



The relation of depression, anxiety and stress with demographic profile of nurses

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Abstract

Purpose: to determine the prevalence of depression, anxiety, and stress among nurses in Al-Irsyad Hospital Surabaya; and to know the factors that influence depression, anxiety, and stress among inpatient nurses in Al-Irsyad Hospital, Surabaya. **Method:** This research was an observational analytic study with cross-sectional study design and is carried out in the inpatient room at Al-Irsyad Hospital, Surabaya. The population in this study were all nurses in the inpatient room in Al Irsyad Hospital, Surabaya. The sampling technique was using a simple random sampling method so that a sample of 100 nurses was obtained. Data were collected by questionnaires and documentation. Data analysis used quantitative descriptive analysis (Descriptive, Univariate, Bivariate). **Results:** The prevalence of the majority of nurses, level of depression, anxiety, and stress were in the normal categories of 96%, 95%, and 94%. the results of the chi-square analysis showed that there was no relationship between age, sex, marital status, length of work, and level of education with the level of depression and anxiety of nurses, p-value > 0.05. In contrast, there was a relationship between age with a level of stress, p-value 0.001, and there was no relationship between sex, marital status, working experience, and education with the level of stress, p-value > 0.05. **Conclusion:** there was a relationship between the age and stress level of nurses in the Al Irsyad Hospital Surabaya.

Keywords: relationship of depression levels, anxiety, stress, nurses

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INTRODUCTION

Nurses are one of the important yet strategic components for the implementation of health services, especially hospitals. Nurses have heavy duties and responsibilities in the working area and their neighborhood (Herqutanto, Harsono, Damayanti, & Setiawan, 2017). A nurse was a profession that exposed to various situations that could cause stress in the workplace (Carolina, Rusyanti, & Susanto, 2017; Kadir, Kamariah, Saleh, & Ratnawati, 2017). According to the study of the Indonesian National Nurse Association in 2006 showed 50.9% of Indonesian nurses had experienced burn out.

Stress is a disturbance of the psychological condition of human being, that could be caused by many factors. One of the most influential factors was anxiety. Anxiety is an unclear feeling of fear and is not supported by the situation. When anxious, the human feels uncomfortable, fearful, and has an inkling for disaster that happened in the future although he doesn't understand why it happened. Anxiety disorders often

occur 16-29% in a lifetime (Malfasari, Devita, Erlin, & Ramadania, 2017). *American national association for Occupational Health (ANAHO)* (2009), from 40 burnt-out cases, nurse was on the top and has the opportunity to get minor psychiatric disorder and depression.

Stress could cause anxiety that closely related to lifestyle. This could happen because stress could affect someone's psychology in the form of anxiety, fatigue, depression, loss of patience, low self-esteem (Widiyanto & Khaironi, 2014). Vellyana et al., (2017) explained that anxiety is an emotional condition characterized by over-worry of some daily events in life (Vellyana, Lestari, & Rahmawati, 2017). Prevalence of anxiety in America more than 28% age 9-17 years old, 13% in age 18-54%, 16% in 55 years old, and 11,4% in elderly. Females twice more risk to have anxiety than males.

The heavy workload of nurse very influences the level of stress, where if it was ignored could cause

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Table 1. Baseline characteristics

Profile	Category	Amount (n)	Percentage (%)
Age	20-30 years	28	28
	31-40 years	26	26
	41-50 years	37	37
	>50 years	9	9
Sex	Male	17	17
	Female	83	83
Marital status	Married	76	76
	Single	24	24
Length of working	<1 year	0	0
	>1-3 years	19	19
	>3-5 years	6	6
	>5 years	75	75
Education	Diploma 3	97	97
	Diploma 4	0	0
	Bachelor	3	3
Psychological status			
Depression	Normal	96	96
	Mild	3	3
	Medium	1	1
Anxiety	Normal	95	95
	Mild	2	2
	Moderate	3	3
Stress	Normal	94	94
	Mild	4	4
	Moderate	2	2

Source: Primary processed data, 2020

depression. Depression is a common disease worldwide. It's defined as a sad disturbance, characterized by sleep pattern changes, less-concentration (Willenberg et al., 2020), psychomotor, loss of appetite, hopelessness, fatigue (Wibowo, Berniyanti, & Sunariani, 2017), and suicidal temptation (A. . Sari, Oktarlina, & Septa, 2017). Depression as mental disturbance, characterized by sad feelings, loss of interest or pleasure, loss of energy, guilty feeling, or low self-esteem, besides depression often come up with anxiety symptoms (Marsasina & Fitrikasari, 2016; Prastyo, Deliana, Dimyati, & Arto, 2018; Akpan, & Udoh, 2017). Depression could cause social, family, work functional disturbances (Naibaho, Hanafiah, & Tampubolon, 2019; D. K. Sari, Dewi, & Daulay, 2019). Various factors as age, sex, living status, education, psychosocial stressors and physical disease could affect depression. The research objective is to determine the prevalence of depression, anxiety, and stress among nurses in Al-Irsyad Hospital Surabaya; and to know the factors that influence depression, anxiety, and stress among inpatient nurses in Al-Irsyad Hospital, Surabaya.

METHODS

The present study was an observational analytic with a cross-sectional study (Setijanto, Bramantoro, Palupi, & Hanani, 2019). This study held inward of Al-Irsyad Hospital, Surabaya. The population of the study was all nurses inward. Sampling was using simple random sampling. The inclusion criteria were duration of works for more than six months and agreed to participate. Exclusion criteria if the nurse had the preexisting mental underlying disease and refused to participate.

Calculation number of samples using Krejcie & Morgan formula. So, we obtained 100 nurses, divided into Obstetrics and Gynecology Room, Internal Ward, Pediatric ward, Surgery ward Data was collected using questionnaire and observation.

Data analysis using univariate and bivariate analysis. Univariate analysis was done by distributing the frequency of each variable of baseline characteristics (age, sex, marital status, working experience, and education), level of stress, anxiety, and depression. Questionnaire of depression, anxiety, and stress using adapted 21-item Depression Anxiety Stress Scale (DASS-21). Antony Bielling reported the internal validity and accuracy of this questionnaire to identify depression, anxiety, and stress.

Bivariate analysis was conducted to test the relationship between the two variables (independent and dependent) statistical test that was used were Pearson chi-square and Fisher test to determine the relationship between the prevalence of anxiety, depression, and stress and selected factor variable. All the statistical tests were set at 95% confidence level, where P-value < 0.05 was considered as a significant difference.

Research ethics is a value system that must be obeyed by the researcher when conducting research that involves respondents, including freedom from threats, exploitation, and risks.

RESULTS

The results of this study were shown in **Tables 1-4**. The baseline characteristics of respondents were shown in **Table 1**.

Table 2. Relationship of Nurse' Characteristics with the level of depression

Characteristics	Depression (%)			p- value
	Normal	Mild	Moderate	
Age				0,809
20-30 years	92,9	3,6	3,6	
31-40 years	96,2	3,8	0	
41-50 years	97,3	2,7	0	
>50 years	100	0	0	
Gender				0,677
Male	94,1	5,9	0	
Female	96,4	2,4	1,2	
Marital status				0,185
Married	97,4	2,6	0	
Single	91,7	4,2	4,2	
Length of working				0,297
<1 year	0	0	0	
>1-3 years	89,5	5,3	5,3	
>3-5 years	100	0	0	
>5 years	97,3	2,7	0	
Education				0,938
Diploma 3	95,9	3,1	1,0	
Diploma 4	0	0	0	
Bachelor	100	0	0	

Source: Primary processed data, 2020

The majority of nurses were 41-50 years old (37%), 28% was 20-30 years, 26% older than 31-40 years, and 9% older than 50 years old. Female was 83% of all respondents. 76% was in a marriage. From working experience, nurses work in Al-Irsyad Hospital for more than 5 years for about 75%, 19% of them have already worked for 1-3 years, and the rest work for 4-5 years. The educational background of the nurses, the vast majority was diploma 3 (97%), rest were on bachelor degrees.

The vast majority of depression levels of the nurses were normal (96%), 3% were categorized as mild depression, and 1% belonged to moderate depression.

95% of nurses didn't have anxiety, 3% have moderate anxiety, and 2% rest have mild anxiety. A previous study from Kusumawardani (2015) showed 79,3% of last year students had low anxiety

Based on **Table 1**, the vast majority of nurses (94%) have a normal level of stress, 4% have categorized into mild stress, and 2% with a moderate level of stress. This result goes along with a previous study (Saputri, 2017), where 50,2% of students in a normal level of stress.

Relationship of nurse's characteristic with the level of depression was shown in **Table 2**, where all nurses > 50 years inward of Al-Irsyad Hospital were all not having depression (100%), one nurse in mild stress was 31-40 years old, and one nurse in moderate depression was 20-30 years old. By doing the chi-square test, there was no relationship between age and level of depression (p-value 0,809).

Table 2 showed, 96,4% is not depressed category were female, one male nurse was in mild depression, and one female nurse was in moderate depression. Karin (2017) revealed a depression attack most of the females, because female tends to be more depressed than male (Karin, 2017). The data from the present study revealed no significant relationship between age and depression (p-value 0.677). Based on marital status,

97,4% of the normal status of depression were married, 1 nurse in mild depression was single, and so the nurse in moderate depression. This showed no relationship between marital status and depression (p-value 0.185).

Nurses in mild and moderate depression worked for 1-3 years, each 1 nurse. So, there was no relationship between working experience and depression (p-value 0.297).

The educational background of the nurse had nothing to do with depression (p-value 0.938). Where only 3,1% of those with mild stress and 1% with moderate depression were graduated from diploma 3.

The relationship between the demographic profile of nurses and the level of anxiety were shown in **Table 3**.

Table 3 showed 97,3% were normal, 3,8% (41-50 years) was mildly anxious, and 11,2% (> 50 years) was moderate anxious. This means, there was no relationship between age and anxiety of those nurses (p-value 0.605). 95,2% of the normal level of anxiety were female, 5,9% were male, and only 3,6% were female. This showed no relationship between sex and anxiety (p-value 0.340).

Only 2.7% of those with mild anxiety worked for > 5 years and 5.3% in moderate anxiety worked between 1 and 3 years. There was no relationship between the length of working with anxiety (p-value 0.876). Furthermore, only 2.1% in mild anxiety was graduated from diploma 3, and 3.1% in moderate anxiety were from diploma 3. Based on the analysis, there was no significant relationship between education and anxiety (p-value 0.922).

As shown in **Table 4**, those older than 50 years old were mild stress (33.3%), and only 3.6% in moderate stress was in the range of 20-30 years. Haqi (2019), a range of 20-30 years old categorized in adulthood, where there were so many emotional tensions. This is characterized as fears and manifested as stress later. Despite others, there was a relationship between age

Table 3. Relationship of Nurse' Characteristics with the level of anxiety

Characteristics	Anxiety (%)			p-value
	Normal	Mild	Moderate	
Age				0,605
20-30 years	96,4	0	3,6	
31-40 years	92,3	3,8	3,8	
>50 years	88,9	0	11,1	
Gender				0,340
Male	94,1	5,9	0	
Female	95,2	1,2	3,6	
Marital status				0,678
Married	94,7	2,6	2,6	
Single	95,8	0	4,2	
Length of working				0,876
<1 year	0	0	0	
>1-3 years	94,7	0	5,3	
>3-5 years	100	0	0	
>5 years	94,7	2,7	2,7	
Education				0,922
Diploma 3	94,8	2,1	3,1	
Diploma 4	0	0	0	
Bachelor	100	0	0	

Source: Primary processed data, 2020

Table 4. Relationship of Nurse' Characteristics with the level of stress

Characteristics	Stress (%)			p-value
	Normal	Mild	Moderate	
Age				0,001*
20-30 years	96,4	0	3,6	
31-40 years	100	0	0	
41-50 years	94,6	2,7	2,7	
>50 years	66,7	33,3	0	
Sex				0,307
Male	94,1	0	5,9	
Female	94	4,8	1,2	
Marital status				0,365
Married	92,1	5,3	2,6	
Single	100	0	0	
Length of working				0,075
<1 year	0	0	0	
>1-3 years	100	0	0	
>3-5 years	83,3	0	16,7	
>5 years	93,3	5,3	1,3	
Education				0,906
Diploma 3	93,8	4,1	2,1	
Diploma 4	0	0	0	
Bachelor	94	4	2	

Source: Primary processed data, 2020

and stress significantly (p -value 0.05). So, those older than 50 years tend to have a heavy workload and responsibility than others in the ward of Al-Irsyad Hospital. Handayani and Ratnasari (2019) showed heavy workload in caring patients and tend to become stress and saturated during duty.

Only 4.8% with mild stress were female and 5.9% with moderate stress were male. This showed no relationship between sex and the level of stress (p -value 0.307). Either mild or moderate stress happened to married nurses, each 5.3% and 2.6%. There was no relationship between marital status and nurses' stress (p -value 0.365).

Length of working didn't relate to the level of stress (p -value 0.075), where 5.3% worked for more than 5 years, 16.7% worked for 3-5 years. Based on educational background, only 4.1% in mild stress were graduated from diploma 3 and 2.1% in moderate stress were graduated from the same category. So, there was

no relationship between education and level of stress (p -value 0.906).

DISCUSSION

Hospital is a main health care provider, which characterized with the stressful workload and emotional tension in the workplace. This condition is tough especially for nurses who constantly exposed to various stressful situations and conflicts that can lead nurses to experienced anxiety, negative emotions, and depressive symptoms.

This study was conducted to determine the prevalence of the distribution of depression, anxiety, and stress among inpatient nurses at Al-Irsyad Surabaya Hospital, And to identify the factors that influence depression, anxiety, and stress among inpatient nurses at Al-Irsyad Surabaya. Based on the result it can be known that most nurses have normal depression, anxiety, and stress level.

Depression, anxiety, and stress are very common disorders that can affect people's wellbeing and other various aspects of daily life. The result of this study shows that the prevalence of depression, anxiety, and stress levels of the majority of nurses were at a normal level respectively with value 96%, 95%, and 94%. This high percentage shows that nurses can cope with their problems and stressor very well. Nurses that can't cope properly with the stressor at some point will lead to depression, anxiety, and stress especially for nurses that already reach a moderate level. Nurses that suffered mild level and a moderate level of depression, anxiety, and stress need to take action to overcome their condition and seek help when needed. From those three negative emotions, anxiety is the vaguest emotion and difficult to understand the cause. Anxiety is a vague and unpleasant feeling of fear, apprehension, characterized by tension or discomfort deriving from the anticipation of danger, of something unknown.

Depression, anxiety, and stress caused by internal and external factors. Internal factors include personal characteristics, while external factors include factors related to work. External factors that can lead to depression, anxiety, and stress such as heavy workload, excessive long of work, lack of resources, unhealthy workplace, and low support of supervisors and co-workers. While personal characteristics that affect depression, anxiety, and stress such as age, gender, marital status, years of service, and education. The coping technique also affects how someone can overcome their stressor.

Based on the result, this study identifies the relationship between depression, anxiety and stress, and personal characteristic. This study found that there was no relationship between age, gender, marital status, years of service, and level of education with the level of depression and anxiety of nurses in the inpatient room at Al-Irsyad Surabaya Hospital with p-value > 0,05. This result was different from a previous study that found women scores higher for depression according to the Beck Depression Inventory compare to men.

Most of the female respondent has experienced moderate depression relevant with previous research conducted by Karin, (2017), that found the majority of people that experienced psychological disorder such as depression were a woman (Karin, 2017). This condition caused by the characteristics of women that tend to

more depressive compared to men. In other words, women faced a higher risk of mental health-related problems compared to men.

Other studies found that personal characteristics include age, marital status, and educational level associated with depression and anxiety. Another recent study also found that recent episode of stress at work is associated with a relatively high risk of developing mental health problems like anxiety and depression for a man (Godin, Kittel, Coppieters, & Siegrist, 2005), which means external factor have a greater effect on man compare to internal factors. Other studies also found that depression is more evident in younger than in older groups (Akhtar, Danesh, & Landeen, 2007). That finding did not relevant to the result in this study where the level of depression all age range almost did not show significant differences.

A study conducted by Akhtar et, al (2007) also found that there was a relationship between educational level and depressive episode and the highest incidence of depression was among people with a post-secondary education level. In this study there was no relationship between education level and depression, this caused almost all of the participants to have the same education level (Akhtar et al., 2007).

Another finding of this study was significant there was a relationship between nurses' age and stress level in the inpatient room at Al-Irsyad Hospital with p-value 0,01 (p < 0,05). In-person life by the older age there will be more workload both in personal life or workplace, this condition may lead to cause stress. Haqi et al (2019) explain that persons with age between 20-30 years old included in the category as adult age, wherein this age describes as a time that full of emotional tension. Emotional tension often manifested in fears or worries that later can cause stress (Haqi, Mishbahatul, & Bahiyah, 2019).

CONCLUSION

Prevalence of depression, anxiety, and stress of nurses in the ward of Al-Irsyad Hospital, Surabaya were 96%, 95%, and 94%. There was no relationship between demographic nurses (age, sex, marital status, working experience, and education) with depression and anxiety. However, the relationship between age and stress was significant (p-value 0,001).

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