

## **Influence of Individual and Organizational Characteristics on Work Stress among Nurses**

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### **ABSTRACT**

Hospitals, public or private, central, and even district, are an intricate organization, regardless of size. The responsibility of medical personnel is large, and their work is complex, which involves alleviating physical ailment and monitoring mental health during healing. Work conditions may cause stress to nurses. This study attempted to obtain information about work stress experienced by nurses in the inpatient section of Budi Asih Hospital, Jakarta. A total of 100 respondents participated. Results showed that organizational characteristics such as mutation, workload, and interaction between co-workers suggest work stressors. Individual characteristics such as saturation and conflict can also cause work stress. Support from the leader is required to minimize the triggering factors of stress. Extending vacation time can also reduce stress.

Keywords: Health Services, Organizational Characteristics, Individual Characteristics

## **1. Background**

Service provider organizations require management to improve services and procedures. As one of the organizations providing services such as disease treatment, hospitals must always be prepared. Nurses have 24-hour duty shift. They interact with patients, families, colleagues, and leaders or doctors who may make them vulnerable to stress.

In addition to physical tasks, nurses do work that mentally needs more attention. For example, nurses have to deal with the families of patients who sometimes complain about unsatisfactory provision of facilities or services. Patients' condition at present largely differs from the situation ten years ago. Whenever something detrimental to patients happen, they can directly complain or sue the hospital and doctor. The demand for excessive responsibility make employees feel overwhelmed with stress. Organizational characteristics can cause stress that comes from lack of autonomy, mutation, workload, career, and interaction (National Safety Council, 2004). Individual characteristics may result from family support, boredom, and conflict with co-workers (National Safety Council, 2004).

The public hospital of Budi Asih is owned by the provincial government of Jakarta and located in the city of East Jakarta. The hospital has been designated as self-financing unit since 1997. As one of the organizers of the Social Security Health Agency (BPJS), this hospital has many units with 300 nurses.

In 2006, Indonesian National Nurses Association conducted a survey of nurses in four provinces in Indonesia, and the survey showed that as many as 60% of nurses experience job stress. The stress was characterized by frequent dizziness, fatigue, aloofness, and short rest because of the high workload with low income and inadequate incentive (Rahmawati, 2007).

As medics, nurses carry considerable workload and work longer than doctors. Despite their working hours or shift work, nurses bear great responsibility in providing superior service to patients. According to the explanation given by the National Safety Council, many factors can cause stress for employees. This study references the National Safety Council, but its analysis is limited to the factors that cause job stress among nurses in Budi Asih Hospital, an inpatient hospital.

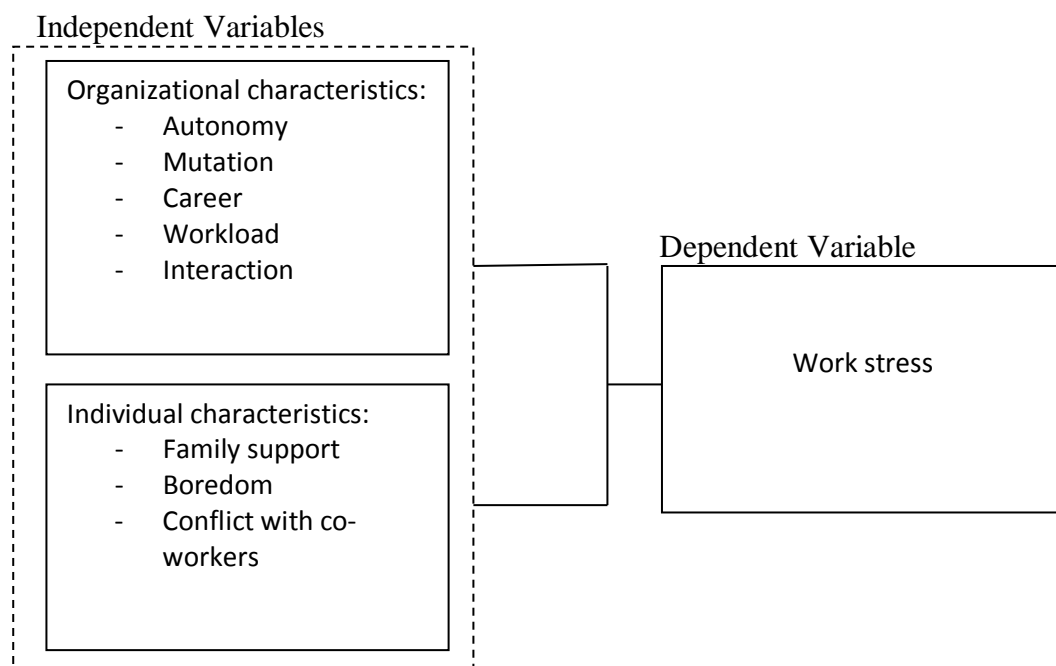
This study attempts to answer the following questions:

- 1) Do organizational characteristics greatly affect work stress?
- 2) Do individual characteristics substantially influence job stress?
- 3) What factors dominantly influence work stress?

The research objectives are to analyze the organizational characteristics, individual characteristics, and work stress. The results of this study are expected to provide accurate information about how the variables influence employees, especially nurses in a hospital setting.

## 2. Research Framework

Figure 1 presents the research framework.



**Figure 1. Research Framework**

Work stress is a condition of dependency that affects emotions, thinking process, and condition of a person (Hasibuan, 2001). Job stress can also be classified under stress from actual work and outside of work, as proposed by Siagian (2008). Sources of job stress are classified into unbalanced workload, unequal authority, uncomfortable ambiguities with regard to duty work environment, uncomfortable work circumstances, financial worries, disharmonious family life, and negative child behavior. Organizational characteristics have different variables. Rumaningsih (2011) mentioned that organizational factors that influence job stress include role conflict, career barriers, and work environment in a hospital. A rise in any of these variables increases job stress (Rumaningsih, 2011). Work experience serves as intervening variable to lighten the stress of nurses. Based on this description, we build the first hypothesis that organizational characteristics greatly affect work stress.

Wood (2001) claimed that stress has two sides, namely, constructive and destructive. Without stress, employees are not challenged, so their performance tends to decline. This theory is in line with Wheatley (1990), who suggested that individual's responses to sources of stress can be seen from one or a few aspects of life. Aspects of life encompass social habits, social relations, sexual preferences, and sleeping habits. Special aspects are also considered, specifically, menstrual cycle for women and specific aspects for the elderly. Stress on one aspect of life can affect other aspects of life. Stress at work can affect sleep habits, sexual life, or heart health. Based on this discussion, this study formulates the hypothesis that individual characteristics influence work stress (H2).

### 3. Literature Review

The Webster's dictionary defines a nurse as "a person who is trained to care for sick or injured people and who usually works in a hospital or doctor's office." Professional nursing care entails nurses to bear responsibility, exhibit honesty, develop new knowledge, be compassionate toward others, and work according to the appropriate framework standard. They help patients or clients improve their quality of life (Gokenbach, 2014).

According to Ivancevich and Matteson (2004), stress is an adaptive response mediated by differences in the process, either physical or psychological, as a consequence of the various elements of the external environment. This definition has two main aspects.

1. Stress is a response or reaction to certain situations or conditions and does not refer to the stimulus or stressors.
2. Stress can be mediated by individual differences (Luthans, 2002).

The National Safety Council (2004) reported that the cause of stress can be divided into three, that is, organizational, individual, and environmental characteristics. Organizational characteristics consist of

1. Autonomy - independence of nurses in performing their duties without strict monitoring of their immediate supervisor.

2. Mutation - displacement of nurses from one unit to another unit, which can be in the same building or another branch.
3. Career - a post occupied by a person.
4. Workload - amount of work received and carried by someone that involves job responsibilities.
5. Interaction - direct contact between patients and their family and ongoing nurses, wherein parenting occurs under the coordination of a nurse.

The following individual characteristics can cause work stress:

1. Family support, specifically the support that comes from the husband/wife and children and large families when executing a job
2. Boredom when the same task is performed throughout a year without variation
3. Conflict with co-workers, a discrepancy between/among two/more members of a group in the workplace

### **Health Services in Indonesia**

Health services in Indonesia remain constrained by facilities and always receive complaints from the community, especially from those in the middle income group. However, since the formation of BPJS in 2014, the community have expectations.

Health services are divided into two categories.

1. Primary health service is the main health care services provided for the public if they have health problems or accidents.
2. Secondary and tertiary health services include hospital wherein community members require further treatment. In Indonesia, hospitals have different levels, ranging from type D to class A. (Juanita, 2002)

A study in the hospital of Dr. Kariadi Semarang by Ambarwati (2014) reveals that social support may moderate the effect of workload on nurses' job stress. The results of the analysis using t-test show the absolute value of the difference among social support workloads with significant effect on work stress.

## **4. Methodology, Results, and Discussion**

### **Methods of Data Analysis**

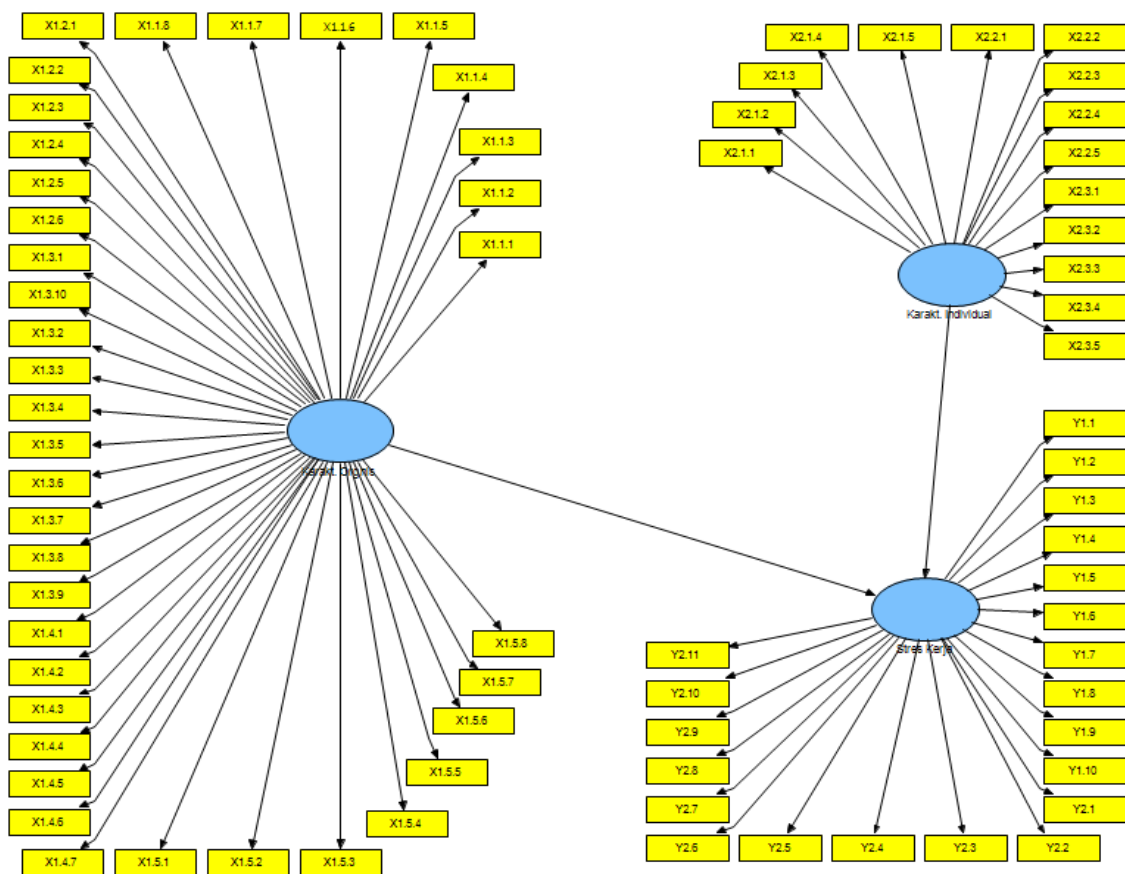
To test the hypotheses, we used partial least square. Based on the literature review and the problems, three variables are measured in this study, that is, two independent variables and one dependent variable. The independent variables are the organizational characteristics (X1) and individual characteristics (X2). Organizational characteristics consists of lack of autonomy, mutation, workload, career, and interaction. Individual characteristics comprise family support, boredom, and conflict with co-workers. Y is the dependent variable, that is, job stress as measured by emotion (Y1.1) and attitude or behavior (Y1.2).

### **Results**

The results are based on the characteristics of the respondents. The respondents were between 20 and over 50 years old. The younger respondents were not civil servants. Most respondents (55) were aged 20–30 years. Based on employment status, respondents were grouped into civil servants and permanent employees. The education level of respondents ranged from high school to master’s degree. The working period of respondents varied from 5 to 15 years.

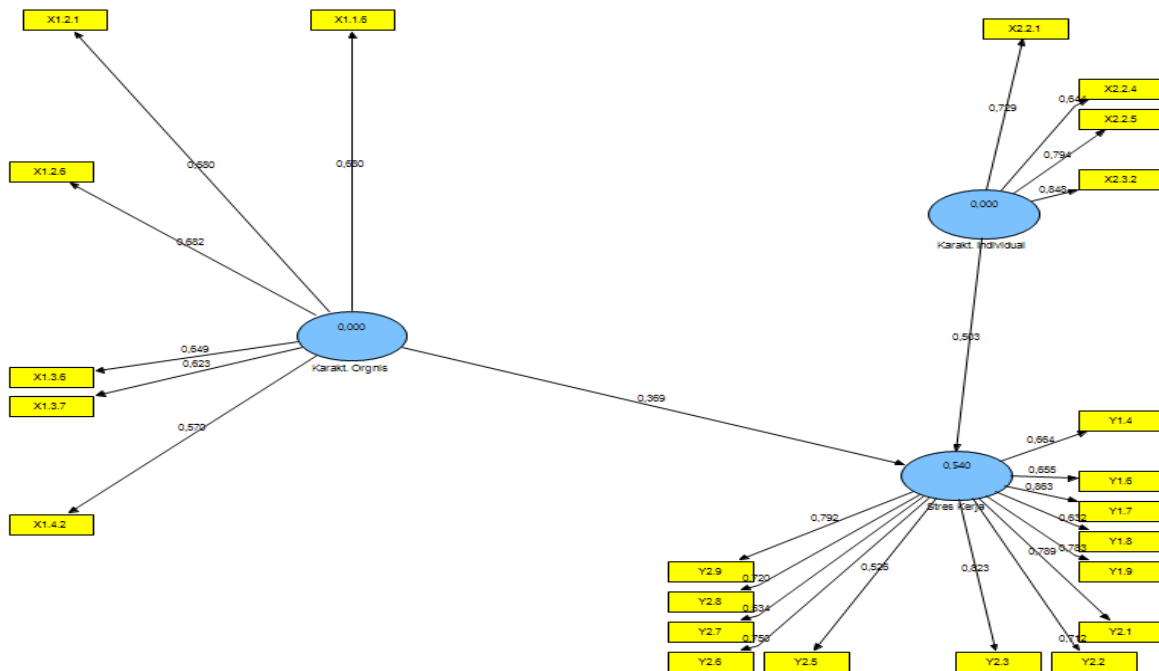
**Analysis**

Figure 2 shows an early model of the research, detailing the indicators of organizational characteristics, individual characteristics, and work stress.



**Figure 2. Research Model**

Reliability indicators are reflected by the value of the loading factor, which indicates the strength of the interrelation between the latent variables of organizational characteristics, individual characteristics, and stress of employees toward each variable indicator. Figure 3 shows the model after the re-test.



**Figure 3. Research Model after Drop**

The inner models aim to evaluate the influence between latent variables and test the hypotheses. Structural models were evaluated by using R-square for endogenous variables and comparing t-count with t-table (t-table at 95% confidence level is 1.96).

This study has an endogenous variable, that is, work stress. Work stress is influenced by the organizational and individual characteristics (see Figure 3). The R-square of the organization and individual characteristics is at 0.539 (see Table 1). This finding means that the organizational and individual characteristics greatly contribute to job stress by 53.9% and 45.1%, respectively, when influenced by other factors, such as demands of the job.

**Table 1. Overview**

	AVE	Composite Reliability	R-square	Cronbach's alpha	Communality	Redundancy
Individual characteristics	0.5739	0.8421	0	0.7514	0.5739	0
Organizational characteristics	0.4207	0.8127	0	0.726	0.4207	0
Work stress	0.5158	0.9314	0.5399	0.9206	0.5158	0.192

To test the hypotheses, we conducted bootstrapping analysis by path coefficients by comparing t-count with t-table (see Table 2). Table 2 shows that t-table value is greater than 1.96 (at 95% confidence interval) for all latent variables. This result means that the two hypotheses are supported.

**Table 2. Path coefficients**

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	Standard Error (STERR)	T Statistics (O/STERR)
Individual characteristics →Work stress	0.5025	0.5117	0.0734	0.0734	6.848
Organizational characteristics →Work stress	0.3694	0.3752	0.0676	0.0676	5.4681

## Hypothesis Testing

### Hypothesis 1

Path coefficient analysis indicates that organizational characteristics influence work stress. The influence of organizational characteristics on work stress is positive, wherein the value of the parameter coefficient is 0.36. The higher the organizational characteristics (e.g., high workload, strict organization rules, a mutation system, and frequent interaction between officers with the patients' family), the higher the work stress of the employee.

Hypothesis 1 is accepted because the t-statistics = 5.47 is greater than the t-table = 1.96. The characteristics of hospital organization greatly influence work stress.

### Hypothesis 2

Path coefficient analysis shows that individual characteristics have a positive influence on work stress, with the value of the parameter coefficient at 0.50. The higher the individual characteristics (e.g., family support, boredom, and conflict with co-workers), the higher the work stress of the employee.

Hypothesis 2 is accepted because the t-statistics = 6.84 is greater than the t-table = 1.96. The individual characteristics of hospitals significantly influence work stress.

In this research, the management of the Budi Asih Hospital has given nurses assigned at inpatient rooms an opportunity to bear full responsibility. From the in-depth interviews, we learned that the nurses feel pressure from their interactions with the patient's family. This phenomenon is expected because of the location of their jobs. These nurses often have interaction with the families of patients and encounter unpleasant circumstances. For example, if the family of the patient crowds the room, then they create noisy circumstances and disturb the nurses' work. These situations can cause work stress for nurses. Nurses also have less opportunity to take a vacation because of shift duty. This short rest can lead to job stress when not taken seriously by the management or supervisor. The dominant factor that affects job stress of nurses in this study is boredom and interaction.

## Discussion

Stress is a form of physical, psychological, emotional, and mental tension. Such a tension affects aspects of one's daily life. Stress can decrease productivity and result in

pain and mental disorders. The pressure that stresses people is that which threatens (threaten), that which frightens (scare), that which alarms (worry), and that which are painful or piercing (Canadian Centre for Occupational Health and Safety, 1999).

Fifty-five respondents were aged 20–30 years. The number is reasonable considering that Budi Asih Hospital has been established for more than four decades. The values assumed by the hospital include commitment, empathy, responsiveness, honesty, and trustworthiness. In providing treatment to patients, nurses require cooperation with hospital personnel from other professions. When conflicts with colleagues arise, they can be a heavy burden for nurses that can lead to stress, because if nurses take an action without coordinating with other nurses and doctors, they can cause a mistake fatal to patients (Saragih, 2008). Nurses were able to complete many tasks on time, which is in line with the research. The variables of organizational characteristics have a positive and significant influence on work stress.

Age can influence the type of workplace stress experienced, but it tends to be specific to certain aspects of the job. For example, in a study conducted by Statistics Canada (Williams, 2002 cited in Melanie, 2005) workers over the age of 45 felt more stress as a result of having to learn computer skills than those between the ages of 15 and 24. This situation is the same as our study. The respondents were between 22–50 years old. Stress can be the result of any number of situations in the workplace (Melanie, 2005), and our research supports the theory and confirms that nurses feel bored when tasked the same job all year round, creating job stress.

## 5. Conclusions and Recommendations

The following conclusions are reached after testing and analyzing the data obtained. The results of the study suggest that individual differences in terms of work experience play an important role in facing the reality of the job.

1. Both hypotheses are accepted because of the analytical results obtained indicating that  $t$ -count is greater than  $t$ -table.
2. Job stress is influenced by many factors, such as organizational and individual characteristics. External factors, such as the demands of the job, also increase the stress among nurses.
3. The nurses at inpatient care bear great responsibility in providing outstanding service to patients and their families.

With the above conclusions as basis, the following suggestions are provided:

1. Management should consider many factors that can cause stress among nurses to reduce the negative impacts.
2. Work stress can be reduced by extending the vacation of nurses so long as it is not intrusive to their duties and responsibilities.
3. Management must provide moral and social support to nurses at any time if necessary.



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