

# Work-related psychological distress and social dysfunction in Nurses at Haji Hospital Medan-Indonesia



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## ABSTRACT

**Background:** The concept of “stress” has been growing for a long time and has attracted a lot of attention, behaviour, and philosophy of many people in the world. Nowadays, stress has become a popular topic among health care professionals. Nurses are assumed to have heavy and various workloads. The nursing workload is influenced by stressors that can cause stress. At some level, psychological, physiological and sociological symptoms might appear. Job stress related to work stress factors include role ambiguity, role conflict, quantitative work overload, career development, and responsibility toward others, which have an impact on psychological distress and social dysfunction.

**Objective:** This study aims to determine the psychological distress and social dysfunction in nurses related to job stressors in Haji Hospital Medan.

**Method:** This research was an analytic research with a cross-sectional method using total sampling of 186 nurses who are still working in Haji Medan Hospital. The instruments used were the Stress Diagnostic Survey to measure work stress and GHQ12 to measure psychological distress and social dysfunction. The statistical tests used were Pearson correlation test (for a normal distribution) and Spearman (for non-normal distribution).

**Results:** There was a significant relationship between total work stressors and psychological distress ( $p = 0.0001$ ), also, a weak positive correlation ( $r = 0.364$ ) showed that total work stressors and psychological distress would increase together. The relation between total work stressors and social dysfunction was statistically significant ( $p = 0.018$ ) and a very weak negative correlation ( $r = -0.173$ ) was found, meaning that an increase in total job stress score would lower the social dysfunction score.

**Keywords:** Working stressor, psychological distress, social dysfunction

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## BACKGROUND

The concept of “stress” has developed over time and has attracted much attention and behaviour and the philosophy of many people worldwide. Currently, stress has become a popular topic of daily conversation, people even gossip without necessarily understanding the true meaning of stress.<sup>1</sup>

Many insights are given by experts ranging from the less scientific to the very scientific as discussed in psychiatry. Commonly, the term stress leads to a negative connotation which interferes a person’s mental state neglecting the definition and the causes. On the contrary, according to the psychiatric view of stress, it is discussed as stratified, ranging from the normal (eustress), mild, to severe (distress) which able to cause phenomena of psychiatric symptoms and deviant behaviours to the sufferer.<sup>1,2</sup>

Stress in work is common, an inescapable fact in people’s lives caused by many factors at work, in the family, at home, or in the environment. According to Wilton, stress affects both human and management resources at the same time.<sup>3</sup>

Meanwhile, stress can also be expressed as a phenomenon in which there is a strong stimulation

that can cause tension in the individual who experienced it.<sup>3,4</sup> The reactions shown from the stimulus can or cannot be adapted well. Terrifying events lead to a painful reaction when the individual is unable to adapt. The brief effect of such a painful reaction occurs as an immediate reaction to the conditions in the work environment.<sup>5</sup>

Stressors can generally be described as a condition experienced by a person, whether good or bad to the self (physical, mental, or social), which can trigger an individual based on sensitivity values that vary from one person to another.<sup>4</sup>

The stressors can be originated from the person itself or the interpersonal relationship in working including norms, rules, wages, reputations, and philosophies which trigger a various responses of the individual, such as physical, mental, and social behaviour.<sup>5,6</sup>

If the stressor is relatively low according to the normal tolerance of the individual, the stimulus is unable to generate a high reaction in the individual to respond optimally. As a result, the person cannot perform its functions and gain less achievement, which leads to a decrease in performance.<sup>5,6</sup>

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Conversely, if the given stressor is too heavy for a person relative to his or her normal ability, the burden will cause a negative response and the individual performance will also decrease.<sup>5,6</sup>

In the profession, nurses tend to be exposed to the same stressor as any normal person needs to produce a life reaction. Prihatini cited the results of PPNI research (What is PPNI? Please state the abbreviation of PNNI!) in France (Frasser, 1997) in which 74% of nurses experienced distress, while in Indonesia, 51% of nurses experienced stress in various levels associated with the stressors in Sidikalang Hospital and its surroundings. According to research conducted by the National Association of Nursing Indonesia, there were 50.9% of nurses experience work stress in Indonesia.<sup>7</sup>

A study to determine psychological distress and social dysfunction related to working stressors affecting the nurses in the hospital is necessary to improve the working performance.

## METHOD AND TIME OF STUDY

This research was an analytic research with a cross-sectional approach analysing the relationship between SDS factor and GHQ12. The data was obtained in Haji Hospital, Medan with the total number of 219 nurses in different fields from November 2013 to February 2014. Population and sample were selected by checking the number of nurses who were still working at Haji Hospital and they were filtered validly through exclusion and inclusion criteria. A total sampling was used for this study consist of 186 nurses.

The inclusion criteria used for data collection are nurses who were employed by Haji Hospital, aged between 21 to 55 years, and had been working for at least 1 year. The exclusion criteria for this study are those who were suffering from severe physical illness and psychiatric disorder, as well as being suspended from work.

This research used a questionnaire as the research instrument composed of examples from similar research questionnaires that have been validated previously and used legitimately according to the Stress Diagnosis and GHQ12 Survey model globally including Indonesia.

### Stress Diagnostic Survey

Stress diagnostic survey (SDS) is a work stressor questionnaire containing 30 questions covering six type of job stressors: 1) role ambiguity, 2) role conflict, 3) quantitative work overload, 4) qualitative work overload, 5) career development, and 6) personal responsibility. This questionnaire was edited from a book with a title "*Action on Stress at*

*Work*" and had been developed by Research and Development Agency of Ministry of Health in Indonesia.<sup>8</sup>

This questionnaire had been validated and assessed quite accurately, thus, it could be used in Indonesia. Assessments for each work stressor were grouped with pre-made numbers from 30 questionnaires using a seven-point Likert scale, with details as follow:<sup>8</sup>

1. Role ambiguity consists of numbers: 1,7,13,19, and 25
2. Role conflict consists of numbers: 2, 8, 14, 20, and 26
3. Quantitative work overload consists of numbers: 3, 9, 15, 21, and 27
4. Qualitative work overload consists of numbers: 4, 10, 16, 22, and 28
5. Career development consists of numbers: 5, 11, 17, 23, and 29
6. Responsibility toward others consists of numbers: 6, 12, 18, 24, and 30.

This assessment was obtained by accumulating the respective parts of the work stressors and the results would be classified as:

- a. Low stress level if total score < 10
- b. Medium stress level if total score 10 – 24
- c. High stress level if total score > 24

The obtained scores were then sequentially coded or given interval value 1, 2, and 3 for the input on SPSS statistical instruments. (Please specify which series of SPSS used for this study!)

### Stress Psychopathology in General Health Questionnaire (GHQ12)

In this study, authors cited a set of questionnaire model contents offered by Goldberg & Williams (1988) *General Health Questionnaire* abbreviate as GHQ12. GHQ12 can be used to assess anxiety, insomnia, depression, hypochondriasis, and social dysfunction.<sup>9,10</sup>

The measuring instrument includes 12 questions and uses a Likert scale with a value ranging from 0 to 3. This instrument is also a survey with an additional purpose to assess the symptoms of psychological distress. In GHQ12, there is an analysis of two constructing factors. The first factor consists of psychological distress contracts (items 2, 5, 6, 9, 10, and 11), while the second factor consists of social dysfunction contracts (items 1, 3, 4, 7, 8, and 12). GHQ12 had been validated in Indonesia by Sri Idaiani and Suhardi, in which the alpha Cronbach value for each of the collisions were 0.776 and 0.670 respectively.<sup>11</sup>

The twelve items were questioned during data collection to be a criterion of the intensity due to excessive stress which results in psychological distress in the respondent.<sup>11</sup>

## RESULTS

According to Spearman correlation test, there was a significant relationship between quantitative work overload and psychological distress ( $p = 0.0001$ ). Additionally, there was a weak positive correlation ( $r = 0.289$ ) between quantitative work overload and psychological distress meaning that the higher the score of quantitative overload work, the higher the psychological distress score would be.

The stressors from qualitative work overload also had a significant relationship with psychological distress ( $p = 0.0001$ ). A weak positive correlation ( $r = 0.381$ ) between them was also found implying that high qualitative work overload would increase the psychological distress score.

Additionally, a significant relationship was also found between career development stressors and psychological distress ( $p = 0.0001$ ). A positive correlation ( $r = 0.573$ ) was discovered between career development and psychological distress suggesting that an increase in career development stressors would add the psychological distress score.

The components of role ambiguity, role conflict, and responsibility toward others were not significantly related to psychological distress ( $p > 0.05$ ).

Moreover, the relationship between total work stressors and psychological distress was statistically significant ( $p = 0.0001$ ) and had a positive correlation ( $r = 0.364$ ) revealing that the rise in the total work stress would increase the psychological distress score.

Data analysis using Spearman correlation test revealed a statistically significant correlation between role ambiguity and social dysfunction ( $p = 0.018$ ) with a very low negative correlation value ( $r = -0.173$ ) indicating that an increase in role ambiguity score would decline the score of social dysfunction.

Quantitative work overload stressor also had a significant relationship with social dysfunction ( $p = 0.003$ ) and the correlation value was positive ( $r = 0.218$ ) denoting that the score of quantitative work overload and social dysfunction score will increase together.

The components of role conflict, qualitative work overload, career development and responsibility toward others are not significantly related to social dysfunction ( $p > 0.05$ ).

There was a significant correlation between total work stressors and social dysfunction ( $p = 0.018$ )

with a negative correlation value ( $r = -0.173$ ) meaning that an increase in total work stressor score would lower the social dysfunction score.

## DISCUSSION

Table 1 shows the characteristics of respondents who had participated in this study. Most respondents were women with 146 people (78.5%) and most of them fall into the age group of 30-40 years with 80 nurses (43%). According to the length of work, the data was distributed evenly for those who have been working for 1-5 years, 5-10 years, and over 10 years with the percentage of 29.6%, 34.9%, and 35.5% respectively. Generally, a greater proportion of respondents (80.1%) had gotten married.

**Table 1** The Characteristics of the Nurses in Haji Hospital

Characteristics	N	%
Gender		
Female	146	78.5
Male	40	21.5
Age		
21- 30 years old	61	32.8
31 – 40 years old	80	43
> 40 years old	45	24.2
Length of Work		
1-5 years	55	29.6
6-10 years	65	34.9
> 10 years	76	35.5
Marital Status		
Single	37	19.9
Married	149	80.1
Education Level		
Diploma	151	81.2
Bachelor	34	18.3
Master	1	0.5
Working Site		
Administration	3	1.6
Paediatric Ward	18	9.7
Adult Ward	80	43
Haemodialysis	6	3.2
ICU	21	11.3
ER	12	6.5
Obstetrics and Gynaecology	14	7.5
OR	15	8.1
Educational	16	8.6
Radiology	1	0.5

**Table 2** The Level of Stress in Respondents based on Working Stressor

Variables	N	%
Role Ambiguity		
Low	25	13.4
Medium	145	78
High	16	8.6
Role Conflict		
Low	26	14
Medium	151	81.2
High	9	4.8
Quantitative Work Overload		
Low	96	51.6
Medium	89	47.8
High	1	0.5
Qualitative Work Overload		
Low	76	40.9
Medium	105	56.5
High	5	2.7
Career Development		
Low	99	53.2
Medium	86	46.2
High	1	0.5
Personal responsibility		
Low	89	47,8
Medium	90	48,4
High	7	3,8

**Table 3** Psychological Distress and Social Dysfunction in Respondents

Variables	N	%
Psychological Distress		
Yes	81	43.5
No	105	56.5
Social Dysfunction		
Yes	80	43
No	106	57

Moreover, most respondents worked in adult wards with the amount of 80 respondents (43%). These findings are in line with the research conducted by Akif Lutfi et al where the proportion of the nurses were 68 women (63%) and 40 men (37%), while there is no similar finding at the level of education (what do you mean by this sentence? Please look back at your table, it shows similar results!). His research also mentioned that approximately three-quarter of nurses were diploma graduates (Please write your data regarding the level of education because it was

not stated in the previous sentence!). In terms of length of work (Do you mean “age”?), the study also showed a difference, whereas the majority of nurses working in the most <55 years (what do you mean by the working duration < 55 years? Is it the age of the nurses? Or is it a typo and should be written as <5 years? Please correct this!) group were 48 people (44.4%).<sup>12</sup>

Table 2 represents the level of stress in respondents based on working stressors. The level of stress was mainly distributed in the low and medium category. The role ambiguity in respondents according to working stressors mostly fall into the medium category with 145 people (78%). A total of 151 respondents (81.2%) showed moderate categories for role conflict. In the qualitative work overload component, the moderate category is found in 105 respondents (56.5%). Meanwhile, for the quantitative work overload and career development, more than half of the nurses fall into the low category with the number of 96 (51.6%) and 99 (53.2%) respectively. These results were in line with the research conducted by Hariyono et al that the highest level of work stress is in the category of moderate level with 43 respondents (82.70%), but the highest stressor level was workload stressors found in moderate stress category with 32 people (61.54%), while the research conducted by Iin revealed that the highest stress level was found at low level (46.7%, n = 7) and medium level (53.3%, n = 8) which is found at workload stressors (53.6%) (What do you mean by this?).<sup>13,14</sup>

From table 3, it is known that psychological distress in nurses presented in 81 people (43.5%), which is slightly higher than social dysfunction found in 80 nurses (43%). This is in accordance with the research conducted by Lutfi et al at King Abdullah Hospital in which work stress on nurse was approximately 44% based on length of work.<sup>12</sup>

This is also consistent with the findings by Edwards et al that 35% of psychiatric cases in nurses, 51% was due to emotional disturbance caused by fatigue, 24% was due to depersonalization effects of work fatigue, and 14% was due to personal achievement. This assumption can be attributed to the presence of symptoms of psychological distress in the nurse. The same thing was also raised by Iin in his research conducted in the ICU of Cipto Mangunkusumo Hospital that the psychological symptoms and behavioural symptoms were found in 64.3% and 60.7% nurses respectively.<sup>13,15</sup>

Nakakis explained that nurses reported 11 additional sources of stress consist of patient care (aggressive and cruel), staff attitudes and behaviour, facility and resource issues (lack of manpower and limited time), employment aspects (inter-professional relations and administrative issues), personal

**Table 4 Spearman Correlation between Work Stressors and Psychological Distress**

Variables	p	r
Role Ambiguity	0.683	-0.03
Role Conflict	0.221	0.09
Quantitative Work Overload	0.0001	0.289
Qualitative Work Overload	0.0001	0.381
Career Development	0.0001	0.573
Responsibility toward Others	0.303	0.076
Total Work Stressor	0.0001	0.364

**Table 5 Spearman Correlation between Work Stressors and Social Dysfunction**

Variables	p	r
Role Ambiguity	0.018	-0.173
Role Conflict	0.223	-0.090
Quantitative Work Overload	0.003	0.218
Qualitative Work Overload	0.376	-0.065
Career Development	0.969	0.003
Responsibility toward Others	0.086	0.126
Total Work Stressor	0.018	-0.173

thoughts/feelings/expectations, lack of support or supervision, cultural environment (heavy workload, low spirit, and assignments), career issues, working conditions (working shift, night shift, and no break), less service and change of the organization.<sup>16</sup>

The research conducted by Herdis *et al* reported that nurses in Iceland had a significant relationship between the workload of time and time management on work stress ( $p = 0.003$ ), as well as the unplanned job ( $p = 0.000$ ). In this study, it was found that there was a significant relationship between the responsibility toward others and the occurrence of stress ( $p = 0.003$ ). There was a moderate relationship between role conflict and job stress ( $r = 0.41$ ,  $p = 0.001$ ). It can be assumed that the workload of time management and unplanned work is part of the quantitative work overload, and job stress would have psychological effects and social behavioural changes in the nurse.<sup>17</sup>

Another study conducted by Edwards *et al* showed a moderate relationship between the index of fatigue shown in work and GHQ12 score ( $r = 0.497$ ,  $p < 0.01$ ). Emotional and physical reactions from nurses' interactions and work environments might induce fatigue and have an effect in distress and behaviour change.<sup>15</sup>

A research conducted by Verhaeghe *et al* explained that support from superiors, time management, and methods of supervision had a significant relationship with the occurrence

of distress in ICU nurses and non-ICU nurses. However, the support from superiors had a negative relationship with the occurrence of distress (ICU:  $r = -0.13$ ,  $p = 0.002$ ; non-ICU:  $r = -0.12$ ,  $p < 0.001$ ) and time management also had a negative relationship with the occurrence of distress (ICU:  $r = -0.08$ ,  $p = 0.043$ ; non-ICU:  $r = -0.14$ ,  $p < 0.001$ ), while the supervision method was only significant toward non-ICU with a negative correlation ( $r = -0.18$ ,  $p < 0.001$ ).<sup>18</sup>

A study in Jordan Hospital performed by Lutfi *et al* explained that low salaries in career development, high workload, and responsibility toward others was categorized in difficult work groups (mean = 3.52, SD = 0.75). Competition with colleagues has a value (mean = 3.35, SD = 0.65), ability to make new innovations and make decisions in solving problems has value (mean = 3.81, SD = 0.74). (What do you mean by this?) There was no significant relationship between difficult workload and nurse performance in making new innovation as well as in solving problems ( $r = 0.327$  and  $r = 0.302$  respectively, Sig = 0.01), while there was no significant relationship between competition with colleagues and work performance in making new innovation and decision-making ability to solve problems ( $r = 0.144$  and  $r = 0.302$  respectively). It can be concluded that the correlation was ranging from very weak to medium in terms of career development, quantitative work overload, qualitative work overload, role conflict, and responsibility toward others. If it was beyond the threshold, the nurses' performance will be affected and change the social activities in the nurse.<sup>12</sup>

In the research conducted by Satria at Hasanudin University Hospital in Makassar, there was no relationship between nurse workload and performance in the morning shift ( $p = 0.078$ ), afternoon shift ( $p = 0.378$ ), and night shift ( $p = 0.160$ ). In this case, workload based on work shift can be related to quantitative work overload, whereas working performance, according to Gibson, is influenced by individual variable, psychological variable, and organizational variable. The high workload will affect work performance on emotional reactions such as negligence, irritability, emotional, and social change as an outcome of external factor changes and personal conflict.<sup>17</sup>

In addition, Prihatini's research conducted at Sidikalang public hospital showed that there is a relationship between work stress that caused psychological stress, as well as physical and social behaviour change in nurses working in the surgical wards ( $n = 6$ ,  $r = 0.885$ , sig = 0.019), paediatric wards ( $n = 9$ ,  $r = 0.705$ , sig = 0.034), obstetrics and gynaecology wards ( $n = 7$ ,  $r = 0.756$ , sig = 0.049), and internal medicine wards ( $n = 8$ ,  $r = 0.797$ , sig = 0.018).<sup>7</sup>

## LIMITATION OF RESEARCH

The limitation of this study was that not all factors causing stress at work are discussed in detail and the presence of other factors causing stress was not mentioned in this study. The GHQ12 questionnaires in this study are rarely used (How could the core method of the study was rarely used? This research was an analytic research with a cross-sectional approach analysing the relationship between SDS factor and GHQ12. Serious evaluation in the method should be done.) to measure psychological distress and social dysfunction in the nurse population. Self-reporting filling was done under certain conditions, thus, the psychological factors and emotions of respondents when answering questionnaires had a dominant effect on the results of research.

## CONCLUSIONS AND RECOMMENDATIONS

### Conclusion

There was a significant relationship between various working stressors and psychological distress in nurses who were working at Haji Hospital Medan. Although there was a relationship between some independent variables of working stressors and the nurses' social dysfunction, the correlation value does not indicate any significant effect on the social dysfunction of the nurses.

### RECOMMENDATIONS

The management of Haji Hospital Medan should pay close attention to the results of this research as an input to control the stressor.s. Mild symptoms of distress may not be avoided because of the psychological variations of the nurses, but they can be controlled by conditioning the harmonious organizational culture with the individual values for each nurse.

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