

## Conference Paper

# The Differences in Stress Levels of Male and Female Nurses at Hospitals

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## Abstract

A study conducted by *Northwestern National Life* stated that around 40% of workers experienced work-related stress. One of the professions who has a high risk of stress is nursing. This research aims to analyze the differences in stress levels of male and female nurses, employing a quantitative method and a cross sectional approach. There were 73 respondents, all of whom were nurses at X Hospital. Random sampling was used in this research. Chi Square test was carried out to determine the relationship between gender and work stress levels. The results showed that the majority of nurses were women (78.1% or 57 people) and male nurses accounted for the remaining 21.9% (16 people). A higher number of female nurses experience high stress (15.8%) compared to male nurses (12.5%). The result of the analysis of the gender effect on stress levels in X Hospital nurses generated *p-value* of 0.745 indicating that *p value* > 0.05. This result shows that there is no significant effect of gender on the stress level of nurses in Hospital X. Accordingly, from the hypothesis tested, it is proven that there is no significant relationship between the gender of nurses and work stress experienced.

**Keywords:** Stress Level, Nurse, Hospital

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Published: 29 July 2020

Publishing services provided by  
Knowledge E

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Selection and Peer-review under the responsibility of the WCGS Conference Committee.

## 1. Introduction

*The National Institute Occupational Safety and Health* (2014) stated that health disorders caused by work are directly affected by stressful conditions in the work environment. According to a study conducted by *Northwestern National Life*, around 40% of workers experienced work stress. Nurses are one of the health service sector workers who are vulnerable to work-related illness because they have a high risk of stress. Data obtained from *Universcheir Medische Centra* (2018) in the Netherlands in 2017 showed that around 57% of work-related illness were related to mental disorders and health service sector workers were the most affected by the work-related illness of around

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21%. In addition, a study conducted by Soep (2012) revealed that 59.6% of nurses experienced moderate stress and workload was the dominant factor causing it.

Stress in the workplace can be prevented, one of which is by doing risk management. According to Kurniawidjaja (2012), occupational health and safety risk management is a system including assessment, monitoring, and risk control, which is performed systematically and continuously in the form of cycles of a series of activities, namely anticipation of recognition, evaluation, and risk control. If the level of stress at work is known, the stress can be controlled.

## 2. Materials and Methods

This research was conducted by using quantitative methods, with the type of research used was analytic observational, namely analyzing the relationship between independent and dependent variables through hypothesis testing. Furthermore, this research employed quantitative methods to analyze the stress levels experienced by male and female nurses. The design of this research was cross sectional aiming to determine differences in stress levels experienced by male nurses and female nurses. The stress levels were measured using a *Smart pulse stress analyzer*. The time of data collection was from July 2019 to August 2019.

The respondents were all nurses at Hospital X, in Malang as many as 73 people. The sample method used in this research was simple random sampling, which is a method of taking samples randomly and meeting the inclusion criteria, namely the nurses who were directly involved in performing patient service actions. The exclusion criteria were nurses who had a history of heart disease, hypertension, and diabetes as well as nurses who refused to sign an informed consent. In addition, Chi Square test was carried out to determine the relationship between gender and work stress levels.

## 3. Results and Discussion

Identification of the individual characteristics of nurses at Hospital X, in Malang covering gender, age, working period, education, marital status is shown in Table 1 as follows.

The results of the nurse gender description are mostly female, with 78.1% or 57 people and male nurses at 21.9% or 16 people. From the age factor, 57.6% or 42 nurses are over 28 years old. In terms of working period, there are 43 people or 59% of nurses who have been working for more than 5 years. The nurse education level is dominated

TABLE 1: Results of the Individual Characteristics Description of Nurses at Hospital X in 2019

Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	16	21.9
	Female	57	78.1
Age	<28 years old	31	42.4
	≥28 years old	42	57.6
Working Period	<5 tahun	30	41
	≥5 tahun	43	59
Education	D3 (Diploma)	59	80.8
	S1 (Bachelor)	14	19.2
Marital Status	Married	52	71.2
	Single	21	28.8

Source: Primary data, analyzed, 2019

by D3 (Diploma) as many as 59 people or 80.8%. Meanwhile, the marital status of the nurses are mostly married, with 71.2% or 52 people.

Bivariate testing was carried out to determine the effect of gender and other individual characteristics such as age, working period, education, and marital status on stress levels, as shown in Table 2 below.

TABLE 2: The Relationship of Gender, Age, Working Period, Education, and Marital Status to Stress Levels of Nurses at Hospital X in 2019

Variable	Stress Level						p-value	PR
	Not High		High		Total			
	n	%	n	%	n	%		
Gender							0.745	1,256
Male	14	87.5	2	12.5	16	100		
Female	48	84.2	9	15.8	57	100		
Age							0.269	2,603
<28 years old	28	90.3	3	9.7	31	100		
≥28 years old	34	80.9	8	19.1	42	100		
Working Period							0.312	1,860
<5 years	27	90	3	10	30	100		
≥5 years	35	74.4	8	15.6	47	100		
Education							0.459	1,580
D3 (Diploma)	51	86.4	8	13.6	59	100		
S1 (Bachelor)	11	78.5	3	11.5	14	100		
Marital Status							0.369	2,740
Married	43	82.6	9	17.4	52	100		
Single	19	90.4	2	9.6	21	100		

Source: Primary data, analyzed, 2019

Table 2 explains the result of gender effect on stress levels obtained by the chi-square test with significance value of 0.745, meaning it is more than 0.05. Accordingly, it can be concluded that there is no significant effect between gender of the nurses on stress levels. The statistical test of age variable has a significance value of 0.269 or greater than 0.05, meaning that there is no significant relationship between the age of nurses and stress levels. Statistically, the significance value of working period variable is 0.312 or greater than 0.05, hence it can be said that there is no relationship between working period and stress levels of nurses.

Furthermore, Table 2 also illustrates that the educational variable produces a significance value of 0.459 which means it is greater than 0.05. Accordingly, it can be inferred that there is no meaningful relationship between the level of education and the stress level of nurses. Furthermore, the statistical test of marital status variable generates a significance value of 0.369, meaning that it is higher than 0.05. As a result, it can be concluded that there is no meaningful relationship between marital status and the stress levels of nurses.

Moreover, the result of the analysis of the gender effect on stress levels in X Hospital nurses produces *p-value* of 0.745 indicating that  $p\text{-value} > 0.05$ . This result indicates that there is no significant effect of gender on the stress levels of nurses at Hospital X. In addition, the number of nurses who experienced high stress was more in female nurses with 15.8% compared to male nurses as much as 12.5%.

The absence of stress differences between male and female nurses is caused by several points. First, there is no difference in workload. Second, there is no difference in incentives between male and female nurses. Third, in addition to playing role as nurses, most women also act as wives and mothers. However, although there are many house chores to do at home, a good coordination with the husbands makes the female nurses do not experience different stress from the male nurses.

The existing views in society regarding the assumption that men have positions in dominant power compared to women and men are judged to be stronger or superior compared to women in all respects, in this case, are not proven. The result of research conducted on these nurses shows the opposite of what is understood in the patriarchal system where there is a human civilization considering that men are stronger (superior) than women in personal, family, community, and nation life. This patriarchal culture has hereditary formed differences in behavior, status, and authority between men and women in society which later becomes a gender hierarchy (Masudi, 2002: 16).

Further, Kristina Gyllensten (2005) argued that work-related stress levels between men and women are different. At the workplace, women have higher work stress than

men. Stressors causing women to have higher levels of stress include stereotyping, discrimination, and multi-role as a wife or mother. In addition, Hamid Safarpour et al (2018) stated that female nurses are more prone to stress because of the night shift and being away from family.

Moreover, Pilar Rivera et al (2013) claimed that stress on male is dominantly caused by quantitative workloads (quantitative demands) whereas female worker stress is mostly triggered by qualitative workloads, namely emotional and intellectual aspects. According to Kristina Gyllensten (2005), the field of nursing is often led by women, one of the reasons is that this profession matches the character of women.

## 4. Conclusions

Based on the result of the analysis, it can be concluded that there is no significant relationship between gender and work-related stress. Nevertheless, the limitation in this research is some of the respondents are still at a young age, consequently, they have limitations in answering questions.

## Conflict of Interest Statement

The authors of this research declare that there is no conflict of interest related to this study.

## Source of Funding

All funds used to support this research come from the researchers themselves

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