women do not do pap test not because they are married, but rather because of their belief in protecting their health. Even though they are a health worker, this does not guarantee that they are aware of the importance of pap tests. It has become a habit for some people to do Pap tests only to be done if there are signs and symptoms that lead to cervical cancer. It certainly will reduce the possibility of recovery from cervical cancer.

Age does not have a significant relationship with pap smear behavior. Although age is one of the factors that can describe one's maturity and the level of understanding and awareness of the importance of preventing illness. It is also mentioned by McFarland (2013) that age does not have a meaningful relationship with pap smear behavior (p= 0.160). Cervical cancer often attacks women of fertile age. In this study, almost all respondents were in the reproductive age category so that the HPV would more easily infect cervical cells. Age is directly proportional to the level of maturity of one's thinking. Maturity of the individual's mindset is shown from behavior that benefits himself like pap test behavior.

The low rate of cervical cancer depends on the success of the prevention program, one of which is a Pap test. But in developing countries, it is estimated that only 5–10% of women have done Pap tests (Roy & Tang, 2008). Most of the respondents did not do Pap tests (88.5%). It was triggered due to several obstacles that caused individuals not to do pap tests.

In this study, several barriers have been identified. Respondents mentioned the most felt obstacle was because the examiner was male. Oon et al. (2011) in Malaysian reported that the perceived barriers were feeling of shame related to examination procedure and the different gender of the examiner who mostly was male. Pap smear is performed on the vaginal area, which is a sensitive area of women so that many women choose not to do Pap tests and are encouraged by cultural and belief factors where sensitive areas cannot be seen by anyone other than their husbands.

Another barrier is forgetting and worrying about the pap smear results. Research conducted by Dim, Ekwe, Maduboku, Dim, and Ezegwui (2009) also mentions that female medical practitioners feel fear of procedures and the results they will receive. When they find out the results of the pap smear, they cannot imagine the treatment process and the effects of the treatment they will undergo (Kar & Rahman, 2015).

Some respondents also mentioned that the reason they did not do pap test was that they were not comfortable with the procedure. The pain that is felt during the examination often causes individuals to be traumatized to do a re-examination (Kar & Rahman, 2015).

This finding has implications of nursing interventions and suggests that broad-based nursing initiatives will be needed to overcome these barriers. We need to prepare special reorientation programs to sensitize nurses about cervical cancer and pap test. It is important to focus and more emphasize early detection and treatment of cervical cancer. We recommended that hospitals should periodically arrange seminars and training for nurses. Training is good to be orientation program to newly nurses.

We need to make nurses as a key player in creating awareness of the importance of early detection of cervical cancer and pap test because they play an important role in modifying awareness of health behaviors. "Prevent is better than cure."

The limitation of this study on the design and sampling, because it was a cross-sectional study. There are several factors that might influence the results of this study, so it needs to be explored again related to the other factors.

Conclusions

This study found that the level of education and religion had a significant relationship with the behavior of the Pap test. Most nurses do not do Pap tests because they feel barriers such as discomfort related to the opposite sex examiner and feeling embarrassed if the examiner is a colleague. Shame is felt also because the examination is related to something that is sensitive and is privacy. The results of this study recommended that the hospital provide female health personnel in pap smear examination services to overcome the obstacles of the respondents so that there is no discomfort related to the examiner and provide understanding regarding the examination so as not to cause feelings of shame and fear related to the examination results later on. Continued information is also needed and the facility for health workers to do a pap test, so it is expected that nurses will be active for pap tests as an effort to prevent cervical cancer.

References

Padela, A.I., Peek, M., Johnson-Agbakwu, C.E., Hosseinian, Z., & Curlin, F. (2014). Associations between religion-related factors and cervical cancer screening among Muslims in greater Chicago. *Journal of lower genital tract disease, 18* (4), 326. doi: 10.1097/LGT.0000000000000026.

Abotchie, P.N., & Shokar, N.K. (2009). Cervical cancer screening among college students in Ghana: Knowledge and health beliefs. *International Journal of Gynecologic Cancer, 19* (3), 412–416. doi: 10.1111/IGC.0b013e3181a1d6de.

Al-Naggar, R. (2012). Practice and barriers towards pap smear test from a public hospital in Malaysia. *J Community Med Health Edu, 2*(132), 2. doi: 10.4172/jcmhe.1000132.

Awodele, O., Adeyomoye, A.A.A., Awodele, D. F., Kwashi, V., Awodele, I.O., & Dolapo, D.C. (2011). A study on cervical cancer screening amongst nurses in Lagos University Teaching Hospital, Lagos, Nigeria. *Journal of Cancer Education, 26* (3), 497–504. doi: 10.1007/s13187-010-0187-6.

Dim, C., Ekwe, E., Madubuko, T., Dim, N., & Ezegwui, H. (2009). Improved awareness of *Pap smear* may not affect its use in Nigeria: a case study of female medical practitioners in Enugu, southeastern Nigeria. *Transactions of the Royal Society of Tropical Medicine and Hygiene, 103* (8), 852–854. doi: 10.1016/j.trstmh.2009.03.020.

Eze, J.N., Umeora, O.U., Obuna, J.A., Egwuatu, V.E., & Ejikeme, B.N. (2012). Cervical cancer awareness and cervical screening uptake at the Mater Misericordiae Hospital, Afikpo, Southeast Nigeria. *Annals of African medicine, 11* (4), 238. doi: 10.4103/1596-3519.102856.

Guvenc, G., Akyuz, A., & Açikel, C.H. (2011). Health belief model scale for cervical cancer and Pap smear test: Psychometric testing.

Journal of Advanced Nursing, 67 (2), 428–437. doi: 10.1111/j.1365-2648.2010.05450.x.

Jain, S., Bagde, M., & Badge, N. (2016). Awareness of cervical cancer and *Pap smear* among nursing staff at a rural tertiary care hospital in Central India. *Indian Journal of Cancer*, 53 (1), 63–66. doi: 10.4103/0019-509X.180823.

Kar, S., & Rahman, H. (2015). Knowledge, attitudes and practice toward cervical cancer screening among Sikkimese nursing staff in India. *Indian Journal of Medical and Pediatric Oncology*, 36 (2), 105–110. doi: 10.4103/0971-5851.158840.

McFarland, D.M. (2013). Associations of demographic variables and the Health Belief Model constructs with Pap smear screening among urban women in Botswana. *International journal of women's health, 5*, 709–716. doi: 10.2147/IJWH.S50890.

Nuranna, L., Aziz, M.F., Cornain, S., Purwoto, G., Purbadi, S., Budiningsih, S., ... & Peters, A. A.W. (2012). Cervical cancer prevention program in Jakarta, Indonesia: See and Treat model in developing country. *Journal of gynecologic oncology, 23* (3), 147–152. doi: 10.3802/jgo.2012.23.3.147.

Oon, S.W., Shuib, R., Ali, S.H., Hussain, N.H.N., Shaaban, J., & Yusoff, H.M. (2011). Factors affecting health seeking behaviour among kelantanese women on pap smear screening. *Proceedings of Economics Development & Research, 20* (1). doi: 10.13140/2.1.2171. 8729.

Rahayu, D.S., & Ochoa, M. (2015). Cervical cancer awareness: An information dissemination campaign in Indonesia. *Jurnal Keperawatan Padjadjaran, 3* (1). https://doi.org/10.24198/jkp.v3i1.97.g91.

Roy, B., & Tang, T. S. (2008). Cervical cancer screening in Kolkata, India: Beliefs and predictors of cervical cancer screening among women attending a women's health clinic in Kolkata, India. *Journal of Cancer Education, 23* (4), 253. doi: 10.1080/08858190802189105.

Sasieni, P., Castanon A, & Cuzick J. (2009). Effectiveness of cervical screening with age: population based case-control study of prospectively recorded data. *BMJ 339*, b2968. doi: 10.1136/bmj.b2968.

Savas, H.G., & Taskin, L. (2011). Determining nurse-midwives' knowledge of the Pap-smear test and their rate of being tested in Turkey. *Asian Pacific Journal of Cancer Prevention, 12* (5), 1353–1360.

Spencer, J. (2007). *Deadly Disease And Epidemics Cervical Cancer.* New York: Chelsea House.

Yoshino, Y., Ohta, H., Kawashima, M., Wada, K., Shimizu, M., Sakaguchi, H., ... & Aizawa, Y. (2012). The knowledge of cervical cancer and screening adherence among nurses at a university-affiliated hospital in Japan. *Kitasato Med J, 20* (29), 280.

WHO. (2014). *Comprehensive cervical cancer control a guide to essential practice* (2nd Edition). Geneva: World Health Organization. Retrieved from https://apps.who.int/iris/bitstream/handle/10665/144785/9789241548953_eng.pdf;jsessionid=B6A77CD9A963EE217DEEA9D16863D061?sequence=1.

Jurnal Keperawatan Indonesia, 2020, 23 (1), 48–63
DOI: 10.7454/jki.v23i1.1071
Received September 2019; Accepted January 2020

pISSN 1410-4490; eISSN 2354-9203

PERCEIVED COMPETENCE AND TRANSITION EXPERIENCE OF NEW GRADUATE FILIPINO NURSES

Nicolette Anne Ubas-Sumagasyay, Ryan Michael Flores Oducado*

West Visayas State University College of Nursing, 5000 Iloilo, Philippines

*E-mail: rmoducado@wvsu.edu.ph

Abstract

Recruitment and hiring of new graduate nurses are seen as a potential strategy to mitigate the problem of nurse shortage. However, previous studies disclosed that new graduate nurses are inadequately prepared to enter practice and experience transition difficulties. This study aimed to determine the perceived competence and transition experience of new graduate Filipino nurses. Seventy-nine conveniently chosen new graduate nurses were surveyed in this descriptive cross-sectional research. Self-administered instruments were used to gather data. Descriptive statistics, Mann–Whitney U test, and Kruskal–Wallis test were the statistical tools employed. Results indicated that new graduate nurses had a high level of self-reported fundamental nursing skills (M= 7.99) and core competence (M= 8.16), although areas needing improvement were identified. There were no significant differences in the perceived competence based on the length of experience, year graduated, area of assignment, sex, type of school graduated, CPD participation, and hospital bed capacity (p> .05). The major difficulty experienced by new graduates during their transition was related to changes in role expectations (72.2%). Majority expressed the need for increased support during their transition (83.5%). The most satisfying aspects of their working environment were ongoing learning (81%) and peer support (74.7%), while the least satisfying was the negative nursing work environment (55.7%). New graduate nurses are equipped with the necessary nursing skills and core competencies. However, there are still gaps and areas needing improvement that should be addressed and supported to assist them in their transition to the world of professional nursing practice. Follow up, feedback, mentoring, and preceptorship are beneficial to enhance the competencies of new graduate nurses and facilitate their successful transition into the nursing workforce.

Keywords: competency assessment, new graduate nurses, nursing skills, transition experience

Abstrak

Persepsi Kompetensi dan Pengalaman Transisi Perawat Lulusan Baru Filipina*. Rekrutmen dan perekrutan perawat lulusan baru dipandang sebagai strategi potensial untuk mengurangi masalah kekurangan perawat. Namun, penelitian sebelumnya mengungkapkan bahwa perawat lulusan baru tidak cukup siap untuk memasuki praktik dan mengalami kesulitan transisi. Penelitian ini bertujuan untuk menentukan persepsi kompetensi dan pengalaman transisi perawat lulusan baru Filipina. Tujuh puluh sembilan perawat lulusan baru yang dipilih dengan mudah disurvei dalam penelitian cross-sectional deskriptif ini. Instrumen yang dikelola sendiri digunakan untuk mengumpulkan data. Statistik deskriptif, uji Mann-Whitney U, dan uji Kruskal-Wallis adalah alat statistik yang digunakan. Hasil menunjukkan bahwa perawat lulusan baru memiliki tingkat tinggi keterampilan keperawatan fundamental yang dilaporkan sendiri (M= 7,99) dan kompetensi inti (M= 8,16), meskipun bidang yang perlu perbaikan diidentifikasi. Tidak ada perbedaan signifikan dalam kompetensi yang dirasakan berdasarkan lama pengalaman, tahun lulus, bidang tugas, jenis kelamin, jenis sekolah yang lulus, partisipasi CPD, dan kapasitas tempat tidur rumah sakit (p> 0,05). Kesulitan utama yang dialami oleh lulusan baru selama transisi mereka terkait dengan perubahan dalam ekspektasi peran (72,2%). Mayoritas menyatakan perlunya peningkatan dukungan selama masa transisi mereka (83,5%). Aspek yang paling memuaskan dari lingkungan kerja mereka adalah pembelajaran berkelanjutan (81%) dan dukungan sebaya (74,7%), sedangkan yang paling tidak memuaskan adalah lingkungan kerja keperawatan negatif (55,7%). Perawat lulusan baru dilengkapi dengan keterampilan keperawatan dan kompetensi inti yang diperlukan. Namun, masih ada kesenjangan dan bidang yang perlu diperbaiki yang harus ditangani dan didukung untuk membantu mereka dalam transisi mereka ke dunia praktik keperawatan profesional. Tindak lanjut, umpan balik, pendampingan, dan pelatihan guru bermanfaat untuk meningkatkan kompetensi perawat lulusan baru dan memfasilitasi keberhasilan transisi mereka menjadi tenaga kerja keperawatan.*

Kata Kunci*: keterampilan keperawatan, pengalaman transisi, penilaian kompetensi, perawat lulusan baru*

Introduction

Nursing shortage has become a worldwide issue despite the integral part of nursing in the health care system (Fraher et al., 2015). The World Health Organization predicts rising global demand for healthcare workers until 2030 (World Health Organization, 2016). One of the trends in addressing nurse shortage in developed countries is employing international nurses from developing countries (Walker, 2010). The Philippines is one of the major sending countries of foreign healthcare workers worldwide (Yeates & Pillinger, 2018; Yasmin & Ortiga, 2018). The country has been losing its most skilled and well-educated workers to the most developed countries (Lu, 2014), leaving hospitals and health care institutions in the Philippines the demands of efficient use of resources, including the hiring of new graduate professionals.

Recruitment and hiring of new graduate nurses is considered a potential strategy to mitigate the problem of nurse shortage. Despite the nursing shortage, some healthcare institutions and employers have expressed concern regarding the hiring of potential applicants including new graduates, because of their lack of experience (Cox, Willis, & Coustasse, 2014). Benner's (1984) Novice to Expert Model argues that nurses have limited technical skills and clinical experience when entering a new specialty role, and 2–3 years of experience in similar or relevant situations is necessary to be called competent. Thus, new graduate nurses may not be fully competent and prepared to begin professional practice. Previous studies found that new registered nurses have sufficient theoretical knowledge but lack competency in basic nursing skills or they are inadequately prepared to enter practice (Smith & Crawford, 2002; Moeti, van Niekerk, & van Velden, 2004; Morolong & Chabeli 2005). Although studies found that newly qualified nurses are unprepared for and unaware of the demands of the nursing profession (Kelly & Ahern, 2009), new graduates are still expected to be competent and work independently without direct supervision (Clark & Holmes, 2007).

The transition of graduate nurses from an educational program into the practical setting is a period of stress, role adjustment, and reality shock (Casey, Fink, Krugman, & Propst, 2004). Even in nursing school, nursing students express the need for guidance in their career (Oducado et al., 2017). According to Duchscher's (2008) Transition Theory, new graduates are confronted with a broad range of changes that are both expressions of and mitigating factors during the transition. Unfamiliar and changing personal and professional roles and relationships, as well as unexpected and enhanced levels of responsibility and accountability that are not afforded to students during their education, may further aggravate these factors (Duchscher, 2008).

The Institute of Medicine report in 2010, The Future of Nursing: Leading Change, Advancing Health has recommended the need to support the transition of new graduate nurses (Maryniak, Markantes, & Murphy 2017). Additionally, higher education institutions have been called upon to prepare students with the necessary attributes needed of graduates for the future workforce (Sparacino, 2016). In the Philippines, higher education institutions offering the Bachelor of Science in Nursing (BSN) program must conform to the standard set by the Commission on Higher Education (CHED) (2009). The CHED Memorandum No. (CMO) 14 series of 2009 policies and standards for the BSN program specifies the core competencies expected of nursing graduates in the country. The BSN program aims to prepare a nurse, who, upon completion of the degree, demonstrates competencies of a beginning professional in the following Key Areas of Responsibility (KAR): 1) Safety and Quality Nursing Care, (2) Management of Resources and Environment, (3) Health Education, (4) Legal Responsibility, (5) Ethico-Moral Responsibility, (6) Personal and Professional Development, (7) Quality Improvement, (8) Research, (9) Records Management, (10) Commu-

nication, and (11) Collaboration and Teamwork. The KAR were formally introduced in 2005 in the Philippine Core Competency Standards for Nursing; in 2012, these Key Areas were entrenched in the National Nursing Core Competencies Standards or the NNCCS (International Labour Organization, 2014). The NNCCS serves as a unifying framework for nursing education and practice and for any related evaluation tools in various practice settings in the Philippines (International Labour Organization, 2014; Belo-Delariarte, Oducado, & Penuela, 2018). The KAR along with its performance indicators specify what nursing graduates in the Philippines are expected to do at the workplace.

Along with the current local and global nursing shortage, the importance of looking into the competencies and transition experience of the new graduate nurses in the Philippines should be recognized as an urgent need to promote retention, improve the delivery of quality care, and evaluate the outcomes of nursing education. Inputs to nursing education and practice that will be established from study results are critical in ensuring that new graduate nurses are competently equipped with the knowledge, skills, and attitudes of a beginning professional nurse.

Although competencies and transition experiences of new graduate nurses are important issues, limited published studies have been conducted in the local setting looking into these areas. Most studies delving into the transition experiences of new graduate nurses were qualitative. This study aimed to determine the perceived competence (skills and core) and transition experience of new graduate nurses in Iloilo City, Philippines.

Methods

This study utilized a descriptive, cross-sectional survey research design. Convenience sampling was used, because most hospitals in the country are experiencing nursing shortage. Nonetheless, the researcher tried to maximize data collection to cover as many participants as possible. The participants of this study were the 79 new graduate nurses of four private hospitals in Iloilo City, Philippines. A new graduate nurse in this study was operationally defined as having a total work experience of not more than 12 months as a registered nurse after graduation. The participants included only graduates of nursing schools from 2014 to 2018. These were the graduates under CMO No. 14 BSN curriculum. New graduate nurses, regardless of employment status (permanent, contractual, or trainees) who were available and willing to participate in the study, were included. Those who were on leave during the conduct of the study and second coursers or those who took the nursing course as their second baccalaureate degree were excluded from the study.

The Perceived Competence for Filipino Nurses Questionnaire (PCFNQ), a questionnaire developed by the researchers, and Section IV of Casey–Fink Graduate Nurse Experience Survey - Revised were used as the data gathering instruments. The PCFNQ consisted of two scales: the Fundamental Nursing Skills Competency Scale (FNSCS) and the Nursing Core Competency Scale (NCCS). The FNSCS was composed of 99 items used to determine the self-report level of competence of new graduate nurses in performing basic nursing procedures. The items were based on the works of Cheng, Tsai, Chang, and Liou (2014), Berman et al. (2015), and Potter et al. (2017). The NCCS measured the participants' degree of self-reported competence based on the 11 KAR. This part consisted of all 151 performance indicators as stipulated in the CMO 14 series of 2009. Responses were provided on a 10-point scale, in which one corresponds to "not competent" and 10 indicates "very highly competent." High scores indicate a high level of competence. The 10-point scale was equally divided into five categories, and the following scale of mean was used to interpret the level of competency of new graduates: 1.00 –1.79= "very low"; 1.80–3.59= "low"; 3.60–5.39= "moderate"; 5.40–7.19= "high"; 7.20–10.00= "very high".

The Casey–Fink Graduate Nurse Experience Survey - Revised (Casey & Fink, 2006) was used to assess the new graduate nurses' experience of entry into the workplace and their transition experience into the professional nurse role. The tool has been used to assess aspects of the transition experience on new graduate nurses conducted elsewhere (e.g., Cline et al., 2017). In this study, only Section IV of the tool was adopted. Permission to use the questionnaire was sought and granted by the principal authors provided that no changes will be made in any way. Four multiple response items were used to determine the difficulties, support needed, most satisfying, and least satisfying aspects of the transition experience of new graduates. The last one open-ended question that asked about the work environment and difficulties in the role transition of new graduates was not included in this report. A Personal Information Sheet was also utilized to gather the personal characteristics of the participants.

To ensure validity and reliability, the PCFNQ was subjected to face and content validation by three experts with Deanship experience in a College of Nursing and are doctorate holders. One expert is a member of the CHED Technical Committee for Nursing Education. Each member of the panel was requested to evaluate whether each item included in the scale is clear and relevant. The instrument was also pilot-tested prior to the actual survey among new graduate nurses in one of the private hospitals in the city. Ten pilot study participants were asked to evaluate the questionnaire in terms of clarity of items and instructions. Participants were inquired about the length of answering the entire survey to ensure that the possibility of respondent fatigue is considered. Cronbach's alphas of the scales were .975 for FNSCS and .996 for NCCS.

After the distribution of communication letters to conduct the study, compliance with the requirements set by each hospital, including their own ethics committee, was ensured. Once a letter of proceeding with the study was secured, the self-administered questionnaires were distributed before or after the nurses' shifts. The unit heads of the hospitals assisted in the identification of new graduate nurses. Two to four weeks were spent on each hospital for data gathering, and the entire data collection spanned for about 2–3 months.

The data were encoded in an Excel file and processed via the Statistical Package for the Social Sciences 23. Frequency count, percentage, mean, standard deviation (SD), and rank were used to describe the data. The Mann–Whitney U test and Kruskal–Wallis test were performed to determine significant differences after data normality was assessed. The alpha level of significance was set at 0.05.

This study was approved by the Research Ethics Review Committee of the University and participating hospitals. Informed consent was also obtained before data gathering.

Results

The frequency distribution of the participants on the basis of their personal profile is shown in Table 1. The majority of the participants were female (77.2%), graduated from private schools (59.5%), graduated in the year 2018 (58.2%), had not participated in CPD activities after graduation (64.6%), and were currently working in private hospitals with a 100–200 bed capacity (64.6%). They were assigned in private rooms (38.0%), wards (31.6%), and special areas (30.4%), such as the critical care unit, operating room, and emergency department. In terms of the total nursing work experience after graduation, 38% had 1–3 months experience, 13.9% had 4–5 months experience, and 48.1% had 6–12 months experience.

Table 2 shows that the new graduate nurses had a very high level of perceived fundamental nursing skills competence (M= 7.99). Among the 14 skills, new graduates reported being most competent in asepsis (M= 8.79, Rank 1) and medication administration (M= 8.76, Rank 2).

However, they only had high self-reported competence in wound care (M= 7.19, Rank 13) and diagnostic testing (M= 7.13, Rank 14). Table 3 shows the individual enumeration of highest and lowest ranking orders of fundamental clinical nursing skills of new graduates.

Table 2 shows that the new graduate nurses in private hospitals had a very high level of perceived nursing core competence (M= 8.16). Among the 11 KAR, the new nurse graduates had the highest mean score in ethico-moral responsibility (M= 8.50, Rank 1), followed by legal responsibility (M= 8.49, Rank 2). Self-reported competence was also very high in health education (M= 7.92, Rank 10) and research (M= 7.37, Rank 11); these areas ranked lowest among the 11 domains of core nursing competencies.

As shown in Table 4, the results of the Kruskall–Walis test revealed no significant differences (p> .05) in the perceived skills and core competence of new graduate nurses grouped based on the length of experience, year graduated, and area of assignment. The Mann–Whitney test also revealed no significant differences (p> .05) in the perceived nursing skills and core competence of new graduate nurses when classified based on sex, type of school graduated, CPD participation, and hospital bed capacity.

As for the transition experience of the new graduate nurses (Table 5), recognizing changes in role expectations was perceived as the major difficulty of 72.2% of the participants, followed by lack of confidence (69.6%). To feel more supported or integrated into the unit, increased support from their manager, coworkers, and mentors was reported by the majority (83.5%) of the participants. Most of the participants answered that the most satisfying aspects of their working environment were ongoing learning (81%) and peer support (74.7%), while the least satisfying was the negative nursing work environment (55.7%).

Table 1. Profile of the Participants

Categories	*f*	%
Length of Experience		
1–3 months	30	38.0%
4–5 months	11	13.9%
6–12 months	38	48.1%
Year Graduated		
2014–2016	18	22.8%
2017	15	19.0%
2018	46	58.2%
Area of Assignment		
Wards	25	31.6%
Private Rooms	30	38%
Special Areas	24	30.4%
Sex		
Male	18	22.8%
Female	61	77.2%
Type of School		
Public	32	40.5%
Private	47	59.5%
CPD Participation		
Yes	28	35.4%
No	51	64.6%
Hospital Bed Capacity		
100–200	51	64.6%
More than 200	28	35.4%
Total	79	100%

Table 2. Perceived Level of Fundamental Nursing Clinical Skills and Core Competence

Categories	Mean	Interpretation	Rank
Clinical Nursing Skills Competencies	7.99	Very High	
Asepsis (AS)	8.79	Very high	1
Medication Administration (MA)	8.76	Very high	2
Activity and Exercise (A&E)	8.66	Very high	3
Fluid, Electrolyte, and Acid–Base Balance (FEAB)	8.35	Very high	4
Safety (SA)	8.34	Very high	5
Nutrition (NU)	8.26	Very high	6
Oxygenation (OX)	8.18	Very high	7
Peri-operative Nursing (PE)	8.04	Very high	8
Hygiene (HY)	7.69	Very high	9
Health Assessment (HA)	7.64	Very high	10
Elimination (EL)	7.35	Very high	11
Pain Management (PM)	7.32	Very high	12
Wound Care (WC)	7.19	High	13
Diagnostic Testing (DT)	7.13	High	14
Core Competencies	8.16	Very High	
Ethico-Moral Responsibility	8.50	Very High	1
Legal Responsibility	8.49	Very High	2
Records Management	8.46	Very High	3
Collaboration and Teamwork	8.39	Very High	4
Personal and Professional Development	8.38	Very High	5
Communication	8.33	Very High	6
Quality Improvement	8.17	Very High	7
Safe and Quality Nursing Care	8.12	Very High	8
Management of Resources and Environment	8.07	Very High	9
Health Education	7.92	Very High	10
Research	7.37	Very High	11

Table 3. Highest and Lowest Ranking Fundamental Clinical Nursing Skills

Fundamental Clinical Nursing Skills	Mean	Interpretation	Rank
Performing handwashing technique (AS)	9.41	Very High	1
Performing capillary blood glucose measurement (DT)	9.24	Very High	2
Administering oral, sublingual, buccal medications (MA)	9.23	Very High	3
Measuring oxygen saturation (HA)	9.19	Very High	4
Discontinuing intravenous lines (FEAB)	9.18	Very High	5.5
Measuring blood pressure (HA)	9.18	Very High	5.5
Administering oxygen by cannula, face mask, or non-rebreather mask (OX)	9.16	Very High	7
Administering intravenous medications using IV push or bolus (MA)	9.15	Very High	8
Preparing medications from vials and ampules (MA)	9.13	Very High	9
Adding medications to IV fluid container (MA)	9.08	Very High	10
Assessing the breasts and axillae (HA)	6.84	High	90
Changing a bowel diversion stoma appliance (colostomy and ileostomy) (EL)	6.81	High	91
Assessing the thorax and lungs (HA)	6.8	High	92
Obtaining wound drainage specimen for culture (WC)	6.73	High	93
Removing, cleaning, and inserting a hearing aid (HY)	6.65	High	94
Performing blood withdrawal or venipuncture (DT)	6.62	High	95
Assessing the female and male genitals and inguinal area (HA)	6.48	High	96
Assessing the rectum and anus (HA)	6.33	High	97
Taking electrocardiogram (ECG) (DT)	5.77	High	98
Interpreting electrocardiogram (ECG) (DT)	5.47	High	99

Table 4. Differences in Perceived Clinical and Core Skills Competence

Independent Variables	Clinical Skills p	Core Skills p
Length of Experience[a]	.397	.564
Year Graduated[a]	.807	.444
Area of Assignment[a]	.415	.330
Sex[b]	.986	.921
Type of School[b]	.407	.956
CPD Participation[b]	.406	.496
Bed Capacity[b]	.406	.667

Notes: [a]Kruskal–Wallis, [b]Mann–Whitney U, *p<0.05

Table 5. Transition Experience of New Graduate Nurses

Categories	*f*	%
Transition Difficulties		
Role Expectations	57	72.2
Lack of Confidence	55	69.6
Workload	51	64.6
Fears	41	51.9
Orientation Issues	37	46.8
Support Needed		
Increased Support	66	83.5
Improved Work Environment	46	58.2
Improved Orientation	41	51.9
Unit Socialization	37	46.8
Most Satisfying Aspects		
Ongoing Learning	64	81.0
Peer Support	59	74.7
Professional Nursing Role	50	63.3
Positive Work Environment	50	63.3
Patients and Families	49	62.0
Least Satisfying Aspects		
Nursing Work Environment	44	55.7
System	31	38.0
Interpersonal Relationships	29	36.7
Orientation	8	10.1

Discussion

This study investigated the perceived competence and transition experience of new graduate Filipino nurses. Although prior studies in other countries indicated that newly licensed nurses are said to be inadequately prepared to enter practice or still lack clarity in their level of competency (Smith & Crawford, 2002; Morolong & Chabeli, 2005; Karahan, Toruner, Abbasoglu, & Ceylan 2012; Brown & Crookes, 2016), new graduate Filipino nurses in this study disclosed a high level of self-reported competency. Similar to the results of this study, some studies reported good competency among new graduate nurses in Taiwan (Cheng et al., 2014) and in the United States (Batch-Wilson, 2016). Studies conducted elsewhere among nurses also revealed good to high competency levels (Meretoja, Isoaho, & Leino-Kilpi, 2004; Meretoja, Leino-Kilpi, & Kaira, 2004; Wangensteen, 2010; Istomina et al., 2011). Local studies found posi-

tive perceptions or satisfactory competency among nurses, new registered nurses, and graduating nursing students (Mangubat, Mangahas, Matias, & Mauleon, 2014; Belo-Delariarte et al., 2018; Feliciano et al., 2019). A study related that new graduate nurses might perceive their preparation more favorably than nursing leaders (Goldstein et al., 2016). Prior research among preceptors found that new graduates were able to perform basic technical skills most of the time (Hickey, 2009). The latest survey by Wolters Kluwer Health Learning, Research, and Practice also disclosed a narrowing perception gap between nurse hiring managers and clinical educators on new graduates' practice readiness. This finding may denote that progress has been made (Wolters Kluwer, 2018). Moreover, efforts have been made to close the theory–practice gap in nursing education in the Philippines (Oducado, Amboy, Penuela & Belo-Delariarte, 2019). The findings of this study may indicate that new graduate Filipino nurses are indeed competent in most but not in all fundamental nursing skills and competencies. They still require assistance in some areas needing improvement. Nevertheless, the results of this study suggest readiness for beginning professional nursing practice from the perspective of new graduate Filipino nurses. Another study found that graduating nursing students' self-reported competence is linked with the perceived quality of the undergraduate program (Kiekkas et al., 2019). The CMO 14 BSN curriculum may have provided nursing students in the Philippines with relatively adequate student experiences that prepared them to function with entry-level competencies expected of the professional nursing role.

In this study, participants posted the highest competencies in asepsis and medication administration. Similar to the result of this study, asepsis (such as handwashing) and medication administration were the two most essential clinical skills with the highest level of competence identified by the new registered nurses in the studies of Boxer and Kluge (2000) and Karahan et al. (2012), respectively. These skills are frequently performed. Despite such results, a review study identified that medication errors, patient falls, and delay in treatment are the most common errors of new graduate nurses (Saintsing, Gibson, & Pennington, 2011). Further research is essential to explore this finding.

By contrast, complex areas of diagnostic testing and wound care revealed low means of competence. These skill sets represent the areas uncommonly practiced by many nurses in the Philippines, except in highly specialized settings. For example, ECG recording and interpretation, and negative-pressure wound therapy management may not be part of the routine return demonstration practice in some nursing schools. Moreover, some hospitals where new graduate nurses had their clinical placements and the hospitals where they are currently employed are teaching and training hospitals. In these hospitals, depending on per hospital protocol, junior interns, postgraduate interns, and resident physicians conduct complex procedures and diagnostic tests. Cardiopulmonary and radiology technicians and wound care specialists are already available in some hospitals. These employees may have lessened the opportunities for new graduate nurses to practice these skills. Notably, most of the fundamental nursing skills requiring improvement in this study entail the use of specific equipment or resources (e.g., PCA, negative-pressure wound machine, and bowel diversion stoma appliance) that may not always be available in school or in some hospitals within the local setting. Other possible reasons reported in the literature that may also reflect the current situation in the Philippines include inadequate participation of students in these areas of instruction (Karahan et al., 2012). Skills are best learned by direct experience, and satisfactory levels of competence are achieved through time (Karahan et al., 2012). A high level of competence is signifycantly associated with frequent performance of clinical skills (Hassankhani et al., 2018). Despite being relatively adequately prepared by the current undergraduate nursing program, nursing schools may need to provide additional op-

portunities for students to practice some skills needing improvement.

Furthermore, in this study, most new graduate nurses displayed high regard in ethico-moral and legal responsibility. This result was supported by other prior studies (Lazarte, 2016; Karasuda, Tsumoto, & Uchida, 2014). Similarly, graduating nursing students had a high level of proficiency in these areas (Belo-Delariarte et al., 2018). New graduate nurses center around on their duties at hand. Doing so possibly increased their abilities related to their ethical duty and responsibilities to perform professionnal obligations in compliance with prevailing rules and regulations (Fukada, 2018; Feliciano et al., 2019). Rule-governed behavior is typical of a novice nurse (Benner, 1984) and may even be common among nurses beginning in their practice. With the increasing number of nurses being summoned to court (Faraji, Aryan, Jafari, & Khatony 2018), nurses and clients are now becoming more legally conscious.

Although a very high level of competence was reported in health education and research, these two areas ranked lowest among the 11 KAR. Results in other studies conformed to the low self-reported competency in health education or teaching coaching (Lazarte, 2016; Karasuda et al., 2014; Istomina et al., 2011). Local studies also found gaps in health literacy and health education competencies of graduating nursing students (Belo-Delariarte et al., 2018; Madura-mente et al., 2019). Although the nurse who has an innate role in rendering care would always accompany teaching in his/her practice (Feliciano et al., 2019), work overload, lack of time, and limited support from coworkers (Adejumo & Guobadia, 2013) may have thwarted the development of nurses' health education competencies. Moreover, the study of Lazarte (2016) indicated that research is also among the weak areas of competency among beginning staff nurses. A recent review study also disclosed that nurses still lack awareness about research (Tuppal et al., 2019), and few new graduates utilize research (Wangensteen, 2010). Additionally, a study among nursing students in a private nursing school revealed the lowest grade in nursing research (Oducado & Penuela, 2014). Results of the present study suggest that additional attention must be given to the health education and research competencies of nurses.

Meanwhile, previous studies have shown that length of work experience is positively correlated with level of competence (Meretoja, Leino-Kilpi, & Kaira, 2004; Meretoja, Isoaho, & Leino-Kilpi, 2004; Istomina et al., 2011). However, the results of this study suggest that 1 year may not be sufficient to appreciate an increase in the level of competence of new graduates. According to Scanlon (2017), the threshold for a nurse to achieve the level of being competent in practice varies. Although the first 6 months after graduation is a crucial period for new graduate nurses to reinforce clinical competence, Cheng et al. (2014) suggested that new graduates still need to have at least 12 months to feel comfortable to work in a new environment.

Benner (1984) argued that a newly registered practitioner becomes competent only with a degree of exposure to that role for 2–3 years after the point of registration. However, it is acceptable to expect that a person is competent at the level of registration (Scanlon, 2017). Besides, the professional licensure examination system ensures that the person bearing the license has met the minimum or entry-level competencies to perform acts allowed by the license (Oducado, Cendaña, & Belo-Delariarte, 2019). As novices in the role of a beginning professional nurse and for situations in which they have no prior experience, new graduate Filipino nurses perceived themselves as highly competent. New graduate Filipino nurses appear to demonstrate marginally acceptable performance consistent with the advanced-beginner level in Benner's model (1984). Their Related Learning Experiences or clinical placements in the undergraduate nursing program may be significant in honing new graduates' competency (Oducado, Amboy, Penuela, & Belo-Delariarte, 2019).

Concerning transition experience, new graduate nurses are confronted with an array of challenges when transitioning into the workforce (Hofler & Thomas, 2016). New graduate Filipino nurses in this study emphasized changes in role expectations, followed by lack of confidence and workload as their primary difficulty during their transition to practice. Practicing autonomy and being fully responsible and accountable for their actions were described by the new graduate nurses as tough and hard. Transition shock, feeling pressured, learning excitement, and needing support were also the emerging themes in the transition experiences reported in a qualitative study among new graduate Filipino nurses (Labrague, McEnroe-Pettite, & Leocadio, 2019). Other studies conducted in other countries among new graduate nurses in the United States (Fink, Krugman, Casey, & Goode, 2008); New Zealand (Walton et al., 2018), Australia (Kelly & Ahern, 2009; Ankers, Barton, & Parry, 2018), Hongkong (Wong et al., 2018), and Oman (Al Awaisi, Cooke, & Pryjmachuk, 2015) reported similar themes about transition difficulties and positive experiences in the first year of practice. Hussein et al. (2017) cited that new graduate nurses experience stress in the first year of practice as they strive to "fit in" and apply newly acquired skills. This result supports Duchscher's (2008) Transition Theory where a period of feeling overwhelmed and recognizing difference from student experiences was interpreted as the first initial transition phase, known as the "shock" state. During this phase, new graduates simply focus on "surviving" the experience and exposing their self-perceived incompetence.

As reinforced by a wealth of literature (Dyess & Sherman, 2009; Hofler & Thomas, 2016; Hussein et al., 2017; Wildermuth, Weltin, & Simmons 2019; Labrague et al., 2019), support during the transition period is vital for new graduate nurses. New graduate Filipino nurses considered support from their supervisor, co-staff nurses, senior staff, coworkers, mentors, family, and friends as essential in coping through their transition. Inadequate orientation and support to new graduates during transition is associated with burnout and job dissatisfaction that may lead to high rates of turnover (Laschinger et al., 2009; Theisen & Sandau, 2013).

This study also demonstrated that new graduate nurses considered ongoing learning to be one of the most satisfying factors in their work environment. However, a significant number of new graduates in this study have not participated in any CPD activities after graduation. Nurses' needs and expectations for ongoing professional development are necessary in the various stages of their career (Price & Reichert, 2017). Early-career nurses expect opportunities for continuing education to help them in their transition into the workplace and in the advancement of their careers (Price & Reichert, 2017). More opportunities for CPD must be provided to new graduate nurses.

Finally, new graduate nurses in this study reported that a poor nursing work environment was the least satisfying aspect of their job. The worsening working conditions of Filipino nurses reported in the news (Crisostomo, 2017; Lina, 2018) must be given proper attention to facilitate the successful transition of new graduates into the nursing workforce. As new graduate nurses seek employment in supportive workplaces (Price & Reichert, 2017), they continue to enter a work environment with limited nursing staff and increasing number of patients with complex conditions; they are often left with minimal clinical support (Hussein et al., 2017; Hofler & Thomas, 2016). These negative experiences in the work environment may result in feelings of heightened work stress and significantly influence their job satisfaction and retention.

A high level of competency takes time to develop, but with proper support and training, new graduate Filipino nurses can take on the demands of the nursing profession expected of a beginning professional nurse. Sourcing of new nurse graduate nurses may potentially address the shortage of nurses in hospital settings.

This study bears certain limitations that may pose threats to the validity and reliability of findings. First, cautious interpretation of the data should be observed due to the use of convenience sampling. The study was conducted with a relatively small sample size in four private hospitals in the Philippines, thereby limiting the generalizability of the results. Although certain competencies may be generic to nursing, findings cannot be extrapolated to other countries because the core competencies, the content of the curriculum, and the teaching methods may vary among countries. Second, research questions framed relative to competence has always been challenging to define (Scanlon, 2017), and surveys can lead to self-reported bias and social desirability. Given that the instrument used in this study underwent validation and pilot testing, further psychometric evaluation is still warranted. Other variables not included in this research may have caused variation in the competence of new graduates. Although most findings are supported by a body of literature, the results about the overall competency level of new graduate nurses is not conclusive. Despite these limitations, this study has provided empirical evidence on the limited information on competence and transition experience of new graduate nurses in Iloilo City at a particular time. Even though progress has been made in improving the competency of new graduates, there is still room for improvement. Other studies may be conducted to validate the results of the present investigation, and results must be triangulated.

Conclusions

Despite the learning gaps and areas needing improvement identified in this study, results showed that new graduates displayed beginning confidence and perceived themselves to be adequately equipped with the necessary skills and core competencies expected of a beginning professional nurse. Although new graduates are essentially novices with the role of a beginning professional, they have marginally acceptable performance in most of the fundamental nursing skills frequently done but may be uncomfortable and require guidance to carry out complex procedures and skills that they have less exposure. Recognizing changes in role expectations was perceived as their major difficulty, but they feel more supported or integrated into the unit with the presence of increased support from their manager, coworkers, and mentors. This study highlights that length of up to 1 year may not be sufficient to significantly increase the skills of new graduate nurses and be considered highly competent. Thus, when onboarding new graduates to practice, continuous training needs assessment must be done. Alignment with the global and local trends and current health care situation, as well as considering the areas needing improvement found in this survey, may serve as a guide when revisiting the curriculum. New graduate nurses go through a range of positive and negative experiences during transition. Difficulties are expected, but adequate support plays a vital role in the transition of new graduate nurses. Follow up, feedback, mentoring, and preceptorship should be recognized as relevant support needed by new graduate nurses.

Acknowledgement

The authors would like to acknowledge Mr. Grant Ireneo Pilla for his valuable support in the completion of this study.

References

Adejumo, P.O. & Guobadia, P.O. (2013). Nurses' attitude to reading research articles and their perception of research utilization in clinical practice in a Nigerian city. *Journal of Medicine and Biomedical Research*, 12(1), 46–56.

Al Awaisi, H., Cooke, H., & Pryjmachuk, S. (2015). The experiences of newly graduated nurses during their first year of practice in the Sultanate of Oman - A case study. *International Journal of Nursing Studies*, 52(11), 1723–1734. https://doi.org/10.1016/j.ijnurstu.2015.06.009.

Ankers, M.D., Barton, C.A., & Parry, Y.K. (2018). A phenomenological exploration of graduate nurse transition to professional practice within a transition to practice program. *Collegian*, 25(3), 319–325. https://doi.org/10.1016/j.colegn.2017.09.002.

Batch-Wilson, W. (2016). *Practice preparedness in new graduates: Exploring the education-practice gap* (Doctoral Dissertation). Walden University. Retrieved from https://scholarworks.waldenu.edu/dissertations/2341/

Benner, P. (1984). *From novice to expert: Excellence and power in clinical nursing practice*. Menlo Park, CA: Addison-Wesley Publishing.

Belo-Delariarte, R.G., Oducado, R.M.F., & Penuela, A.C. (2018). Terminal assessment of core nursing knowledge in a state university. *Asia Pacific Journal of Multidisciplinary Research*, 6(2), 10–17.

Berman, A., Snyder, S., Kozier, B., Erb, G., Levett-Jones, T., Dwyer, T., Hales, M., Harvey, N., Moxham, L., Park, T., Parker, B., Reid-Searl, K., & Stanley, D. (2015). Kozier *& Erb's fundamentals of nursing. Australian edition*. (3rd Ed.). Australia: Pearson Higher Education AU.

Boxer, E., & Kluge, B. (2000). Essential skills for beginning registered nurses. *Nurse Education Today*, 20(4), 327–335. https://doi.org/10.1054/nedt.1999.0415.

Brown, R.A., & Crookes, P.A. (2016). What level of competency do experienced nurses expect from a newly graduated registered nurse? Results of an Australian modified Delphi study. *BMC Nursing*, 15(45), 45. https://doi.org/10.1186/s12912-016-0166-2.

Casey, K., Fink, R., Krugman, M., & Propst, J. (2004). The graduate nurse experience. *Journal of Nursing Administration*, 34(6), 303–311. http://doi.org/10.1097/00005110-200406000-00010.

Casey, K., & Fink, R. (2006). Casey-Fink graduate nurse experience survey (revised). Denver, CO: University of Colorado Hospital. Retrieved from https://www.uchealth.org/wp-content/uploads/2016/10/PROF-CF-survey-2006.pdf.

Cheng, C.Y., Tsai, H.M., Chang, C.H., & Liou, S.R. (2014). New graduate nurses' clinical competence, clinical stress, and intention to leave: A longitudinal study in Taiwan. *The Scientific World Journal*, 748389. http://doi.org/10.1155/2014/748389.

Clark, T., & Holmes, S. (2007). Fit for practice? An exploration of the development of newly qualified nurses using focus groups. *International Journal of Nursing Studies*, 44(7), 1210–1220. https://doi.org/10.1016/j.ijnurstu.2006.05.010.

Cline, D., La Frentz, K., Fellman, B., Summers, B., & Brassil, K. (2017). Longitudinal outcomes of an institutionally developed nurse residency program. *Journal of Nursing Administration*, 47(7–8), 384–390. https://doi.org/10.1097/NNA.0000000000000500.

Commission on Higher Education. (2009). *CHED memorandum order no. 14 series of 2009 policies and standards for bachelor of science in nursing (BSN) program*. Retrieved from https://ched.gov.ph/cmo-14-s-2009/

Cox, P., Willis, K., & Coustasse, A. (2014). *The American epidemic: The U.S. nursing shortage and turnover problem*. Paper presented at Business and Health Administration Association Annual Meeting 2014, Chicago, IL. Retrieved from https://mds.marshall.edu/cgi/viewcontent.cgi?referer=&httpsredir=1&article=1125&context=mgmt_faculty.

Crisostomo, S. (2017). Nurses need better pay, work conditions – FNU. *Phil Star Global*. Retrieved from https://www.philstar.com/headlines/2017/10/20/1750983/nurses-need-better-pay-work-conditions-fnu#96K0KpI8B2Mh5soB.99.

Duchscher, J.B. (2008). A process of becoming: The stages of new nursing graduate professional role transition. *Journal of Continuing Education in Nursing*, 39(10),

441–50. https://doi.org/10.3928/00220124-20081001-03

Dyess, S.M. & Sherman, R.O. (2009). The first year of practice: New graduate nurses' transition and learning needs. *Journal of Continuing Education in Nursing*, 40(9), 403–410. https://doi.org/10.3928/00220124-20090824-03

Faraji, A., Aryan, A., Jafari, F., & Khatony, A. (2018). Awareness of professional rules among Iranian nurses: A cross-sectional study. *BMC Nursing*, 17(1), 55. https://doi.org/10.1186/s12912-018-0324-9.

Feliciano, E.E., Boshra, A.Y., Mejia, P.C.G., Feliciano, A.Z., Maniago, J.D., Alsharyah, H.M., Malabanan, M.C., & Osman, A. (2019). Understanding Philippines nurses' competency in the delivery of healthcare services. *Journal of Patient Care*, 5(1), 146. https://doi.org/10.4172/2573-4598.1000146.

Fink, R., Krugman, M., Casey, K., & Goode, C. (2008). The graduate nurse experience: A qualitative residency program outcomes. Journal of Nursing Admini*stration*, 38(7–8), 341–348. https://doi.org/10.1097/01.NNA.0000323943.82016.48.

Fraher, E., Spetz, J., & Naylor, M. (2015). Nursing in a transformed health care system: New roles, new rules. *Robert Wood Johnson Foundation Interdisciplinary Nursing Quality Research Initiative*. Retrieved from https://www.shepscenter.unc.edu/wp-content/uploads/2015/07/inqri-ldi-brief-nursing.original.pdf.

Fukada, M. (2018). Nursing competency: Definition, structure and development. *Yonago Acta Medica*, 61(1), 1–7. https://doi.org/10.33160/yam.2018.03.001.

Goldstein, N., D'Alessandro, M., Sussman, A., & Brown, J. (2016). *New graduate nurse perception of competence compared to nurse leadership.* Paper presented at Sigma Theta Tau International 43rd Biennial Convention 2015. Retrieved from http://hdl.handle.net/10755/602968. Las Vegas, NV, USA.

Hassankhani, H., Hasanzadeh, F., Powers, K.A., Zadeh, A.D., & Rajaie, R. (2018). Clinical skills performed by Iranian emergency nurses: Perceived competency levels and attitudes toward expanding professional roles. *JEN: Official Publication of the Emergency Department Nurses Association*, 44(2), 156–163. https://doi.org/10.1016/j.jen.2017.06.007.

Hickey, M.T. (2009). Preceptor perceptions of new graduate nurse readiness for practice. *JNSD: Official Journal of the National Nursing Staff Development Organization*, 25(1), 35–41. https://doi.org/10.1097/NND.0b013e318194b5bb.

Hofler, L. & Thomas, K. (2016). Transition of new graduate nurses to the workforce: Challenges and solutions in the changing health care environment. *North Carolina Medical Journal*, 77(2), 133–136. https://doi.org/10.18043/ncm.77.2.133.

Hussein, R., Everett, B., Ramjan, L.M., Hu, W., & Salamonson, Y. (2017). New graduate nurses' experiences in a clinical specialty: A follow up study of newcomer perceptions of transitional support. *BMC Nursing*, 16, 42. https://doi.org/10.1186/s12912-017-0236-0.

International Labour Organization. (2014). National nursing core competency standards: Training modules Philippines. Retrieved from https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---ilo-manila/documents/publication/wcms_316218.pdf.

Istomina, N., Suominen, T., Razbadauskas, A., Martinkėnas, A., Meretoja, R., & Leino-Kilpi, H. (2011). Competence of nurses and factors associated with it. *Medicina*, 47(4), 230–237. https://doi.org/10.3390/medicina47040033.

Karahan, A., Toruner, E.K., Abbasoglu, A., & Ceylan, A. (2012). Perceptions of new graduate nurses regarding their competence in nursing skills. *Hacettepe University Faculty of Health Sciences Nursing Journal*, 62–72.

Karasuda, S., Tsumoto, Y., & Uchida, H. (2014). Relationship between clinical competence of new graduate nurses and instructive support of colleagues - From the survey result at the time of one year after graduation. *Shimane Daigaku Igakubu Kiyo*, 37, 27–36.

Kelly, J. & Ahern, K. (2009). Preparing nurses for practice: A phenomenological study of the new graduate in Australia. *Journal of Clinical Nursing*, 18 (6), 910–918. https://doi.org/10.1111/j.1365-2702.2008.02308.x.

Kiekkas, P., Michalopoulos, E., Igoumenidis, M., Michalopoulos, A., & Stefanopoulos, N. (2019). Factors associated with self-reported competence of graduating nursing students. *Collegian*, 26(2), 267–272. https://doi.org/10.1016/j.colegn.2018.08.004.

Labrague, L.J., McEnroe-Pettite, D., & Leocadio, M.C. (2019). Transition experiences of newly graduated Filipino nurses in a resource-scarce rural health care setting: A qualitative study. *Nursing Forum*, 54(2), 298–306. https://doi.org/10.1111/nuf.12330.

Lazarte, F.C. (2016). Core competencies of beginning staff nurses: A basis for staff development training program. *Journal of Advanced Management Science*, 4(2), 98–105. https://doi.org/10.12720/joams.4.2.98-105.

Laschinger, H.K., Finegan, J., & Wilk, P. (2009). New graduate burnout: The impact of professional practice environment, workplace civility, and empowerment. *Nursing Economics*, 27(6), 377–383.

Lina, J.D. (2018). Our overworked and unpaid/underpaid nurses badly need help. *Manila Bulletin*. Retrieved from https://news.mb.com.ph/2018/02/26/our-overworked-and-unpaidunderpaid-nurses-badly-need-help/

Lu, J.L. (2014). Analysis of brain drain in the Philippines: The case of professionals. *International Journal of Sociology Study*, 2, 93–99.

Maduramente, T., Orendez, J., Saculo, J., Trinidad, A.L., & Oducado, R.M. (2019). Health literacy: Knowledge and experience among senior students in a nursing college. *Indonesian Nursing Journal of Education and Clinic*, 4(1), 9–19. https://doi.org/10.24990/ injec.v4i1.227.

Mangubat, N.R.C., Mangahas, B.T., Matias, C.J.C., & Mauleon, A.J.A. (2014). Level of competency of new registered nurses as perceived by their nursing supervisors. *CAM Research Journal*, 2(1), 136–169.

Maryniak, K., Markantes, T., & Murphy, C. (2017). Enhancing the new nurse experience: Creation of a new employee training unit. *Nursing Economics*, 35(6), 322–326.

Meretoja, R., Isoaho, H., & Leino-Kilpi, H. (2004). Nurse competence scale: Development and psychometric testing. *Journal of Advanced Nursing*, 47(2), 124–133. https://doi.org/10.1111/j.1365-2648.2004.03071.x.

Meretoja, R., Leino-Kilpi, H., & Kaira, A.M. (2004). Comparison of nurse competence in different hospital work environments. *Journal of Nursing Management*, 12(5), 329–336. https://doi.org/10.1111/j.1365-2834.2004.00422.x.

Moeti, M.R., van Niekerk, S.E., & van Velden, C.E. (2004). Perceptions of the clinical competence of newly registered nurses in the north west province. *Curationis*, 27(3), 72–84. https://doi.org/10.4102/curationis.v27i3.1003.

Morolong, B.G., & Chabeli, M.M. (2005). Competence of newly qualified registered nurses from a nursing college. *Curationis*, 28 (2), 38–50. https://doi.org/10.4102/curationis.v28i2.944.

Oducado, R.M.F., Amboy, M.K.Q., Penuela, A.C., & Belo-Delariarte, R.G. (2019). Correlation between theoretical classroom instruction and related learning experiences: Evidence from a Philippine nursing university. *International Journal of Scientific and Technology Research*, 8(12), 3666 3670.

Oducado, R.M.F., Cendaña, D.P., & Belo-Delariarte, R.G. (2019). Institutional competency assessment and other factors influencing the nurse licensure examination. *International Journal of Scientific and Technology Research*, 8(12), 268–270.

Oducado, R.M.F., Frigillano, P.R.S., Gunce, J.J.T., Jover, P.L.B., Meliton, P.N., & Pangilinan, K.T. (2017). Guidance needs of nursing students in Iloilo City, Philippines. *PEERS Inc. Multidisciplinary research journal*, 1(2), 35–47.

Oducado, R.M.F. & Penuela, A.C. (2014). Predictors of academic performance in professional nursing courses in a private nursing school in Kalibo, Aklan, Philippines. *Asia Pacific Journal of Education, Arts and Sciences*, 1(5), 21–28.

Yasmin Y., & Ortiga, Y.Y. (2018). Learning to fill the labor niche: Filipino nursing graduates and the risk of the migration trap. *RSF: the Russell Sage Foundation Journal of the Social Sciences*, 4(1), 172–187. https://doi.org/10.7758/rsf.2018.4.1.10

Potter, P., Perry, A., Stockert, P., & Hall, A. (2017). *Fundamentals of nursing*. (9th Ed.). USA: Elsevier Inc.

Price, S. & Reichert, C. (2017). The importance of continuing professional development to career satisfaction and patient care: Meeting the needs of novice to mid- to late-career nurses throughout their career span. *Administrative Sciences*, 7(2), 17. https://doi.org/10.3390/admsci7020017.

Saintsing, D., Gibson, L.M., & Pennington, A.W. (2011). The novice nurse and clinical decision making: How to avoid errors. *Journal of Nursing Management*, 19(3), 354–359. https://doi.org/10.1111/j.1365-2834.2011.01248.x.

Scanlon, A.P. (2017). An analysis of the concept of competence in nursing education. *Advanced Practices in Nursing*, 2(4), 1–7. https://doi.org/10.4172/2573-0347.1000144.

Smith, J. & Crawford, L. (2002). Report of findings from the 2001 employers survey. *National Council of State Boards of Nursing Research Brief*, 3, 1–12. Chicago: National Council of State Boards of Nursing, Inc.

Sparacino, L.L. (2016). Faculty's role in new graduate nurses' adjustment to practice. *SAGE Open Nursing*, 2. https://doi.org/10.1177/2377960816635182.

Theisen, J.L. & Sandau, K.E. (2013). Competency of new graduate nurses: A review of their weaknesses and strategies for success. *Journal of Continuing Education in Nursing*, 44(9), 406–414. https://doi.org/10.3928/00220124-20130617-38.

Tuppal, C.P., Vega, P.D., Ninobla, M.M.G., Reñosa, M.D., Al-Battashi, A., Arquiza, G., & Baua, E.P. (2019). Revisiting the barriers to and facilitators of research utilization in nursing: A systematic review. *Nurse Media Journal of Nursing*, 9(1), 90–102. https://doi.org/10.14710/nmjn.v9i1.20827.

Walton, J.A., Lindsay, N., Hales, C., & Rook, H. (2018). Glimpses into the transition world: New graduate nurses' written reflections. *Nurse Education Today*, 60, 62–66. https://doi.org/10.1016/j.nedt.2017.09.022.

Wangensteen, S. (2010). *Newly graduated nurses' perception of competence, critical thinking and research utilization* (Doctoral Dissertation). Sweden: Karlstad University Studies. Retrieved from http://www.diva-portal.org/smash/get/diva2:344929/FULLTEXT01.pdf.

Walker, J. (2010). The global nursing shortage: Migration, brain drain, and going forward. *Johns Hopkins School of Nursing Magazine*. Retrieved from https://magazine.nursing.jhu.edu/2010/08/the-global-nursing-shortage/

Wildermuth, M.M., Weltin, A., & Simmons, A. (2020). Transition experiences of nurses as students and new graduate nurses in a collaborative nurse residency program. *Journal of Professional Nursing: Official Journal of the American Association of*

Colleges of Nursing, 36(1), 69–75. https://doi.org/10.1016/j.profnurs.2019.06.006.

Wolters Kluwer. (2018). *Perception gap on new graduates' practice-readiness narrows between nurse hiring managers and clinical educators*. Retrieved from https://www.nursingcenter.com/nursingcenter_redesign/media/nursingcenter/Nurse-Preparedness-White-Paper.pdf.

Wong, S.W.J., Che, W.S.W., Cheng, M.T.C., Cheung, C.K., Cheung, T.Y.J., Lee, K.Y., So, K.C., & Yip, S.L. (2018). Challenges of fresh nursing graduates during their transition period. *Journal of Nursing Education and Practice*, 8(6), 30–37. https://doi.org/10.5430/jnep.v8n6p30.

World Health Organization. (2016). *Global strategy on human resources for health: Workforce 2030*. Geneva: World Health Organization.

Yeates, N. & Pillinger, J. (2018). International healthcare worker migration in Asia Pacific: International policy responses. *Asia Pacific Viewpoint*, 59 (1), 92–106. https://doi.org/10.1111/apv.12180.

Jurnal Keperawatan Indonesia, 2020, 23 (1), 64–73
DOI: 10.7454/jki.v23i1.537
Received July 2017; Accepted July 2019

pISSN 1410-4490; eISSN 2354-9203

SELF-EFFICACY AND FEELING OF SECURITY ASSOCIATED WITH RISKY SEXUAL BEHAVIOR AMONG COMMERCIAL SEX WORKERS LIVING WITH HIV

Anki Tias Yolanda*, Agung Waluyo, Lestari Sukmarini

Faculty of Nursing Universitas Indonesia, Depok 16424, Indonesia

*E-mail: anki.yolanda@gmail.com

Abstract

Commercial sex workers (CSWs) represent a key population for HIV transmission. CSWs continue to thrive because of the development of the tourism sector and the acceptance of communities. This study aimed to identify the factors associated with risky sexual behavior among CSWs living with HIV. A cross-sectional design was adopted. The sample size was set to 80 CSWs living with HIV in the Special Region of Yogyakarta and Central Java. Chi-square and multiple logistic regression were used in the data analysis. Results showed the significant relationship of self-efficacy ($p < 0.001$; OR = 9.365) and feeling secure ($p= 0.033$; OR= 2.762) with risky sexual behavior. No significant relationship was noted between income ($p= 0.244$), knowledge ($p= 0.110$), attitude ($p= 0.978$), drug use ($p= 0.150$), alcohol consumption ($p= 0.642$), and sexual violence ($p= 0.968$) and risky sexual behavior. Nursing practices are expected to focus on promotive and preventative efforts by involving communities in enhancing the feeling of security and self-efficacy of CSWs through health programs and improvement of health facilities.

Keywords: commercial sex workers, HIV, sexual risk behavior

Abstrak

Efikasi Diri dan Perasaan Aman Berhubungan dengan Perilaku Seksual Berisiko pada Pekerja Seks Komersial dengan HIV. *Pekerja Seks Komersial (PSK) menjadi populasi kunci penularan HIV. Perkembangan sektor pariwisata dan penerimaan masyarakat menjadikan PSK tetap bertahan. Penelitian ini bertujuan mengidentifikasi faktor-faktor yang memengaruhi perilaku seksual berisiko pada PSK dengan HIV positif. Desain penelitian ini adalah cross-sectional dengan jumlah sampel 80 Orang Dengan HIV AIDS (ODHA) PSK di Daerah Istimewa Yogyakarta dan Jawa Tengah. Analisis data menggunakan Chi-Square dan regresi logistik ganda. Hasil penelitian menunjukkan adanya hubungan yang signifikan antara efikasi diri (p< 0,001; OR= 9,365) dan perasaan aman (p= 0,033; OR= 2,762) dengan perilaku seksual berisiko. Tidak terdapat hubungan yang signifikan antara penghasilan (p= 0,244), pengetahuan (p= 0,110), sikap (p= 0,978), pemakaian narkoba (p= 0,150), konsumsi alkohol (p= 0,642), dan kekerasan seksual (p= 0,968) dengan perilaku seksual berisiko. Pelayanan keperawatan diharapkan lebih berfokus pada upaya promotif dan preventif dengan melibatkan masyarakat dalam meningkatkan rasa aman dan efikasi diri PSK melalui program-program kesehatan dan peningkatan fasilitas kesehatan.*

Kata Kunci*: HIV, pekerja seks komersial, perilaku seksual berisiko*

Introduction

As of 2015, the number of people living with HIV in the world was 36.7 million, and the mortality rate was 1.1 million (WHO, 2016b). Nearly 2.1 million of them were new cases (around 5,700 cases per day) (UNAIDS, 2016). As of 2016, Indonesia documented 14,693 deaths due to HIV and AIDS. HIV and AIDS cases in the Special Region of Yogyakarta (DIY) and Central Java continue to increase every year. DIY is one of the top 10 provinces with the highest number of AIDS cases per 100,000 people (AIDS case rate) while Central Java ranks fifth in terms of the cumulative number of HIV and AIDS cases in Indonesia (The Ministry of

Health Republic of Indonesia, 2017).

Commercial sex workers (CSWs) represent a key population for HIV transmission through sex (WHO, 2016a). Today, the cumulative number of CSWs living with AIDS in Indonesia ranks seventh among the total population of people living with AIDS in the country (The Ministry of Health Republic of Indonesia, 2017). Social vulnerability and various factors related to their occupation make CSWs a high risk group for HIV transmission (Baral et al., 2012; Decker et al., 2010; Scorgie et al., 2012; Wang et al., 2009).

Several studies performed in Indonesia revealed that condom usage among CSWs is still low. A study by Safika, Levy, and Johnson (2013) in Lombok indicated that only around 39% of female CSWs use condoms. In Semarang, Central Java, 41% of CSWs rarely use condoms when servicing customers (Susanti & Nirmasari, 2015).

The development of the tourism sector in DIY and Central Java, along with the construction of hotels and nightclubs, contributes to increased commercial sex practices (Lokollo, 2009). Moreover, certain areas in Java are known to recruit and provide female sex workers for sexual services. In Central Java, commercial sex work is an acceptable profession for women. Moreover, commercial sex worker is not considered a crime *(*HIV and AIDS Data Hub for Asia-Pacific, 2010). This wide acceptance contributes to the increase in HIV cases among CSWs.

Income (Gu et al., 2014; Zhang et al., 2013), knowledge (Bowen, Williams, Daniel, & Clayton, 2008; Mimiaga et al., 2009), attitude toward condom use (Catalan, Sherr, & Hedge, 2014; Mcdonough, 2012), self-usage (Jung, 2013), drug use (Brodbeck, Vilen, Bachmann, Znoj, & Alsaker, 2010; Yao et al., 2012), alcohol consumption (Bukenya et al., 2013), sexual assault (Mooney et al., 2013), and feeling of security (Erausquin, Reed, & Blankenship, 2016) are known factors that influence the risky sexual behavior of CSWs.

Jung (2013) studied 1,083 female CSWs. The research result showed that condom usage among female CSWs increases when they have high self-efficacy. The feeling of security of CSWs is related to the behavior of security officers and the acceptance of local communities and could affect CSWs' condom usage (Erausquin et al., 2016; Kerrigan, Telles, Torres, Overs, & Castle, 2008).

Numerous studies have explored CSWs in DIY and Central Java. However, the studies on CSWs living HIV are limited. The factors affecting risky sexual behavior among CSWs living with HIV should be determined to establish appropriate and effective prevention and intervention measures.

Methods

The present study used a cross-sectional research design with a sample of 80 CSWs living with HIV from the Peer Support Group (KDS) working area in Yogyakarta and Central Java. The study was performed on 19 May to 1 June 2017. The non-probability sampling technique with consecutive sampling was adopted.

The inclusion criteria were as follows: female CSW; diagnosed as HIV positive; >18 years old; was sexually active in the past month; showed good time, place, and spatial orientations; and provided consent to participate in the study. The exclusion criteria were impaired vision and hearing and illiteracy.

The data collection instrument was a respondent characteristic instrument covering average monthly income, drug use, alcohol consumption, and sexual assault. The knowledge questionnaire was the HIV Knowledge Questionnaire (HIV-KQ-18) with a reliability of 0.83 (Carey & Schroder, 2002). The attitude questionnaire was the Sexual Risks Scale-Attitudes Toward Condom Use (SRSA) questionnaire

(DeHart, & Birkimer, 1997) with a reliability of 0.90. The self-efficacy questionnaire was the Self-Efficacy for Negotiating Condom Use questionnaire (Rotheram-Borus et al., 1997) with a reliability of 0.87. The questionnaire for gauging the feeling of security was developed by the researchers through discussions with experts with a reliability of 0.86. The risky sexual behavior questionnaire was the Safe Sex Behavior Questionnaire with a reliability of 0.91.

Results

Respondent Characteristics. The research results showed that 42.5% of the respondents had an average monthly income < Rp1,500,000. Most respondents had never used drugs (90%). The most common drug use method was injection (5%). The most common drug used was heroin (3.8%) (Table 1).

A total of 46.3% of the respondents did not consumes alcohol. Exactly 18.8% of the respondents who consumed alcohol reported drinking two shots and beer (22.5%). Moreover, 58.8% of the respondents were sexually assaulted by their customers (26.3%).

Chi-square was used in the data analysis to determine the relation of income, knowledge, attitude toward condom usage, self-efficacy, drug use, alcohol consumption, sexual assault, and feeling of security with risky sexual behavior. The logistic regression test was used to determine the factors with the greatest effect on risky sexual behavior related to HIV and AIDS.

Of the respondents, 55% had good knowledge, 56.3% had good attitude toward condom usage, 53.8% had high self-efficacy in negotiating condom usage, and 62.5% felt secure. Most respondents engaged in risky sexual behavior (51.2%).

Factors Affecting Risky Sexual Behavior. The frequency distributions of the respondents in engaging in risky sexual behavior related to HIV and AIDS are presented in Table 2. The most common distributions were respondents with low income (58.8%), poor knowledge (61. 1%), poor attitude (51.4%), and low self-efficacy (78.4%); those not using drugs (54.2%) and not consuming alcohol (54.1%); and those who had not experienced sexual assault (51. 5%) and who felt insecure (66.7%).

The results of the bivariate analysis showed a significant relation ($p< 0.05$) between self-efficacy ($p< 0.001$; OR= 9.365) and risky sexual behavior. CSWs living with HIV who had low self-efficacy had 9.4 times higher chance of performing risky sexual behavior related to HIV and AIDS than CSWs living with HIV who had high self-efficacy.

The bivariate analysis also showed a significant relation ($p< 0.05$) between feeling of security ($p= 0.033$; OR= 2.762) and risky sexual behavior. CSWs living with HIV who felt insecure had 2.76 times higher chance of engaging in risky sexual behavior related to HIV and AIDS than CSWs living with HIV who felt secure.

Factors with the Greatest Effect on Risky Sexual Behavior. Multivariate analysis was conducted after identifying the determinants of the bivariate selection model and the final modeling. The results showed that self-efficacy ($p< 0.001$; OR= 9.662) had a significant relation with risky sexual behavior (Table 3).

The final modeling showed that CSWs living with HIV in DIY and Central Java who had low self-efficacy had 9.66 times higher chance of engaging in risky sexual behavior related to HIV and AIDS than CSWs living with HIV who had high self-efficacy after controlling for the factors of feeling of security and sexual assault (95% CI, OR= 3.201; 29.167).

The final model equation of the multivariate analysis is formulated as:

$$\mathbf{f}\,(\mathbf{Z}) = \frac{1}{1+e^{-(-1.495+2.268\mathrm{EF}+0.711\mathrm{AM}+0.465\mathrm{KS})}}.$$

Table 1. Respondent Distribution in DIY and Central Java 2017

Category	Total	%
Income		
<1,500,000	34	42.5
1,500,000–3,000,000	31	38.8
3,000,000–5,000,000	15	18.8
Drug use		
Frequency of usage in the past year		
Never	72	90
<5 times	7	8.8
5–49 times	1	1.3
Usage method		
Injecting	4	5
Inhaling	3	3.8
Swallowing	2	2.5
Drug type		
Metamphetamines	2	2.5
Heroin	3	3.8
Cannabis	2	2.5
Marijuana	1	1.3
Roaches	1	1.3
Ecstasy	1	1.3
Alcohol consumption		
Frequency of consumption		
Never	37	46.3
≤ once a month	8	10
Once a week	22	27.5
Every day/nearly every day	13	16.3
Amount consumed		
1 shot	14	17.5
2 shots	15	18.8
>2 shots	14	17.5
Alcohol type		
Beer	18	22.5
Vodka	10	12.5
Red wine	5	6.3
Whiskey	7	8.8
Red label	4	5
Jack D	2	2.5
Sunrise	1	1.3
Sexual assault		
History of sexual assault		
Yes	47	58.8
No	33	41.3
Assaulter		
Regular partner	19	23.8
Customer	21	26.3
Others	10	12.5
Knowledge		
Good	44	55
Poor	36	45
Attitude on Condom Usage		
Good	45	56.3
Poor	35	43.8
Self-efficacy		
High	43	53.8
Low	37	46.3

Table 1. Respondent distribution in DIY and Central Java 2017 (Continous)

Category	Total	%
Feeling of Security		
Feeling secure	50	62.5
Feeling insecure	30	37.5
Risky Sexual Behavior		
Low	39	48.8
High	41	51.2

Table 2. Analysis of Relations Among Factors Affecting Risky Sexual Behavior related to HIV and AIDS of CSWs Living with HIV in DIY and Central Java in 2017

Variable	Risky Sexual Behavior				Total		OR	p
	Low		High					
	n	%	n	%	N	%		
Income								
Adequate (≥1.500.000)	25	54.3	21	45.7	46	100	1.701	0.244
Low (<1.500.000)	14	41.2	20	58.8	34	100		
Knowledge								
Good	25	56.8	19	43.2	44	100	2.068	0.110
Poor	14	38.9	22	61.1	36	100		
Attitude on condom usage								
Good	22	48.9	23	51.1	45	100	1.013	0.978
Poor	17	48.6	18	51.4	35	100		
Self-efficacy								
High	31	72.1	12	27.9	43	100	9.365	0.000*
Low	8	21.6	29	78.4	37	100		
Drug usage								
Non-user	33	45.8	39	54.2	72	100	0.282	0.150
User	6	75	2	25	8	100		
Alcohol consumption								
Non-consuming	17	45.9	20	54.1	37	100	0.811	0.642
Consuming	22	51.2	21	48.8	43	100		
Sexual assault								
No	16	48.5	17	51.5	33	100	0.982	0.968
Yes	23	48.9	24	51.1	47	100		
Feeling of security								
Feeling secure	29	58	21	42	50	100	2.762	0.033*
Feeling insecure	10	33.3	20	66.7	30	100		

Note: *significant (p< 0.05)

Table 3. Results of Final Modeling of Variables Affecting Risky Sexual Behavior related to HIV and AIDS in DIY and Central Java in 2017

Variable	B	p	OR
Self-efficacy	2.268	0.000	9.662
Feeling of security	0.711	0.198	2.036
Sexual assault	0.465	0.413	1.592
Constant	−1.495		

Modeling showed that CSWs living with HIV who had low self-efficacy, felt insecure, and were sexually assaulted had 87.5% risk of engaging in risky sexual behavior.

Discussion

The research result showed a relation between self-efficacy and risky sexual behavior. The result was consistent with the study of Zhang et al. (2015), who found that the high self-efficacy of female CSWs has a significant relation with the consistency of condom usage with their regular partners. A study by Markosyan et al. (2007) also revealed that the high frequency of condom usage by regular partners and irregular partners is related to the high self-efficacy of female CSWs.

Self-efficacy affects one's behavior. Self-efficacy is necessary to negotiate safe sex with partners (Catalan et al., 2014; Mcdonough, 2012). High self-efficacy encourages one to try to engage in a certain behavior. The higher the self-efficacy for condom usage is, the higher the effort to maintain condom usage is; the latter includes persuading one's partner to wear a condom (Brodbeck et al., 2010). CSWs who have high self-efficacy for condom usage maintain good communication with their partners and are able to control their emotions during sex. Moreover, CSWs can confidently persuade their partners (regular partners and customers) to wear condoms (Zhang et al., 2015).

The research result showed a relation between feeling of security and risky sexual behavior. CSWs living with HIV reported gaining a feeling of security from their interactions with the community. Kerrigan et al. (2008) attempted to adopt Sanogachi's model in India, a project to reduce HIV transmission through community-based social approach, in the context of Brazil. The result showed that social cohesion and social involvement affect consistent condom usage among CSWs and their customers. Good social integration and close personal relations enable one to receive strong social and psychological support (Bunde, 2012). Social interaction also has a significant impact on one's perception, decision-making process, and behavior (Bunde, 2012). Good social interaction between CSWs living with HIV and the local community resulting in a strong feeling of security could affect the perception of CSWs living with HIV toward the importance of maintaining socially acceptable behaviors, including safe sex practice.

The result of the current work showed no significant relation between income and risky sexual behavior. This result was different from that of Gu et al. (2014), who found that female CSWs who have high monthly incomes are consistent in using condoms with their partners. In their work, a high monthly income did not guarantee that CSWs living with HIV had safe sex. Strong customer influence, concern about losing customers, and being forced (Tucker et al., 2012) can explain why CSWs living with HIV who earn high income still choose to engage in risky sexual behavior. Customers are often willing to pay double or triple for CSWs to have unsafe sex with them (Swanson, 2010). Furthermore, customers under the influence of alcohol make the use of condoms difficult for high-class CSWs (Choi & Holroyd, 2007).

The research result also showed no relation between knowledge and risky sexual behavior. According to the information–motivation–behavioral skills (IMB) model, behavior is affected by information, motivation, and behavioral skills (Walsh, Senn, Scott-sheldon, Peter, & Carey, 2011). In the present study, many respondents did have good knowledge, but such knowledge was not accompanied by motivation to change behavior and was not supported by the skill needed to perform the behavior; hence, the expected behavior, i.e., safe sex, was not achieved. Moreover, no relation between attitude and risky sexual behavior was observed. The result was different from that of a previous study by Susanti and Nirmasari (2015) on the attitude of female CSWs toward HIV prevention related to condom usage.

The theory of planned behavior emphasizes that apart from attitude, other factors influence someone to perform a behavior. The factors are social factor and self-awareness on behavioral control (Faimau, Maunganidze, Tapera, Mosomane, & Apau, 2016). Boileau, Rashed, Sylla, and Zunzunegui (2008) stated that sociocultural factors and religious norms could affect one's desire to engage in a behavior.

The research result of the current work showed no relation between alcohol consumption and risky sexual behavior. The result was different from that of the study by Markosyan et al. (2007), who found that the high frequency of condom usage by the regular partners and irregular partners of female CSWs is related to low alcohol consumption before sex. The result of the current work did not support the theory that alcohol consumption is related to the lack of self-control on sexual behavior (Catalan et al., 2014). Among the alcohol consuming respondents, most of them drank two shots on average (18.8%); this number is considered to be within the safe limit of daily alcohol consumption. A woman is considered to be consuming alcohol excessively and dangerously if the number is > 2 shots per day (Douglas, Nicol, & Robertson, 2013).

The research result also showed no relation between sexual assault and risky sexual behavior. According to Zhang et al. (2013), female CSWs who have been sexually assaulted will try to get emotional support and physical protection. CSWs living with HIV who have been sexually assaulted may also look for support from the nearest people, especially given the fact that Indonesian people, especially those in Java, are known to have tolerance and care for others (Supriyadi, Sudarwanto, & Werdiningsih, 2012). The support could resolve trauma and distress due to sexual assault and thus did not affect risky sexual practice among the CSWs living with HIV in this work.

The variable with the greatest effect on risky sexual behavior was self-efficacy. The research result was consistent with that of Zhang et al. (2015), who found that in a multivariate analysis, self-efficacy is a critical predictor of consistency of condom usage with regular and irregular partners. Control over infection due to risky sexual behavior requires self-efficacy for honest communication with partners (Mcdonough, 2012). CSWs who have high self-efficacy for condom usage communicate well with their partners and are able to control their emotions during sex. Moreover, CSWs are more confident in persuading their partners (regular partners and customers) to wear condoms (Zhang et al., 2015).

Conclusions

This research concludes that self-efficacy and feeling of security are factors affecting risky sexual behavior among CSWs living with HIV. Nursing services are expected to focus on promotive and preventative efforts by ensuring the availability of free condom in health institutions. Nursing practice should also involve communities in increasing the feeling of security and self-efficacy of CSWs through health programs and health facility improvement efforts aimed toward CSWs living with HIV.

Future studies should involve a large number of respondents and use a longitudinal research design to determine the causal relation between risky sexual behavior and the factors affecting it. They should also develop preventative models for risky sexual behavior among CSWs living with HIV based on the basis of community and social and cultural aspects.

References

Baral, S., Beyrer, C., Muessig, K., Poteat, T., Wirtz, A. L., Decker, M. R., … Kerrigan, D. (2012). Burden of HIV among female sex workers in low-income and middle-income countries: A systematic review and meta-analysis. *The Lancet Infectious Diseases, 12*(7), 538–549. http://doi.org/10.1016/S1473-3099(12)70066-X.

Boileau, C., Rashed, S., Sylla, M., & Zunzunegui, M. (2008). Monitoring HIV risk and evaluating interventions among young people in urban west Africa: Development and validation of an instrument. *AIDS Education and Prevention, 20*(3), 203–219. http://dx.doi.org/10.1521/aeap.2008.20.3.203.

Bowen, A.M., Williams, M.L., Daniel, C.M., & Clayton, S. (2008). Internet based HIV prevention research targeting rural MSM: Feasibility, acceptability, and preliminary efficacy. *Journal of Behavioral Medicine*, *31*(6), 463–477. http://doi.org/10.1007/s10865-008-9171-6.

Brodbeck, J., Vilen, U.L., Bachmann, M., Znoj, H., & Alsaker, F.D. (2010). Sexual risk behavior in emerging adults: Gender-specific effects of hedonism, psychosocial distress, and sociocognitive variables in a 5-year longitudinal study. *AIDS Education and Prevention, 22*(2), 148–159. http://dx.doi.org/10.1521/aeap.2010.22.2.148.

Bukenya, J., Vandepitte, J., Kwikiriza, M., Weiss, H. A, Hayes, R., & Grosskurth, H. (2013). Condom use among female sex workers in Uganda. *AIDS Care*, *25*(6), 767–774. http://doi.org/10.1080/09540121.2012.748863.

Bunde, E.A. (2012). Commercial sex and HIV transmission in Indonesia: Understanding structural-enviromental and interpersonal determinants of condom use among female sex workers and male clients (Philosophy in Public Health Dissertations, Tulane University). New Orleans: Tulane University. Retrieved from https://digitallibrary.tulane.edu/islandora/object/tulane%3A26044/datastream/PDF/view.

Carey, M.P., & Schroder, K.E.E. (2002). Development and psychometric evaluation of the brief HIV knowledge questionnaire (HIV-KQ-18). *AIDS Education and Prevention*, *14*(2), 174–184.

Catalan, J., Sherr, L., & Hedge, B. (2014). *The impact of AIDS: Psychological and social aspects of HIV infection.* Boca Raton: CRC Press.

Choi, S. Y. P., & Holroyd, E. (2007). The influence of power, poverty and agency in the negotiation of condom use for female sex workers in mainland China. *Culture, Health & Sexuality*, *9*(5), 489–503. http://doi.org/10.1080/13691050701220446.

Decker, M. R., McCauley, H. L., Phuengsamran, D., Janyam, S., Seage, G. R., & Silverman, J. G. (2010). Violence victimisation, sexual risk and sexually transmitted infection symptoms among female sex workers in Thailand. *Sexually Transmitted Infections*, *86*(3), 236–240. http://doi.org/10.1136/sti.2009.037846.

DeHart, D.D. & Birkimer, J. (1997). Trying to practice safer sex: Development of the sexual risks scale. *The Journal of Sex Research*, *34*(1), 11–25. https://doi.org/10.1080/00224499709551860.

DiIorio, C. (2009). Safe sex behavior questionnaire. In S.L. Fisher, T.D., Davis, C.M., Yarber, W.L., & Davis (Ed.), *Handbook of Sexuality-Related Measures* (Third Edition, 2011, pp. 594–596). New York: Routledge.

Douglas, G., Nicol, F., & Robertson, C. (2013). *Macleod's clinical examination* (13th ed). Philadelphia: Elsevier.

Erausquin, J.T., Reed, E., & Blankenship, K. (2016). Change over time in police interactions and HIV risk behavior among female sex workers in Andhra Pradesh, India. *AIDS Behav*, *19*(6), 1108–1115. http://doi.org/http://doi.org/10.1007/s10461-014-0926-5.

Faimau, G., Maunganidze, L., Tapera, R., Mosomane, L. C. K., & Apau, S. (2016). Knowledge of HIV/AIDS, attitudes towards sexual risk behavior and perceived behavioural control among college students in Botswana. *Cogent Social Sciences*, *2*(1). http://dx.doi.org/10.1080/23311886.2016.1164932.

Gu, J., Bai, Y., Lau, J.T.F., Hao, Y., Cheng, Y., Zhou, R., & Yu, C. (2014). Social enviromental factors and condom use among female injection drug users who are sex workers

in China. *AIDS Behav, 18*(2), 181–191. http://doi.org/10.1007/s10461-013-043 4-z.

HIV and AIDS Data Hub for Asia-Pacific. (2010). *Sex work & HIV: Indonesia.* Retrieved from *http://www.aidsdatahub.org/sites/default/files/documents/sex_work_hiv_indonesia.pdf.*

Jung, M. (2013). Sexual behavior and condom use among gay men, female sex workers, and their customers: Evidence from South Korea. *PLoS ONE, 8*(6). http://doi.org/10.1371/journal.pone.0066867.

Kerrigan, D., Telles, P., Torres, H., Overs, C., & Castle, C. (2008). Community development and HIV / STI-related vulnerability among female sex workers in Rio de Janeiro, Brazil. *Health Education Research, 23*(1), 137–145. http://doi.org/10.1093/her/cym011.

Lokollo, F.Y. (2009). Studi kasus perilaku wanita pekerja seksual tidak langsung dalam pencegahan IMS, HIV dan AIDS di pub&karaoke, café, dan diskotek di Kota Semarang (Master Theses, Universitas Diponegoro). Semarang: Universitas Diponegoro. Retrieved from https://core.ac.uk/download/pdf/11723809.pdf.

Markosyan, K.M., Babikian, T., DiClemente, R.J., Hirsch, J.S., Grigoryan, S., & Del Rio, C. (2007). Correlates of HIV risk and preventive behaviors in Armenian female sex workers. *AIDS and Behavior*, *11*(2), 325–334. http://doi.org/10.1007/s10461-006-9147-x.

McDonough, N. (2012). Factors influencing sexual behavior among HIV positive men who have sex with men (Nursing Dissertations, Georgia State University). Atlanta: Georgia State University. Retrieved from https://scholarworks.gsu.edu/nursing_diss/30/

Mimiaga, M.J., Reisner, S.L., Cranston, K., Isenberg, D., Bright, D., Daffin, G., … Mayer, K. H. (2009). Sexual mixing patterns and partner characteristics of black MSM in Massachusetts at increased risk for HIV infection and transmission. *Journal of Urban Health: Bulletin of the New York Academy of Medicine*, *86*(4), 602–623. http://doi.org/10.1007/s11524-009-9363-6.

Mooney, A., Kidanu, A., Bradley, H. M., Kumoji, E. K., Kennedy, C. E., & Kerrigan, D. (2013). Work-related violence and inconsistent condom use with non-paying partners among female sex workers in Adama City, Ethiopia. *BMC Public Health*, *13*(1), 1. http://doi.org/10.1186/1471-2458-13-771.

Rotheram-Borus, M.J., Murphy, D.A., Coleman, C.L., Kennedy, M., Reid, H.M., Cline, T.R. … Kipke, M. (1997). Risk acts, health care, and medical adherence among HIV+ youths in care over time. *AIDS and Behavior, 1*(1), 43–52. http://doi.org/10.1023/A:1026213905034.

Scorgie, F., Chersich, M.F., Ntaganira, I., Gerbase, A., Lule, F., & Lo, Y.R. (2012). Socio-demographic characteristics and behavioral risk factors of female sex workers in sub-Saharan Africa: A systematic review. *AIDS and Behavior*, *16*(4), 920–933. http://doi.org/10.1007/s10461-011-9985-z.

Safika, I., Levy, J.A., & Johnson, T.P. (2013). Sex work venue and condom use among female sex workers in Senggigi, Indonesia. *Cut Health Sex, 15*(5), 598–613. http://doi.org/10.1080/13691058.2013.776112

Supriyadi, B., Sudarwanto, B. A., & Werdiningsih, H. (2012). In Search of the Power of Javanese Culture against the Cultural Urbanization in Kotagede, Yogyakarta-Indonesia. *Procedia - Social and Behavioral Sciences*, *68*, 676–686. https://doi.org/10.1016/j.sbspro.2012.12.258.

Susanti, R., & Nirmasari, C. (2015). Faktor-faktor yang berhubungan dengan penggunaan kondom untuk pencegahan PMS pada WPS di lokalisasi Kabupaten Semarang. *Jurnal Keperawatan Maternitas, 3*(2), 82–89.

Swanson, B. (2010). *ANAC'S core curriculum for HIV/AIDS nursing* (3rd Ed.). USA: Jones and Bartlett Publishers.

The Ministry of Health Republic of Indonesia. (2017). *Laporan perkembangan HIV-AIDS & Penyakit Infeksi Menular Seksual (PIMS) Triwulan IV tahun 2016*. Jakarta: The Ministry of Health Republic of Indonesia.

Retrieved from http://www.aidsindonesia.or.id/ck_uploads/files/Final%20Laporan%20HIV%20AIDS%20TW%204%202016.pdf.

Tucker, S., Krishna, R., Prabhakar, P., Panyam, S., & Anand, P. (2012). Exploring dynamics of anal sex among female sex workers in Andhra Pradesh. *Indian Journal of Sexuality Transmitted Diseases and AIDS*, 33(1), 9–15. http://doi.org/10.4103/0253-7184.93787.

UNAIDS. (2016). *Global AIDS update 2016*. Retrieved from http://www.unaids.org/sites/default/files/media_asset/global-AIDS-update-2016_en.pdf.

Walsh, J.L., Senn, T.E., Scott-Sheldon, L.A.J., Vanable, P.A., & Carey, M.P. (2011). Predicting condom use using the information-motivation-behavioral skills (IMB) model: A multivariate latent growth curve analysis. *Annals of Behavioral Medicine: A Publication of the Society of Behavioral Medicine*, *42*(2), 235–244. http://doi.org/10.1007/s12160-011-9284-y.

Wang, H., Chen, R.Y., Ding, G., Ma, Y., Ma, J., Jiao, J.H., … Wang, N. (2009). Prevalence and predictors of HIV infection among female sex workers in Kaiyuan City, Yunnan Province, China. *International Journal of Infectious Diseases*, *13*(2), 162–169. http://doi.org/10.1016/j.ijid.2008.05.1229.

WHO. (2016a). *Consolidated guidelines on HIV prevention, diagnosis, treatment, and care for key populations-2016 update.* Retrieved from http://apps.who.int/iris/bitstream/10665/246200/1/9789241511124-eng.pdf?ua=1.

WHO. (2016b). *Global Health Observatory (GHO) data*. Retrieved from http://www.who.int/gho/hiv/en/

Yao, Y., Yang, F., Chu, J., Siame, G., Lim, H.J., Jin, X., … Wang, N. (2012). Associations between drug use and risk behaviours for HIV and sexually transmitted infections among female sex workers in Yunnan, China. *Int J STD AIDS*, *23*(10), 698–703. http://doi.org/10.1258/ijsa.2012.011346.

Zhang, C., Li, X., Hong, Y., Zhou, Y., Liu, W., & Stanton, B. (2013). Unprotected sex with their clients among low-paying female sex workers in southwest China. *AIDS Care*, 25(4), 503–506. doi: 10.1080/09540121.2012.726345.

Zhang, L., Li, X., Zhou, Y., Lin, D., Su, S., Zhang, C., & Stanton, B. (2015). Predictors of consistent condom use among Chinese female Sex workers: An application of the protection motivation theory. *Health Care for Women International*, *36*(7), 816–833. http://doi.org/10.1080/07399332.2014.942902.

Jurnal Keperawatan Indonesia, 2020, 23 (1), 74–84
DOI: 10.7454/jki.v23i1.1073
Received October 2019; Accepted November 2019

pISSN 1410-4490; eISSN 2354-9203

THE INFLUENCE OF MINORITY STRESS ON LEVEL OF DEPRESSION AMONG THAI LGBT ADULTS

Priyoth Kittiteerasack[1*], Alana Steffen[2], Alicia Matthews[2]

1. Faculty of Nursing, Thammasat University, Khlong Luang, Pathumthani 12121, Thailand
2. College of Nursing, The University of Illinois, Chicago 60607, United States

*E-mail: pkitti3@uic.edu

Abstract

In the US, lesbian, gay, bisexual, and transgender (LGBT) individuals report higher rates of depression compared with heterosexual and cisgender persons. To date, little is known about the mental health of LGBT adults in Thailand. Here, we examined rates and correlates of depression among a volunteer sample of Thai LGBTs. Data were collected as part of a larger cross-sectional survey study. Standardized measures of sexual orientation and gender identity, stress, coping style, and minority stressors were completed. Of the 411 participants, 40.3% met the criteria for depression. In multivariate analyses, the combined influences of sociodemographic factors, general stress, coping strategies, and minority-specific stress variables explained 47.2% of the variance in depression scores ($F[16,367]= 20.48$, $p<.001$). Correlates of depression included coping strategies and minority-specific stressors, including experiences of victimization, discrimination, and level of identity concealment. Study findings have implications for psychiatric nursing practice and the development of intervention research.

Keywords: depression, LGBT, minority stress, sexual and gender minority, Thailand

Abstrak

Pengaruh Stres Minoritas terhadap Tingkat Depresi pada LGBT Thailand. *Di AS, individu lesbian, gay, biseksual, dan transgender (LGBT) melaporkan tingkat depresi yang lebih tinggi dibandingkan dengan orang heteroseksual dan cisgender. Saat ini, sedikit yang diketahui tentang kesehatan mental pada orang dewasa dengan LGBT di Thailand. Di sini, kami meneliti tingkat dan korelasi depresi di antara sampel sukarelawan LGBT Thailand. Data dikumpulkan sebagai bagian dari studi survei cross-sectional yang lebih besar. Pengukuran terstandar terhadap orientasi seksual dan identitas gender, stres, koping, dan stresor minoritas telah selesai. Dari 411 peserta, 40,3% memenuhi kriteria untuk depresi. Dalam analisis multivariat, pengaruh gabungan faktor sosiodemografi, stres umum, strategi koping, dan variabel stres spesifik-minoritas menjelaskan 47,2% dari varians dalam skor depresi ($F [16,367]= 20,48$, $p< 0,001$). Korelasi depresi termasuk strategi koping dan stres spesifik-minoritas, termasuk pengalaman viktimisasi, diskriminasi, dan tingkat penyembunyian identitas. Temuan penelitian memiliki implikasi untuk praktik keperawatan psikiatris dan pengembangan penelitian intervensi.*

Kata Kunci*: depresi, LGBT, minoritas seksual dan gender, stres minoritas, Thailand*

Introduction

According to the World Health Organization (WHO), depression is a leading cause of disability and disease burden worldwide (WHO, 2017). In Thailand, the Department of Mental Health (DMH) reported that depression is one of the top five mental health disorders affecting adults (DMH, 2017). Numerous studies have demonstrated that the risk of depression varies considerably based on sociodemographic factors such as gender, age, geographical region, and income level (DMH, 2019; Kittiteerasack, 2012). In the United States and other Western countries, lesbian, gay, bisexual, and transgender (LGBT) individuals have also been identified as a sociodemographic population at elevated risk for depression (WHO, 2018; King et

al., 2008; Meyer, 2003). For example, lifetime prevalence rates of depression among LGBT individuals tend to be two to four times higher than their heterosexual and cisgender counterparts (King et al., 2008; Su et al., 2016; Reisner et al., 2015). Understanding the causes and consequences of depression in Thai populations is an important public health priority for the Thai Ministry of Health (The Excellence Center for Depression Disorder, 2019). However, to date, scant research has been conducted in Thailand to understand the rates and predictors of depression among Thai LGBT populations.

Depression results from a complex interaction of social, psychological, and biological factors. The WHO (2017) has recognized prejudice and discrimination as influential yet understudied risk factors for depression. Globally, LGBT-identified individuals experience high rates of social stigma and discrimination because of their sexual/gender identity (Meyer, 2003; Clark, 2014; Mallory, Hasenbush, & Sears, 2015). Although Thailand is viewed as an LGBT-friendly country with no legal restrictions against same-sex behaviors, anti-LGBT attitudes are still prevalent. Historically, homosexuality in Thailand was classified as a psychosocial disorder and viewed as a punishment for wrongdoing in a past life (UNDP, USAID, 2014).

Currently, more than half of Thais aged 15–24 still believe being LGBT is wrong (Kingston, 2019), and discrimination is common across numerous contexts including within families, the education system, health care organizations, and the workplace (Yadegarfard, Meinhold-Bergmann, & Ho, 2014; UNDP, USAID, 2014; Zachau & Cortez, 2017; Albuquerque et al., 2016). Preliminary evidence conducted with Thai LGBT populations proved the negative influence of discrimination on depression. Yadegarfard, Meinhold-Bergmann, and Ho (2014) found that transgender respondents report significantly higher family rejection due to discrimination, which is associated with elevated rates of depression. In a second study focused on emotional health of LGBT populations, 53% of LGBTs surveyed reported emotional problems (including depression) that were associated with experiences of discrimination (Zachau & Cortez, 2017).

The Minority Stress Model (MSM) (Meyer, 2003) was developed to guide research on the influence of social factors such as discrimination on stigmatized populations, including LGBTs. The MSM is grounded in the assumptions that minority stressors experienced by LGBT populations are unique, chronic, and socially based. Various causal domains under the MSM framework interact to increase or reduce risk associated with social stigma and discrimination, including demographic factors, level of general stress, minority-specific stressors, and coping style. The MSM has been accepted as a comprehensive conceptual framework to guide research aimed to identify contributing factors associated with depression, and it has been applied across LGBT studies worldwide (Hatzenbuehler, Nolen-Hoeksema, & Erickson, 2008; McCarthy, Fisher, Irwin, Coleman, & Pelster, 2014; Baams, Grossman, & Russell, 2015). To date, research on mental health among LGBT populations in Thailand is limited, and few of the existing studies have been guided by a theoretical framework. As such, the overall purpose of this study was to measure rates of depression in a sample of Thai LGBTs and examine contributing factors based on the MSM framework. Specifically, the study aimed to describe the rates of depression in a community sample of LGBT adults and determine the influences of general stress, minority-specific stress, and coping strategies on depression.

Methods

Study Design. Data from these secondary analyses were derived from a larger cross-sectional descriptive research study examining the prevalence of suicidality and its predictors among LGBT adults in Thailand. The study took place between March and August 2018. The study was approved by the Institutional Review Board of the University of Illinois at Chicago in the United States.

Study Setting. The study was conducted in collaboration with the Rainbow Sky Association of Thailand (RSAT), the first LGBT community-based organization devoted to providing resources and health services in Thailand. RSAT is supported by the Thai Ministry of Public Health and the US Centers for Disease Control and Prevention. Data collection took place at each of the seven RSAT clinics across Thailand.

Study Sample. Study eligibility criteria were as follows: 1) Thai national, 2) aged 18–60 years, and 3) ability to read and write in the Thai language. The total number of LGBT adults living in Thailand is currently unknown. As such, the sample size was calculated to estimate the rate of depression with a 5% margin of error. On the basis of Cochran's calculation (1953), 50% prevalence was used to determine the most conservative sample size. The total of 384 participants was sufficient to assess any proportion with a 5% margin of error or less at the 95% confidence level. We also added 5% to account for the non-completion rate. Therefore, 400 samples were needed. A total of 411 participants were recruited in this study.

Participant Recruitment. A volunteer sample of LGBT adults was recruited using convenience and snowball methods. Recruitment activities used included creating a dedicated Facebook (FB) page, flyers, posters, and information cards at community venues and events in collaboration with RSATs' clinics. The created FB page and materials were used for advertisement purposes only. Data collection was conducted online via a secured Qualtrics platform (Snow & Mann, 2013). Interested individuals who met the criteria as described in advertisements were provided options to participate in the study by either a link to an online survey or an in-person survey at the RSAT clinic.

Data Collection. Data collection was conducted using online and in-person surveys. The online survey was created using Qualtrics. Potential participants received a full explanation of the study information. LGBT individuals who were eligible and interested in participating provided their consent by clicking the "Agree" button to start the survey. The online data were instantly uploaded and saved to the standardized Qualtrics server by a secure password. Each data set was assigned a unique ID number and exported to a statistical software program (SPSS) for data management and analyses. In the paper–pencil survey, data recruitment and collection took place at RSAT community clinics by the first author (P.K.). Potential participants were approached in the waiting rooms and given an overview of the study. Interested and eligible individuals provided verbal consent to participate, and they completed the self-administered survey in a private location. All completed surveys were stored in a locked private cabinet, manually entered into the statistic software program daily, and destroyed after data entry.

Study Measures. The survey included standardized measures of demographic characteristics, stress, minority-specific stressors, coping strategies, and depression. Demographic characteristics measured included age, education, chronic disease, level of poverty, and sexual and gender identity. Sexual orientation was measured by the question, "Do you consider yourself to be.?" (response options= heterosexual, homosexual, and bisexual). Gender identity was measured by the question "What is your current gender identity?" (response options= male, female, transgender man, transgender woman, questioning, and others). Male and female response options were categorized as cisgender, and the rest were categorized as transgender. Sexual orientation and gender identity measures were translated into a Thai version by backward translation (Brislin, 1970) and tested among a diverse sample of Thai adults (n= 282), resulting in high content validity and linguistic comprehension/ acceptability (Kittitteerasack, Steffen, & Matthews, 2019).

Stress level was measured using the Srithanya Stress Test (ST-5), which is a 5-question inventory rated on a 4-point Likert scale, ranging from

0= never to 3= usually. Total possible scores ranged from 0 to 15, with high scores indicating a high level of stress (0–4= mild, 5–7= moderate, 8–9= severe, 10–15= very severe) (Silpakit, 2012). The Cronbach alpha of ST-5 in this study was 0.87.

Minority-specific stressors measured included negative experience due to LGBT identity, experiences of discrimination, victimization situations, level of identity outness or disclosure, and internalized sexual stigma. First, the negative experience due to LGBT identity was measured by three questions asking participants whether they have experienced discrimination based on their LGBT status. The questions asked, "Do you think discrimination you have experienced were due to your 1) sexual orientation, 2) gender identity, or 3) gender expression?," with yes/no response options. The scores were counted on the answer "yes" on each item, making the total score ranging from 0 to 3. High scores represent a great number of social identities the respondent perceived to be the cause of their discrimination experiences. Second, experiences of discrimination were measured by the nine items of Experiences of Discrimination Scale (EOD) (Krieger, Smith, Naishadham, Hartman, & Barbeau, 2005). The EOD gauged experiences of social discrimination across various situations (e.g., work and store). Three other items of related situations in Thai contexts were added (home, religious settings, and blood donation). Twelve items were scored by counting a number of situations (range 0–12), with high scores showing high numbers of experienced discrimination situations. Third, victimization situations (VSs) were measured by the five items of Gay, Lesbian, Straight, Education Network with response options rated on a 4-point Likert-type scale (Hamburger, Basile, & Vivolo, 2011). The VS gauged experiences of victimization in public settings related to LGBT identity. Total possible mean scores ranged from 0 to 3, with high scores representing a great level of victimization experience. Fourth, LGBT identity outness was scored by the Outness Inventory (OI) used to assess levels of concealment about LGBT identities on three primary subscales (world, family, and religion) (Mohr & Fassinger, 2000). This measure includes 10 items rated on a 7-point Likert scale ranging from 1 (a person does NOT know about your sexual orientation status) to 7 (person knows about your sexual orientation status). Total possible mean scores ranged from 1 to 7, with the high score indicating a high degree of outness. Fifth, internalized sexual stigma was measured by the Revised Internalized Homophobia Scale (IHP-R), which gauged a range of negative attitudes toward oneself of being LGBT (Herek, Gillis, & Cogan 2009). This measure includes five items rated on a 5-point Likert scale ranging from 1 to 5 (strongly disagree to strongly agree). Total possible mean scores range from 1 to 5, with high scores designating the high negative self-attitudes regarding internalized homophobia. The Cronbach alpha of EOD, VS, OI, and IHP-R in this study was 0.86, 0.81, 0.94, and 0.83, respectively.

Coping strategies used to manage stress were measured by the 25-item Coping Scale (CS) (Suphamongkhon & Kotrajaras, 2004). The CS is divided into three subscales, namely, problem-focused, avoidance, and seeking social support. Each item was rated on a 5-point Likert-type scale, ranging from 1 (none) to 5 (usually). The aggregate was calculated to estimate a total score of each subscale ranging from 12 to 60 for problem-focused coping, 9–45 for avoidance coping, and 4–40 for seeking social support coping. The possible mean score of each subscale was 1–5, indicating the level of using each type of coping mechanisms (1.00–2.49= less use, 2.50–2.99= less to moderate use, 3.00–3.49= moderate to high use, and 3.50–5.00= high use). The Cronbach alpha va-lues of the three subscales of problem-focused, avoidance, and seeking social support coping were 0.87, 0.84, and 0.77, respectively.

Depression was measured using the 21-item Beck Depression Inventory (BDI) (Beck, Steer, & Carbin,1988). Each item consists of four statements with scores ranging from 0 to 3, which

indicates different levels of severity of particular depressive symptoms. The possible scores range from 0 to 63, with high scores indicating a high level of depression (0–9= normal, 10–15 = mild depression, 16–19= mild to moderate depression, 20–29= moderate to severe depression, and 30–63= severe depression). The Cronbach alpha of BDI was 0.92.

The EOD, VS, OI, and IHP-R measures were translated into Thai language using backward translation (Brislin, 1790). All measures were translated by the PI and reviewed by a Thai-bilingual LGBT expert. On the basis of the cross-cultural translation principle, backward translation and comparison were performed by a committee approach (Harkness, Pennell, & Schoua-Glusberg, 2004). All committee members were Thai natives with extensive experience related to LGBT populations. The content validity index (CVI) was confirmed by five Thai measurement and LGBT experts. All four translated measures had CVI scores indicating acceptable content validity (EOD= 1, VS= 1, OI= 0.70, and IHP-R= 0.83). Overall Cronbach alphas of measures were also high, signifying the acceptable reliability as presented above.

Data analysis. The study data were analyzed by SPSS software. Descriptive statistics (percentages, means, standard deviations, and frequencies) were used to summarize study variables. Bivariate analyses (t-test, ANOVA, and Pearson correlation) were used to test for associations between independent variables and depression. The multiple regression model was used to test the relationship between independent variables on depression controlling for sociodemographic factors.

Results

Table 1 displays participant characteristics. A total of N= 411 individuals completed the survey. The mean age of study participants was 29.5 years old (S.D.= 7.4, range 18–53). The majority of participants reported their sexual orientation as homosexual (79.3%) and their gender identity as cisgender (76.6%). Educational attainment of the sample was high with the majority of participants (77.2%) reporting a bachelor's degree or higher. The mean score for stress was 5.48 (S.D.= 3. 42), which corresponded to moderate levels of stress. The mean number of discrimination situation was M= 1.90 (S.D.= 2.69). More than half of all participants (53.7%) reported experiences of discrimination based on their LGBT identity in at least one situation. The mean number of victimization events was.60 (S.D.= 0.51), with 49.4% of respondents reporting at least one victimization event associated with their sexual orientation or gender identity. The mean outness score was M= 4.67 (S.D.= 1.72). Approximately half of LGBT participants reported not being "out" or disclosing their sexual orientation or gender identity to their mothers (43.4%), fathers (52.4%), other family members (50.5%), or acquaintances (62.3%). Mean scores for internalized homophobia were in the average range (M= 2.40, S.D.= 1.06). In terms of depression, the mean score for study participants was 9.46 (S.D.= 8.43). About 43% of study participants reported clinically significant levels of depression; of those, 12.2% reported moderate to severe levels of depression (data not shown).

Bivariate analyses were performed to examine the relationships between depression and key predictor variables including sociodemographic factors, general stress, minority-specific stress, and coping strategies (see Table 2). Sociodemographic factors associated with high levels of depression included young age (r= -0.18, p= 0.01) and being diagnosed with a chronic disease (F [2, 406]= 4.93, p= 0.008). High levels of depression were positively associated with the high use of avoidance coping strategies (r= 0.48, p= 0.01) but negatively associated with problem-focused (r= −0.35, p= 0.01) and social support coping strategies (r= −0.20, p= 0.01). For general and minority-specific stressors, all stress factors were correlated with depression scores (levels of stress r= .56, p= .01; negative experiences due to LGBT identity F [3, 407]= 2.93, p= 0.034; experiences of discrimination

Table 1. Participant Characteristics (N= 411)

	N	%	M	S.D.
Sociodemographic Factors				
Age (year)			29.51	7.43
Education				
High school and diploma	94	22.9		
Bachelor	244	59.4		
Graduate and higher	73	17.8		
Chronic disease (number)				
None	283	69.5		
One	93	22.9		
Two or more	31	7.6		
Poverty rates			7.53	7.37
Community attainment				
Yes	39	9.5		
No	371	90.5		
Sexual orientation				
Heterosexual	23	5.6		
Homosexual	326	79.3		
Bisexual	62	15.1		
Gender identity				
Cisgender	315	76.6		
Transgender	96	23.4		
General Stress				
Levels of stress			5.48	3.42
Minority-Specific Stress				
Negative experiences due to LGBT identity				
None	189	46.3		
One	60	14.7		
Two	51	12.5		
Three	108	26.5		
Experiences of discrimination			1.90	2.69
Victimization situations			0.60	0.51
Identity outness			4.67	1.72
Internalized sexual stigma			2.40	1.06
Coping Strategies				
Problem-focused coping			3.98	0.57
Avoidance coping			2.91	0.77
Seeking social support coping			3.58	0.79
Study Outcome				
Depression			9.46	8.43

Note. M= mean score, S.D.= standard deviation

Table 2. Pearson Correlation Matrix for Key Independent Variables on Depression

	1	2	3	4	5	6	7	8
1. Levels of stress	-							
2. Experiences of discrimination	0.13**	-						
3. Victimization situations	0.22**	0.35**	-					
4. Identity outness	-0.05	0.13**	0.13**	-				
5. Internalized sexual stigma	0.12*	0.10*	0.11*	-0.39**	-			
6. Problem-focused coping	-0.23**	-0.05	-0.10*	0.15**	-0.10*	-		
7. Avoidance coping	0.43**	0.22**	0.16**	-0.02	0.17**	-0.16**	-	
8. Seeking social support coping	-0.17**	0.02	-0.03	0.12*	-0.04	0.45**	0.09	-
9. Depression	0.56**	0.24**	0.24**	-0.14**	0.18**	-0.35**	0.48**	-0.20**

*p= 0.05, **p= 01

Table 3. Summary of Multiple Regression Analyses for Variables Predicting Depression (N= 411)

	B	SE B	*β*	p
Age	−0.07	0.05	−0.06	−
Education	−0.26	0.58	−0.02	−
Chronic disease	1.20	0.54	0.09	0.026
Poverty rates	−0.07	0.05	−0.06	−
Community attainment	−0.74	1.16	−0.03	−
Sexual orientation	−0.31	0.79	−0.02	−
Gender identity	−0.96	0.79	−0.05	−
Levels of stress	0.81	0.12	0.32	0.000
Negative experiences due to LGBT identity	−0.19	0.28	−0.03	−
Experiences of discrimination	0.43	0.14	0.14	0.003
Victimization situations	1.53	0.72	0.09	0.035
Identity outness	−0.54	0.22	−0.11	0.014
Internalized sexual stigma	0.20	0.34	0.03	−
Problemfocused coping	−1.89	0.67	−0.13	0.005
Avoidance coping	2.85	0.50	0.26	0.000
Seeking social support coping	−1.12	0.48	−0.11	0.019
R^2			0.47	
F			20.48	

r= 0.24, p= 0.01; VSs r= 0. 24, p= 0.01; identity outness -0.14, p= 0.01; and internalized sexual stigma r= 0.18, p= 0.01).

Table 3 shows the results of multivariate analyses. The combined influence of demographic, stress, coping, and minority stress variables explained 47.2% of the variance in depression scores (F [16,367]= 20.48, p < 0.001). Levels of general stress (β= 0.81, p< 0.001) were independently associated with depression scores. However, minority-specific stress variables including negative experiences due to LGBT status (β= 1.53, p< 0.05), experiences of discrimination (β= 0.43, p< 0.01), and identity outness (β= −0.54, p< 0.05) were also associated with high rates of depression. Depression was associated with non-stress-related factors including having a chronic disease (β= 1.20, p <.05), low use of problem-focused coping (β= −1.88, p< 0.01), seeking social support coping (β= −1.12, p< 0.05), and high use of avoidance coping (β= 2.85, p< 0.001).

Discussion

This study is among the first to examine the influence of minority-specific stress and related factors of depression among LGBT adults living in Thailand. In the US, researchers have reported rates of depression ranging from 30% to 65% among LGBT individuals (Yarns, Abrams, Meeks, & Sewell, 2016; Hughes, Johnson, Steffen, Wilsnack, & Everett, 2014; Whitehead, Shaver, & Stephenson, 2016). Consistent with these findings, the overall rates of depression in our sample were high with 40% of participants reporting clinically significant levels of depression. Study findings were also consistent with the few existing studies reporting depression rates among Thai LGBTs. For example, one early research project that focused on Thai gays and transwomen (Kathoey) found that 52.9% of participants report mild levels of depression (Pearkoa, 2013). More recently, Zachau and Cortez (2017) reported that 53% of LGBT participants in their study sample experience an emotional problem such as depression. Study findings contribute to a growing international body of literature highlighting LGBT populations as being at elevated risk for depression.

A major objective of the study was to examine the influence of minority stressors on depression outcomes. In this study, most participants had experienced at least one discrimination

event in their lifetime, and half reported being victimized due to their sexual orientation or gender identity. Consistent with the MSM (Meyer, 2003), minority-specific stressors including experiences of discrimination and victimization were strongly associated with elevated levels of depression levels. Previous studies conducted in Thailand also reported associations between depression and social discrimination and VSs among LGBT populations (Yadegarfard, Meinhold-Bergmann, & Ho, 2014; UNDP, USAID, 2014; Zachau & Cortez, 2017). Most Thai LGBTs live in a society with intense pressure to conceal their identity to escape social disapproval (UNDP, USAID, 2014).

According to the MSM, identity concealment can have negative consequences on mental health, including reduced levels of social support and negative self-regard (Meyer, 2003). Approximately half of the sample reported disclosing their LGBT identity to important individuals in their lives. In the current study, level of concealment (not disclosing) of one's sexual orientation or gender identity was associated with elevated rates of depression. These findings were consistent with research from the US, which found high rates of depression among LGBT populations based on identity concealment (Riggle, Rostosky, Black, & Rosenkrantz, 2017). Public policy approaches such as anti-discrimination laws will be required to reduce the negative influences of social stigma on the mental health of Thai LGBT populations.

Besides minority stressors, other factors including levels of general stress, coping strategies, and diagnosis with a chronic disease also influenced levels of depression. In our sample, the majority (60%) of Thai LGBT populations reported having moderate to very severe stress. These findings were consistent with a prior study in Thailand, which reported that 70% of study participants indicates high levels of general stress (Pearkoa, 2013). Levels of stress are positively and strongly associated with depression in LGBT populations (McCarthy, Fisher, Irwin, Coleman, & Pelster, 2014). Coping strategies (e.g., problem-focused, avoidance, and seeking social support coping) are a central feature of the emotional process, and they represent an individuals' efforts to manage generated emotions (Lazarus, 2006).

By contrast, ineffective coping or using less helpful methods can create harmful consequences. We found that depression in our participants was significantly predicted by using less problem-focusing and seeking less social support as coping methods and high reliance on avoidance coping. The findings were in line with the same patterns found in recent studies that examined the influence of coping strategies on depression outcomes among LGBT populations in the United States (Toomey, Ryan, Diaz, & Russell, 2018; White Hughto, Pachankis, Willie, & Reisner, 2017). Chronic disease was the last non-minority stress factor associated with depression in LGBT participants. High rates of poor physical health from chronic disease that cannot be cured completely lead to the experience of burdensomeness (Institute of Medicine, 2011). Depression is one of the most common complications among LGBT individuals who suffer from having a chronic disease (Hoy-Ellis & Fredriksen-Goldsen, 2016).

Limitations. The study makes an important contribution to LGBT mental health research in Thailand. However, study limitations should be noted. First, the study involved a cross-sectional survey design. As such, the determination of cause and effect cannot be established. Although the sample size was relatively large, the study comprised non-probability volunteer samples. Therefore, the generalizability of study findings to the larger Thai LGBT population is unknown. In addition, study participants were primarily biological males, homosexual, and cisgender. Additional research will be needed to examine more diverse samples of LGBT populations based on sexual orientation (i.e., bisexual), gender (i.e., female), and gender identity (i.e., transgender).

Conclusions

The study findings emphasized that Thai LGBT individuals experience negative mental health outcomes associated with minority-specific stressors and other non-specific risk factors. By applying a vigorous conceptual framework and sophisticated methodologies, the outcomes provided strong fundamentals of groundwork for LGBT research in Thailand and other countries. Interventions focusing on reducing social stigma, improving coping responses in the face of minority stress, and refining the cultural competency of mental health professionals are needed and should be a priority in Thailand.

References

Albuquerque, G.A., de Lima Garcia, C., da Silva Quirino, G., Alves, M.J.H., Belém, J.M., dos Santos Figueiredo, F.W.,… & de Abreu, L.C. (2016). Access to health services by lesbian, gay, bisexual, and transgender persons: Systematic literature review. *BMC International Health and Human Rights*, 16(2), 1–10.

Baams, L., Grossman, A.H., & Russell, S.T. (2015). Minority stress and mechanisms of risk for depression and suicidal ideation among lesbian, gay, and bisexual youth. *Developmental Psychology*, 51(5), 688–696.

Beck, A.T., Steer, R.A., & Carbin, M.G. (1988). Psychometric properties of the Beck Depression Inventory: Twenty-five years of evaluation. *Clinical Psychology Review*, 8(1), 77–100.

Brislin, R.W. (1970). Back-translation for cross-cultural research. *Journal of Cross-Cultural Psychology*, 1(3), 185–216.

Clark, F. (2014). Discrimination against LGBT people triggers health concerns. *The Lancet*, 383(9916), 500–502.

Cochran, W.G. (1953). *Sampling techniques* (2nd Edition). New York: John Wiley and Sons. Inc.

DMH. (2017). *Thai Department of Mental Health News*. Retrieved from http://www.prdmh.com/ข่าวสาร/ข่าวแจกกรมสุขภาพจิต/860-พบ-5-กลุ่มโรคหลักก่อปัญหาสุขภาพจิตคนไทยสูงถึง-7ล้านคน-คาดแนวโน้มมากขึ้นโดยเฉพาะ“เหล้า-ยาเสพติด.”html.

DMH. (2019). *Department of Mental Health news*. Retrieved from http://www.prdmh.com/ข่าวสาร/ข่าวแจกกรมสุขภาพจิต/1384-กรมสุขภาพจิต-ห่วงวัยรุ่นเยาวชนไทยมีภาวะซึมเศร้า-แนะคนรอบข้างรับฟังอย่างเข้าใจ.html.

Hamburger, M.E., Basile, K.C., & Vivolo, A.M. (2011). *Measuring bullying victimization, perpetration, and bystander experiences: A compendium of assessment tools.* Atlanta, GA: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control.

Hatzenbuehler, M.L., Nolen-Hoeksema, S., & Erickson, S.J. (2008). Minority stress predictors of HIV risk behavior, substance use, and depressive symptoms: results from a prospective study of bereaved gay men. *Health Psychology*, 27(4), 455–462.

Harkness, J., Pennell, B.E., & Schoua-Glusberg, A. (2004). Survey questionnaire translation and assessment. *Methods for Testing and Evaluating Survey Questionnaires*, 546, 453–473.

Herek, G.M., Gillis, J.R., & Cogan, J.C. (2009). Internalized stigma among sexual minority adults: Insights from a social psychological perspective. *Journal of Counseling Psychology*, 56(1), 32–43.

Hoy-Ellis, C.P., & Fredriksen-Goldsen, K.I. (2016). Lesbian, gay, & bisexual older adults: Linking internal minority stressors, chronic health conditions, and depression. *Aging & Mental Health*, 20(11), 1119–1130.

Hughes, T.L., Johnson, T.P., Steffen, A.D., Wilsnack, S.C., & Everett, B. (2014). Lifetime victimization, hazardous drinking, and depression among heterosexual and sexual minority women. *LGBT Health*, 1(3), 192–203.

Institute of Medicine. (2011). *The health of lesbian, gay, bisexual, and transgender people: Building a foundation for better understanding.* Washington, DC: The National Academies Press.

King, M., Semlyen, J., Tai, S., Killaspy, H., Osborn, D., Popelyuk, D., & Nazareth, I. (2008). *Mental disorders, suicide, and deliberate self-harm in lesbian, gay and bisexual people: A systematic review of the literature*. National Institute for Mental Health England, London.

Kingston, J. (2019). *The politics of religion, nationalism, and identity in Asia.* Rowman & Littlefield Publishers, Maryland.

Kittiteerasack, P. (2012). Trends and assessment of suicidal behavior. *Thai Journal of Science and Technology*, 20(5), 468–477.

Kittitteerasack, P., Steffen, A., & Matthews, A. K. (2019). The validity and linguistic testing of translated measures of sexual orientation and gender identity for research in lesbian, gay, bisexual, and transgender (LGBT) populations in Thailand. *Nursing Journal*, 46(4), 122–137.

Krieger, N., Smith, K., Naishadham, D., Hartman, C., & Barbeau, E. M. (2005). Experiences of discrimination: validity and reliability of a self-report measure for population health research on racism and health. *Social Science & Medicine*, 61(7), 1576–1596.

Lazarus, R.S. (2006). Emotions and interpersonal relationships: Toward a person centered conceptualization of emotions and coping. *Journal of Personality*, 74(1), 9–46.

Mallory, C., Hasenbush, A., & Sears, B. (2015). *Discrimination and harassment by law enforcement officers in the LGBT community.* The Williams Institute, University of California.

McCarthy, M.A., Fisher, C.M., Irwin, J.A., Coleman, J.D., & Pelster, A.D.K. (2014). Using the minority stress model to understand depression in lesbian, gay, bisexual, and transgender individuals in Nebraska. *Journal of Gay & Lesbian Mental Health*, 18(4), 346.

Meyer, I.H. (2003). Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: conceptual issues and research evidence. *Psychological Bulletin*, 129(5), 674–697.

Mohr, J., & Fassinger, R. (2000). Measuring dimensions of lesbian and gay male experience. *Measurement and Evaluation in Counseling and Development*, 33(2), 66.

Pearkao, P (2013). Stress and depression among Thai gay, Kathoey (Transgender). *Journal of Nursing Science & Health*, 36(2), 95–104.

Reisner, S.L., Vetters, R., Leclerc, M., Zaslow, S., Wolfrum, S., Shumer, D., & Mimiaga, M.J. (2015). Mental health of transgender youth in care at an adolescent urban community health center: a matched retrospective cohort study. *Journal of Adolescent Health,* 56 (3), 274–279.

Riggle, E.D., Rostosky, S.S., Black, W.W., & Rosenkrantz, D.E. (2017). Outness, concealment, and authenticity: Associations with LGB individuals' psychological distress and well-being. *Psychology of Sexual Orientation and Gender Diversity*, 4(1), 54–62.

Silpakit, O. (2012). Srithanya stress scale. *Journal of Mental Health of Thailand*, 16(3), 177–185.

Snow, J., & Mann, M. (2013). *Qualtrics survey software: Handbook for research professionals*. Qualtrics Labs, Inc.

Su, D., Irwin, J.A., Fisher, C., Ramos, A., Kelley, M., Mendoza, D.A.R., & Coleman, J.D. (2016). Mental health disparities within the LGBT population: A comparison between transgender and nontransgender individuals. *Transgender Health*, 1(1), 12–20.

Suphamongkhon, N., & Kotrajaras, S. (2004). *Anxiety, social support, and coping strategies*

of university students. Master thesis. Faculty of Psychology, Chulalongkorn University, Thailand.

The Excellence Center for Depression Disorder (2019). *Depression Prevention and Solution.* Retrieved from http://www.thaidepression.com/www.

Toomey, R.B., Ryan, C., Diaz, R.M., & Russell, S.T. (2018). Coping with Sexual Orientation–Related Minority Stress. *Journal of Homosexuality*, 65(4), 484–500.

UNDP, USAID (2014). *Being LGBT in Asia: Thailand Country Report*. Bangkok: UNDP, UNSAID.

Whitehead, J., Shaver, J., & Stephenson, R. (2016). Outness, stigma, and primary health care utilization among rural LGBT populations. *PloS one*, 11(1), e0146139. doi: 10.1371/journal.pone.0146139.

White Hughto, J.M., Pachankis, J.E., Willie, T.C., & Reisner, S.L. (2017). Victimization and depressive symptomology in transgender adults: The mediating role of avoidant coping. *Journal of Counseling Psychology*, 64(1), 41.

WHO. (2017). *"Depression: let's talk" says WHO, as depression tops list of causes of ill health*. Retrieved from https://www.who.int/news-room/detail/30-03-2017--depression-let-s-talk-says-who-as-depression-tops-list-of-causes-of-ill-health.

WHO. (2018). *Depression: Key facts*. Retrieved from https://www.who.int/news-room/fact-sheets/detail/depression.

Yadegarfard, M., Meinhold-Bergmann, M.E., & Ho, R. (2014). Family rejection, social isolation, and loneliness as predictors of negative health outcomes (depression, suicidal ideation, and sexual risk behavior) among Thai male-to-female transgender adolescents. *Journal of LGBT Youth,* 11(4), 347–363.

Yarns, B.C., Abrams, J.M., Meeks, T.W., & Sewell, D.D. (2016). The mental health of older LGBT adults. *Current Psychiatry Reports*, 18(6), 60.

Zachau, U., & Cortez, C. (2017). *LGBTI in Thailand: New data paves way for more inclusion*. Retrieved from https://blogs.worldbank.org/eastasiapacific/lgbti-in-thailand-new-data-paves-way-for-more-inclusion.

JURNAL KEPERAWATAN INDONESIA
SUBMISSION GUIDE

Jurnal Keperawatan Indonesia (JKI), or Nursing Journal of Indonesia in English, is a media that can be used to register, to disseminate, and to archive the works of researchers who concern on nursing field in Indonesia. The article published in JKI will also be acknowledged as an intellectual work in the field of nursing. The articles of JKI are categorized based on the sub-fields of nursing science, including basic nursing care, adult nursing care, child nursing care, maternity nursing care, mental-health nursing care, gerontic nursing care, family nursing care, community nursing care, nursing care management, and nursing education. The types of articles accepted by editors are the results of research. The writing of each type of article must follow the JKI Author Guidelines.

Manuscripts or manuscripts sent to JKI are original works and have never been previously published or are not being submitted for publication in other journals. The author submitting the manuscript must have sufficient rights to publish the manuscript. There must be a statement of agreement from all authors for the publication of the manuscript. The manuscripts submitted must have the approval of the ethics committee and written permission needs to be obtained for experimental studies involving humans. Manuscripts that have been published become the property of the editor and the manuscript may not be published again in any form without the approval of the editor. The manuscript has been published will not be considered by the editor. During the manuscript in the editing process, the author is not allowed to enter the manuscript in another journal until there is a stipulation that the manuscript is accepted or rejected by the editor. The author is asked to send the original copyrighted form that has been signed to the Editor along with the submission of the manuscript. For ease of communication, the author is asked to provide correspondence or e-mail address, telephone number and fax that should be contacted.

Authors must send manuscripts through the online journal system to the JKI journal page (website) at http://jki.ui.ac.id on the "online submission" page. Guidelines for using the online journal system for authors are available on the journal page. The author's guide can be accessed on page http://jki.ui.ac.id/index.php/jki/about/submissions#authorGuidelines. For further information, please contact:

JKI Editorial Secretariat:
Faculty of Nursing
4th floor, E Building, Health Sciences, Universitas Indonesia
Jl. Prof. Dr. Bahder Djohan, UI Campus Depok, West Java - 16424
or the e-mail address to jurnal.keperawatan@ui.ac.id

Manuscripts are written in Indonesian or English. For titles, abstracts and keywords are written in English as well. The minimum length of a manuscript is 8 pages or a minimum of 3500 words on A4 size paper (210 mm x 297 mm). The boundary/margin of writing on the upper side is 3.5 cm, the bottom is 2.5 cm and the remaining 2 cm. The manuscript is made in the form of 1 (one) column without indenting and using spaces between paragraphs. Figures and tables are not grouped separately but rather integrated with the text of manuscripts. The complete guide can be seen in the author's guideline and manuscript template on the website. The Editorial Board has the right to make format adjustments for uniformity purposes.

All submitted manuscripts will go through a feasibility assessment by Reviewer and Editor. The assessment system is anonymous and independent. The editor will determine the final decision of the manuscript, whether accepted, given time for revision, or rejected. The author will receive notification from the editor via correspondence by e-mail. If given time for revision, the editor will determine when the longest time for submission/return of the manuscript after revision. If the author returns the manuscript after the time limit specified, the author must perform steps such as the initial submission.

Changes made to the revised manuscript must be written in the revised list. The author is asked to examine carefully the wording, editing, correctness and completeness of the text, tables, and figures and how to write sources or references. Manuscripts had been acceptable, but the writing is not in accordance with the JKI guideline, will have publishing delay. Rejected manuscripts will not be returned to the author unless stated earlier.

Reprint of 3 copies and JKI print a complete article of 1 copy will be given at the cost of Rp150,000.00 (not including shipping costs). Additional reprints can be ordered with special fees after the manuscript is declared accepted. Reprint orders after the manuscript are published in a journal (printed) will incur an additional fee of 50% of the regular fee. A reprint order form will be sent to the author together with the revised notice of the manuscript or can order via e-mail address: jurnal.keperawatan@ui.ac.id or redaksi_jki@yahoo.com.

ARTICLE TITLE (all caps, 14 point font, boldface, centered, max 16 words)

(One blank single space line, 14 pt)

Abstract *(10* pt, bold, italics*)*

(One blank single space line, 10 pt)

Article Title*. Abstract should be written using Times New Roman font, size 10pt, italics, right justify, and one paragraph-unstructured with single spacing, completed with English title written in bold at the beginning of the English abstract. The abstract is an unstructured paragraph. The abstract should state the problem, the purposes of the study or investigation, basic procedures (research design, selection and size of study subjects; observational and analytical methods), main findings (OR/ RR, CI or themes in qualitative research), and the principal conclusions. Recommendation and implication of the study must be clear. It should not contain any references or displayed equations. The abstract should be no more than 150 words. For the article in English, Indonesian abstract will be provided by the editors.*

(One blank single space line, 12 point font, boldface)

Keywords*: up to 6 words/ phrase in English, alphabetically order (10 point font, italics), give commas between words/phrase.*

Abstrak (10 pt, bold, senter)

(One blank single space line, 10 pt)

Abstrak ditulis menggunakan bahasa Indonesia dan Inggris. Menggunakan tipe abstrak satu paragraf tidak berstruktur, huruf 10 pt, spasi tunggal, rata kanan-kiri, jumlah kata tidak melebihi 150 kata, tidak ada kutipan dan singkatan/ akronim. Abstrak berupa satu paragraf tidak berstruktur. Abstrak harus berisi pendahuluan atau masalah yang diteliti termasuk tujuan penelitian, jika memungkinkan buat dalam satu kalimat. Desain penelitian, cara pengambilan dan besar sampel, cara dan pengumpulan data, serta analisis data. Penemuan utama (OR/ RR, CI atau tema dalam riset kualitatif). Tuliskan satu atau dua kalimat untuk mendiskusikan hasil dan kesimpulan. Rekomendasi dan implikasi hasil penelitian dituliskan dengan jelas.

(One blank single space line, 10 pt)

Kata Kunci: Kata kunci ditulis menggunakan bahasa Indonesia dan Inggris. Berisi kata atau frase maksimal enam kata dan diurutkan berdasarkan abjad (10pt, italics). Antar kata kunci dihubungkan dengan koma.

(Three blank single space lines, 12 point font, boldface)

Introduction (14 point font, boldface, cap in the first letter of headings)

(One blank single space line, 10 point font)

The manuscript is written with Times New Roman font size 10, single-spaced, left and right justified, on one-sided pages, paper in one column and on A4 paper (210 mm x 297 mm) with the upper margin of 3.5 cm, lower 2.5 cm, left and right each 2 cm. The manuscript including the graphic contents and tables should be minimum 8 pages or minimum 3500 words, preferably in even number of pages. If it far exceeds the prescribed length, it is recommended to break it into two separate manuscripts. The Standard English grammar must be observed. The title of the article should be brief and informative and it should not exceed 20 words. The keywords are written after the abstract.

(Between paragraphs are spaced one blank, single spaced, without indentation)

The title should contain the main keyword and do not use abbreviations, numbering around 20 words. Authors need to write a short title is also desirable to be written as a page header on each journal page. Authors should not just write words such as study/ relationship/ influence in the title because the title should indicate the results of the study, for example, "Reduction of blood sugar through exercises diabetes in the elderly".

The full name of the author (without academic title) is placed below the manuscript title. The order of the author based on his contribution to the writing process. After the authors name is written with superscript numbers to mark the affiliation author. One author, affiliates can be more than one, for example Ananda Anandita[1], Ahmad Taufik[2], Josephine[3]

Affiliates and address of the authors. Give the number according to the name of the author, for example 1. Department of Maternal and Women's Health Nursing, Faculty of Nursing, Universitas

Indonesia, Prof. Dr. Bahder Djohan Street, Depok, West Java – 16424. Correspondence address is email address of the one of the author, for example anandita12@ui.ac.id.

The use of abbreviations is permitted, but the abbreviation must be written in full and complete when it is mentioned for the first time and it should be written between parentheses. Terms/Foreign words or regional words should be written in italics. Notations should be brief and clear and written according to the standardized writing style. Symbols/signs should be clear and distinguishable, such as the use of number 1 and letter l (also number 0 and letter O). Avoid using parentheses to clarify or explain a definition. The organization of the manuscript includes **Introduction, Methods** or **Experimental, Results, Discussion, Conclusions,** and **References**. **Acknowledgement** (if any) is written after **Conclusion** and before **References** and narratively, not numbered. The use of subheadings is discouraged. Between paragraphs, the distance is one space. Footnote is avoided.

This manuscript uses *American Psychological Association (APA*) manual style as citation. When using APA format, follow the author-date method of in-text citation. This means that the author's last name and the year of publication for the source should appear in the text, for example, (Jones, 1998), and a complete reference should appear in the reference list at the end of the paper. Citation can be put at the beginning of the sentence, for example Johnson (2005) states that … or the source put at the end of a sentence for examples … (Purwanto, 2004). See the complete format on this link https://owl.english.purdue.edu/owl/resource/560/02/

Introduction contains justification of the importance of the study conducted. Novelty generated from this study compared the results of previous studies or the umbrella of existing knowledge needs to be clearly displayed. Complete it with main reference used. State in one sentence question or research problems that need to be answered by all the activities of the study. Indicate the methods used and the purpose or hypothesis of the study. The introduction does not exceed five paragraphs.
(One blank single space line, 12 point font)

Methods (14 point font, boldface, cap in the first letter of headings)

(One blank single space line, 10 point font)

Method contains the design, the size, criteria and method of sampling, instruments used, and procedures collecting, processing, and analysis of the data. When using a questionnaire as instrument, explain the contents briefly and to measure which variables. Validity and reliability of instruments should also be explained. In the experimental or intervention studies need to be explained interventional procedure or treatment is given. In this section it should explain how research ethics approval was obtained and the protection of the rights of the respondents imposed. Analysis of data using computer programs needs not be written details of the software if not original. Place/location of the study is only mentioned when it comes to study. If only as a research location, the location details not worth mentioning, just mentioned vague, for example, "... at a hospital in Tasikmalaya."

For the qualitative study, in this section needs to explain how the study maintain the validity (trustworthiness) data obtained. The methods section written brief in two to three paragraphs.
(One blank single space line, 12 point font)

Results

(One blank single space line, 10 point font)

The findings are sorted by the objectives of the study or the research hypothesis. The results do not display the same data in two forms namely tables/ images /graphics and narration. No citations in the results section. The average value (mean) must be accompanied by a standard deviation. Writing tables using the following conditions.

Table only uses 3 (three) row lines (do not use a column line), the line heading, and the end of the table (see example). Table is written with Times New Roman size 10 pt and placed within a single space below the title table. Table titles is written with font size 9 pt bold, capital letters at the beginning of the word and placed on the table with the format as shown in the examples that do not use the column lines. Numbering tables are using Arabic numerals. The table framework is using lines size 1 pt. If the table has many columns, it can use one column format at half or full page. If the title in each table column is long and complex, the columns are numbered and its description given at the bottom of the table. Mean, SD, and t-test values should include value of 95% CI. Significance value is put with not mention P at first. Example: The mean age 25.4 years intervention group (95% CI). Based on the advanced test between intervention and control groups showed significant (example: p= 0.001; CI= ... - ...).

Images are placed symmetrically in columns within a single space of a paragraph. Pictures are numbered and sorted by Arabic numerals. Captions placed below the image and within one single space of the image. Captions are written by using 10pt font size, bold, capital letters at the beginning of the word, and placed as in the example. The distance between the captions and paragraphs are two single spaced.

Images which have been published by other authors should obtain written permission from the author and publisher. Include a printed image with good quality in a full page or scanned with a good resolution in the format {file name}.jpeg or {file name}. tiff. When the images are in the photograph format, include the original photographs. The image will be printed in black and white, unless it needs to be shown in color. The author will be charged extra for color print if more than one page. The font used in the picture or graphic should be commonly owned by each word processor and the operating system such as Symbol, Times New Roman, and Arial with size not less than 9 pt. Image files which are from applications such as Corel Draw, Adobe Illustrator and Aldus Freehand can give better results and can be reduced without changing the resolution.

Table and image are not integrated with the contents of the manuscript, put after reference or at the end of the manuscript.

For the qualitative study, the findings commonly are written in the form of participants quotes. Table format is rarely used except to describe the characteristics of the participants, or recapitulation of the themes or categories. If the quote is not more than 40 words, then use quotation marks (") at the beginning and at the end of a sentence and include participants/ informants which give statements without the need to create separate paragraphs. Ellipsis (...) is only used to change a word that is not shown, instead of a stop sign/pause. See the following example.

Due to the ongoing process, the women experiencing moderate to severe pain in the knees, ankles, legs, back, shoulders, elbows, and/or their fingers, and they are struggling to eliminate the pain. To alleviate pain, they look for the cause of the pain. One participant stated that, "... I decided to visit a doctor to determine the cause of the pain is. Now I'm taking medication from the doctor in an attempt to reduce this pain" (participant 3)
Here is an excerpt example of using block quotations if the sentences are 40 or more. Use indentation 0.3"

As discussed earlier, once the participants had recovered from the shock of the diagnosis of the disease, all participants decided to fight for their life. For most of them, the motivation for life is a

function of their love for their children; namely child welfare, which being characteristic the pressure in their world. Here is an example of an expression of one of the participants:

I tried to suicide, but when I think of my children, I cannot do that [crying]. I thought, if I die, no one will take care of my children. Therefore, I decided to fight for my life and my future. They (children) were the hope of my life (participant 2).

Discussions

Describe the discussion by comparing the data obtained at this time with the data obtained in the previous study. No more statistical or other mathematical symbols in the discussion. The discussion is directed at an answer to the research hypothesis. Emphasis was placed on similarities, differences, or the uniqueness of the findings obtained. It is need to discuss the reason of the findings. The implications of the results are written to clarify the impact of the results the advancement of science are studied. The discussion ended with the various limitations of the study

Conclusions

Conclusions section is written in narrative form. The conclusion is the answer of the hypothesis that leads to the main purpose of the study. In this section is not allowed to write other authors work, as well as information or new terms in the previous section did not exist. Recommendation for further research can be written in this section.

Acknowledgement (if any)

Acknowledgement is given to the funding sources of study (donor agency, the contract number, the year of accepting) and those who support that funding. The names of those who support or assist the study are written clearly. Names that have been mentioned as the authors of the manuscripts are not allowed here.

References (14pt, *boldface*, Capital letter in the beginning of the Word)

Reference is written with Times New Roman font size 10 pt, single space, the distance between the references one enter. The references use the hanging, which is on the second line indented as much as 0.25", right justified. The references only contain articles that have been published, and selected the most relevant to the manuscript. It prefers primary references. The references format follows the "name-years" citation style (APA style 6th edition). All sources in the reference must be referenced in the manuscript and what was in the manuscript should be in this reference. The author should write the family/last name of sources author and year of publication in parentheses use, for example (Potter & Perry, 2006) or Potter and Perry (2006). Write the first author's name and "et al", if there are more than six authors. Examples:

Journal

Author, A.A., Author, B.B., & Author, C.C. (year). Article title: Sub-title. *Journal Title*, *volume*(issue number), page numbers.

Wu, S.F.V., Courtney, M., Edward, H., McDowell, J., Shortridge-Baggett, L.M., & Chang, P.J. (2007). Self-efficacy, outcome expectation, and self-care behavior in people with type diabetes in Taiwan. *Journal of Clinical Nursing,* 16 (11), 250–257.

References with eight or more authors, write the first six authors' name following ellipsis (…) & the last author's name. Example:

Dolan, R., Smith, R.C., Fox, N.K., Purcell, L., Fleming, J., Alderfer, B.,…Roman, D.E. (2008). Management of diabetes: The adolescent challenge. *The Diabetes Educator, 34,* 118-135.

Conference Proceeding

Schnase, J.L., & Cunnius, E.L. (Eds.). (1995). Proceedings from CSCL '95: *The First International Conference on Computer Support for Collaborative Learning*. Mahwah, NJ: Erlbaum.

Newspaper no author's name

Generic Prozac debuts. (2001, August 3). The Washington Post, pp. E1, E4.

Book

Author, A.A. (Year). *Source title: Capital letter in the beginning of the subtitle*. Location/City: Publisher.

Peterson, S.J., & Bredow, T.S. (2004). *Middle range theories: Application to nursing research.* Philadelphia: Lippincott Williams & Wilkins.

Book chapter

Author, A. A. (Year). Chapter title*:* Capital letter in the beginning of the subtitle. In Initial, Surname (Author's name/book editor) (eds). *Book title*. Location/City: Publisher.

Hybron, D.M. (2008). Philosophy and the science of subjective well-being. In M. Eid & R.J. Larsen (Eds.), *The science of subjective well-being* (pp.17-43). New York, NY: Guilford Press.

Translated book

Ganong, W.F. (2008). *Fisiologi kedokteran (*Ed ke-22). (Petrus A., trans). New York: McGraw Hill Medical. (Original book published 2005).

Thesis/Dissertation

If available in the *database*

Gilliland, A.L. (*2010). A grounded theory model of effective labor support by doulas* (Disertasi Doktor). Diperoleh dari *ProQuest Dissertations and Theses. (UMI No 3437269)*

If not pubished

Last-name, A. A. (year). *Dissertation/thesis title.* (Unpublished doctoral dissertation/master thesis). Institution Name, Location.

Considine, M. (1986). *Australian insurance politics in the 1970s: Two case studies*. (Unpublished doctoral dissertation). University of Melbourne, Melbourne, Australia.

Database Article

Author, A. A., Author, B. B., & Author, C. C. (Year pub). Title of article. *Title of Journal*, Volume (Issue), pp-pp. doi:xx.xxxxxxxxx [OR] Retrieved from URL of publication's home page

Borman, W.C., Hanson, M.A., Oppler, S.H., Pulakos, E.D., & White, L.A. (1993). Role of early supervisory experience in supervisor performance. *Journal of Applied Psychology, 78*(8), 443-449. Diperoleh dari http://www.eric.com/jdlsiejls/ supervisor/early937d%

Database article wth DOI (Digital Object Identifier)

Brownlie, D. (2007). Toward effective poster presentations: An annotated bibliography. *European Journal of Marketing, 41*(11/12), 1245-1283. doi:10.1108/03090560710821161

Other online source

Author, A. A. (year). Title of source. Retrieved from URL of publication's home page

Article from website

Exploring Linguistics. (1999, August 9). Retrieved from http://logos.uoregon.edu/explore/orthography/chinese.html#tsang

Online article

Becker, E. (2001, August 27). Prairie farmers reap conservation's rewards. *The New York Times*, pp. 12-90. Retrieved from http://www.nytimes.com

(One blank single space line, 12 pt)

Appendices

(One blank single space line, 10 pt)

Appendices are only used when absolutely necessary, placed after the references. If there is more than one attachment/appendix then sorted alphabetically.

Here is an example of a table

Table 1. The Characteristics of the Respondents (capital letters at the beginning of the word 11 pt, bold, left justify)

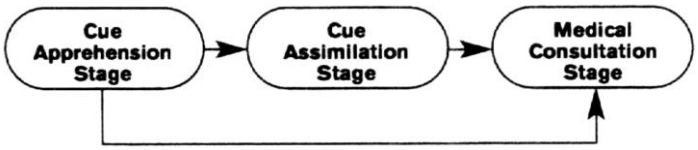
(blank one single space line, 10pt)

Client's Initial	Age	Major Problem
Mr. BN	56	Aggressiveness
Mr. MA	40	Withdrawal
Mr. AS	45	Swing Mood

(Blank two single space line, 10pt)

Here is an example of an image

(One blank single space line, 10 point font)



(One blank single space line, 10 point font)

Figure1. The Process of Cardiac Sensitivity Cues (Capital Letters in the Beginning of the Words, 10pt)

(One blank single space line, 10 point font)

ARTICLE TITLE (all caps, 14-point font, boldface, centered, Maximum 16 words)

(One blank single space line, 14 pt)

Abstrak (10 pt, bold, senter)

(One blank single space line, 10 pt)

Abstrak harus ditulis menggunakan huruf Times New Roman, ukuran 10pt, huruf miring, rata kanan, dan satu paragraf-tidak terstruktur dengan spasi tunggal. Abstrak harus "pendek dan manis". Seharusnya tidak melebihi 200 kata. Singkatan atau referensi dalam Abstrak tidak boleh digunakan. Abstrak harus mencakup latar belakang, ilustrasi kasus, dan kesimpulan. Latar belakang mencakup pengantar tentang mengapa kasus ini penting dan perlu dilaporkan. Harap sertakan informasi tentang apakah ini adalah laporan pertama dari jenis ini dalam literatur. Ilustrasi kasus mencakup rincian singkat tentang apa yang pasien sajikan, termasuk usia pasien, jenis kelamin dan latar belakang etnis. Kesimpulan merupakan kesimpulan singkat dari apa yang pembaca harus pelajari dari laporan kasus dan dampak klinisnya. Apakah laporan kasus asli yang menarik bagi area spesialis keperawatan tertentu atau apakah itu berdampak klinis yang lebih luas?

(One blank single space line, 10 pt)

Kata Kunci: Bagian ini terdiri dari tiga sampai enam kata kunci/frase yang mewakili konten utama artikel. Kata kunci ini penting untuk indeksasi manuskrip dan pencarian daring dengan mudah. Itu ditulis dalam bahasa Inggris, diurutkan berdasarkan abjad (font 10 huruf, huruf miring), memberikan koma di antara kata-kata/ frasa.

(One blank single space line, 12-point font)

Abstract *(10*-pt, bold, italics*)*

(One blank single space line, 10 pt)

Article Title*. Abstract should be written using Times New Roman font, size 10pt, italics, right justify, and one paragraph-unstructured with single spacing, completed with English title written in bold at the beginning of the English abstract. The Abstract should be "short and sweet". It should not exceed 200 words. Abbreviations or references within the Abstract should not be used. The Abstract should include into background, case illustration, and conclusion. Background includes an introduction about why this case is important and needs to be reported. Please include information on whether this is the first report of this kind in the literature. Case illustration includes brief details of what the patient(s) presented with, including the patient's age, sex and ethnic background. Conclusions is a brief conclusion of what the reader should learn from the case report and what the clinical impact will be. Is it an original case report of interest to a particular clinical specialty of nursing or will it have a broader clinical impact across nursing? Are any teaching points identified? If manuscripts are not from Indonesia, the Indonesian abstract will be assisted by the editor.*

(One blank single space line, 10 pt)

Keywords*: This section is comprisedof three to six keywords/phrases representing the main content of the article. It is important for indexing the manuscript and easy online retrieval. It is written in English, alphabetically order (10-point font, italics), give commas between words/phrase.*

(Three blank single space lines, 12-point font)

Introduction (14-point font, boldface, cap in the first letter of headings)

(One blank single space line, 10-point font)

The manuscript is written with Times New Roman font size 12, single-spaced, left and right justified, on one-sided pages, paper in one column and on A4 paper (210 mm x 297 mm) with the upper margin of 3.5 cm, lower 2.5 cm, left and right each 2 cm. The manuscript including the graphic contents and tables should be minimum 8 pages or minimum 3500 words, preferably in even number of pages. If it far exceeds the prescribed length, it is recommended to break it into two separate manuscripts. The Standard English grammar must be observed. The title of the article should be brief and informative and it should not exceed 20 words. The keywords are written after the abstract.

(Between paragraphs are spaced one blank, single spaced, without indentation)

The title should contain the main keyword and do not use abbreviations, numbering around 16 words. Authors need to write a short title is also desirable to be written as a page header on each journal page. Authors should not just write words such as study/ relationship/ influence in the title because the title should indicate the results of the study, for example, "Reduction of blood sugar through exercises diabetes in the elderly".

The information about the author(s) such as full name (without academic title), affiliates, and address are wrote on the separate file (tittle page). Affiliates and address of the authors. Give the number according to the name of the author, for example 1. Department of Maternal and Women's Health Nursing, Faculty of Nursing, Universitas Indonesia, Prof. Dr. Bahder Djohan Street, Depok, West Java – 16424. Correspondence address is email address of the one of the author, for example anandita12@ui.ac.id.

The use of abbreviations is permitted, but the abbreviation must be written in full and complete when it is mentioned for the first time and it should be written between parentheses. Terms/Foreign words or regional words should be written in italics. Notations should be brief and clear and written according to the standardized writing style. Symbols/signs should be clear and distinguishable, such as the use of number 1 and letter l (also number 0 and letter O). Avoid using parentheses to clarify or explain a definition. The organization of the manuscript includes **Introduction, Case Illustration, Discussion, Conclusions,** and **References**. **Acknowledgement** (if any) is written after **Conclusion** and before **References** and narratively, not numbered. The use of subheadings is discouraged. Between paragraphs, the distance is one space. Footnote is avoided.

This manuscript uses *American Psychological Association (APA*) manual style as citation. When using APA format, follow the author-date method of in-text citation. This means that the author's last name and the year of publication for the source should appear in the text, for example, (Jones, 1998), and a complete reference should appear in the reference list at the end of the paper. Citation can be put at the beginning of the sentence, for example Johnson (2005) states that … or the source put at the end of a sentence for examples … (Purwanto, 2004). See the complete format on this link https://owl.english.purdue.edu/owl/resource/560/02/

The Introduction or Background section should explain the background of the case, including the disorder or nursing problems, usual presentation and progression, and an explanation of the presentation if it is a new disease or disorder. If it is a case discussing an adverse intervention the Introduction should give details of intervention's common use and any previously reported side effects. It should also include a brief literature review. This should introduce to the case report from the stand point of those without specialist knowledge in the area, clearly explaining the background of the topic. It should end with a very brief statement of what is being reported in the article.

The Introduction should be in brief, stating the purpose of the study. Provide background that puts the manuscript into context and allows readers outside the field to understand the significance of the study. Define the problem addressed and why it is important and include a brief review of the key literature. Note any relevant controversies or disagreements in the field. Conclude with a statement of the aim of the work and a comment stating whether that aim was achieved.
(One blank single space line, 12-point font)

Case Illustration (14-point font, boldface, cap in the first letter of headings)

(One blank single space line, 10-point font)

This should present all relevant details concerning the case. This section can be divided into separate sections presented with appropriate subheading, such as history and presenting conditions, intervention, outcome, etc. This should provide concerned details of the case with relevant demographic information of the patient concealing their identification (without adding any details that could lead to the identification of the patient), medical history, observed symptoms and describe any tests or treatments done on the patient. If it is a case series, then details must be included for all patients. Discuss the significance and rarity of findings with referencing to the previous studies.

If it is need to present table(s) and or image(s), some rules should be followed. Table only uses 3 (three) row lines (do not use a column line), the line heading, and the end of the table (see example). Table is written with Times New Roman size 10-pt and placed within a single space below the title table. Table titles is written with font size 9-point bold, capital letters at the beginning of the word and placed on the table with the format as shown in the examples that do not use the column lines.

Numbering tables are using Arabic numerals. The distance between table and the paragraph is a single space. The table framework is using lines size 1 pt. If the table has many columns, it can use one column format at half or full page. If the title in each table column is long and complex, the columns are numbered and its description given at the bottom of the table. The table is placed in the highest or the very bottom of each page and do not flanked by sentence. Avoid interrupted the table by page.

Images are using a single space of a paragraph. If the size of the image passes through the column width then the image can be placed with a single column format. Pictures are numbered and sorted by Arabic numerals. Captions placed below the image and within one single space of the image. Captions are written by using 10pt font size, bold, capital letters at the beginning of the word, and placed as in the example. The distance between the captions and paragraphs are two single spaced.

Images which have been published by other authors should obtain written permission from the author and publisher. Include a printed image with good quality in a full page or scanned with a good resolution in the format {file name}.jpeg or {file name}. tiff. When the images are in the photograph format, include the original photographs. The image will be printed in black and white, unless it needs to be shown in color. The author will be charged extra for color print if more than one page. The font used in the picture or graphic should be commonly owned by each word processor and the operating system such as Symbol, Times New Roman, and Arial with size not less than 9-pt. Image files which are from applications such as Corel Draw, Adobe Illustrator and Aldus Freehand can give better results and can be reduced without changing the resolution.

Table and image are not integrated with the contents of the manuscript, put after reference or at the end of the manuscript.

Discussions

The discussion section should contain major interpretations from the findings and results in comparison to past studies. The significance of the findings and case presentation should be emphasized in this section against previous findings in the subject area.

This section should evaluate the patient case for accuracy, validity, and uniqueness and compare or contrast the case report with the published literature. The authors should briefly summarize the published literature with contemporary references.

Conclusions

Conclusions section is written in narrative form. This section should conclude the Case reports and how it adds value to the available information. Explain the relevance and significance of their findings to the respective field in a summary briefly. This section is not allowed to write other authors work, as well as information or new terms in the previous section did not exist. Recommendation for further study can be written in this section.

Acknowledgement

Acknowledgement is given to the funding sources of study (donor agency, the contract number, the year of accepting) and those who support that funding. The names of those who support or assist the study are written clearly. Names that have been mentioned as the authors of the manuscripts are not allowed here.

References (14pt, boldface, Capital letter in the beginning of the Word)

Reference is written with Times New Roman font size 11 pt, single space, the distance between the references one enter. The references use the hanging, which is on the second line indented as much as 0.25", right justified. The references only contain articles that have been published, and selected the most relevant to the manuscript. It prefers primary references. The references format follows the "name-years" citation style (APA style 6th edition). All sources in the reference must be referenced in the manuscript and what was in the manuscript should be in this reference. The author should write the family/last name of sources author and year of publication in parentheses use, for example (Potter & Perry, 2006) or Potter and Perry (2006). Write the first author's name and "et al", if there are more than six authors. Examples:

Journal

Author, A.A., Author, B.B., & Author, C.C. (year). Article title: Sub-title. *Journal Title*, *volume*(issue number), page numbers.

Wu, S.F.V., Courtney, M., Edward, H., McDowell, J., Shortridge-Baggett, L.M., & Chang, P.J. (2007). Self-efficacy, outcome expectation, and self-care behavior in people with type diabetes in Taiwan. *Journal of Clinical Nursing,* 16 (11), 250–257.

References with eight or more authors, write the first six authors' name following ellipsis (…) & the last author's name. Example:

Dolan, R., Smith, R.C., Fox, N.K., Purcell, L., Fleming, J., Alderfer, B.,… & Roman, D.E. (2008). Management of diabetes: The adolescent challenge. *The Diabetes Educator, 34,* 118-135.

Conference Proceeding

Schnase, J.L., & Cunnius, E.L. (Eds.). (1995). Proceedings from CSCL '95: *The First International Conference on Computer Support for Collaborative Learning*. Mahwah, NJ: Erlbaum.

Newspaper no author's name

Generic Prozac debuts. (2001, August 3). The Washington Post, pp. E1, E4.

Book

Author, A.A. (Year). *Source title: Capital letter in the beginning of the subtitle*. City: Publisher.

Peterson, S.J., & Bredow, T.S. (2004). *Middle range theories: Application to nursing research*. Philadelphia: Lippincott Williams & Wilkins.

Book chapter

Author, A. A. (Year). Chapter title*:* Capital letter in the beginning of the subtitle. In Initial, Surname (Author's name/book editor) (eds). *Book title*. Location/City: Publisher.

Hybron, D.M. (2008). Philosophy and the science of subjective well-being. In M. Eid & R.J. Larsen (Eds.), *The science of subjective well-being* (pp.17-43). New York, NY: Guilford Press.

Translated book

Ganong, W.F. (2008). *Fisiologi kedokteran (*Ed ke-22). (Petrus A., trans). New York: McGraw Hill Medical. (Original book published 2005).

Thesis/Dissertation

If available in the *database*

Gilliland, A.L. (*2010). A grounded theory model of effective labor support by doulas* (Disertasi Doktor). Diperoleh dari *ProQuest Dissertations and Theses. (UMI No 3437269)*

If not pubished

Last-name, A. A. (year). *Dissertation/thesis title.* (Unpublished doctoral dissertation/master thesis). Institution Name, Location.

Considine, M. (1986). *Australian insurance politics in the 1970s: Two case studies*. (Unpublished doctoral dissertation). University of Melbourne, Melbourne, Australia.

Database Article

Author, A. A., Author, B. B., & Author, C. C. (Year pub). Title of article. *Title of Journal*, Volume (Issue), pp-pp. doi:xx.xxxxxxxxx [OR] Retrieved from URL of publication's home page

Borman, W.C., Hanson, M.A., Oppler, S.H., Pulakos, E.D., & White, L.A. (1993). Role of early supervisory experience in supervisor performance. *Journal of Applied Psychology, 78*(8), 443-449. Diperoleh dari http://www.eric.com/jdlsiejls/ supervisor/early937d%

Database article wth DOI (Digital Object Identifier)

Brownlie, D. (2007). Toward effective poster presentations: An annotated bibliography. *European Journal of Marketing, 41*(11/12), 1245-1283. doi:10.1108/03090560710821161

Another online source

Author, A. A. (year). Title of source. Retrieved from URL of publication's home page

Article from website

Exploring Linguistics. (1999, August 9). Retrieved from http://logos.uoregon.edu/explore/orthography/ chinese.html#tsang

Online article

Becker, E. (2001, August 27). Prairie farmers reap conservation's rewards. *The New York Times*, pp. 12-90. Retrieved from http://www.nytimes.com

(One blank single space line, 12pt)

Appendices (14pt, boldface, Capital letter in the beginning of the Word)

(One blank single space line, 10pt)

Appendices are only used when absolutely necessary, placed after the references. If there is more than one attachment/appendix then sorted alphabetically.

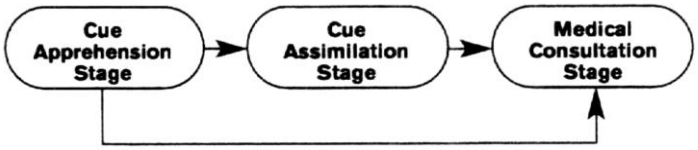
Here is an example of a table

Table 1. The Characteristics of the Respondents (capital letters at the beginning of the word 11 pt, bold, left justify)
(blank one single space line, 10pt)

Client's Initial	**Age**	**Major Problem**
Mr. BN	56	Aggressiveness
Mr. MA	40	Withdrawal
Mr. AS	45	Swing Mood

(Blank two single space line, 10pt)

Here is an example of an image
(One blank single space line, 10 point font)



(One blank single space line, 10 point font)
Figure1. The Process of Cardiac Sensitivity Cues (Capital Letters in the Beginning of the Words, 10pt)
(One blank single space line, 10 point font)

For Customers

SUBSCRIPTION FORM
JURNAL KEPERAWATAN INDONESIA

Name : ……

❑ Student ❑ non-Student ❑ Institution

Address : ……

……

Phone: …… Mobile: …….. E-mail: ……..……

Will subscribe JKI

Vol. ……... : No. ……. up to …….

Amount : …… copies

For that I am willing to pay all cost of printing and delivery service:

Amount : Rp …….

Via : BNI branch office UI Depok

Acc. No. 127 3000 535 UI FIK Non BP

(Copy of proof of payment attached)

For JKI

SUBSCRIPTION FORM
JURNAL KEPERAWATAN INDONESIA

Name : ……

❑ Student ❑ non-Student ❑ Institution

Address : ……

……

Phone: …… Mobile: …….. E-mail: ……..……

Will subscribe JKI

Vol. ……... : No. ……. up to …….

Amount : …… copies

For that I am willing to pay all cost of printing and delivery service:

Amount : Rp …….

Via : BNI branch office UI Depok

Acc. No. 127 3000 535 UI FIK Non BP

(Copy of proof of payment attached)