

Correlation between Characteristics and Workload with Nurses Job Stress In-patient Unit Gedung A of Cipto Mangunkusumo Hospital Jakarta

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Abstract: Nurse is a profession specializing in providing health service which possesses high risk for work-related stress due to greater workload. This study aimed to identify correlation between characteristics and workload with nurses job stress In-Patient Unit Gedung A of Cipto Mangunkusumo Hospital Jakarta. The study design was descriptive correlative and conducted in June 2017. The study involved 243 nurses who work In-patient Unit Gedung A of Cipto Mangunkusumo Hospital Jakarta with minimum nursing diploma education selected by random sampling method and the distribution of the proportion of nurses in each room using the Proportionate Stratified Random Sampling system. ENSS (Expanded Nursing Stress Scale) and nurse workload questionnaire made by Idawati as the instrument. Instruments testing uses a significance of 5%, validity test of work stress and workload instruments was validated. Hospital should take workload into consideration in order to create a supportive working environment for nurses.

1 INTRODUCTION

Nursing is aimed at making the lives of people who are in need better. It is about helping people while they are ill, helping them throughout recovery, and helping them maintain their health. It's about assisting people achieve better health and a better quality of life through using their knowledge, skills, and compassion (Hall, 2009)

In providing nursing care, nurse has responsibilities and roles as caregiver, communicator, advocator, and manager (Potter, 2013). The roles and responsibilities support implementation of comprehensive nursing care in biopsychosocial and spiritual aspects. They also aim to prevent illness, provide care for patient who is suffering from a disease, disability, and dying patient, as well as improving patient's health.

Nurse is vulnerable to work-related stress in performing his duty and profession. At work, nurse meets and interacts with patient, family, visitor, fellow nurse, and other health professionals from multidisciplinary team and also complies with policies in working environment. It may result in excessive workload that overwhelms his physical,

emotional, and psychological condition (Kurnia, 2010).

Supardi (2007) outlined that one's workload should be in proportion with his own physical and cognitive capacity as well as limitation. Each person has distinctive approach in managing the workload to be in proportion with his own ability. A person with workload that exceeds his own capacity may experience burnout which affect his mental and result in fatigue, mood change, boredom, irritability, and distress. Stress has a continuum ranging from adaptive to maladaptive; mild stress is an adaptive stress response followed by moderate stress which may affect individual and severe stress that is maladaptive and results in panic attack and depression.

An interview involving 20 ward nurses in Building A which conducted from November 20th through 24th 2016 revealed several factors that affected their performances including higher workload, higher work demand, pressure to improve performance from both patient and supervisor, conflict with coworker or supervisor or another health profession, shift work, exposure to dying patient, and number of patients exceeding number of nurses.

The issues may lead to stress in nurses and they may experience headache, stiffness, neck pain, and insomnia which contribute to lower concentration and poor performance and even lower productivity in providing nursing care.

- Diploma III	222	91,3
- Bachelor (S1)	21	8,7
Years of Service		
- < 5 years	137	56,5
- 5-10 years	31	12,6
- > 10 years	75	30,9

2 METHODS

The study design was descriptive-correlative in which dependent (characteristics and workload) and independent (nurses job stress) variables were analyzed to identify correlation between both variables.

The study sample was nurses working in Inpatient Department in Building A of Dr. Cipto Mangunkusumo hospital. Participants were recruited through quota sampling method with total number of 243 nurses who met the inclusion criteria established by authors.

Data collection was conducted through questionnaire. Univariate analysis was applied to identify distribution of frequency of variables and bivariate analysis was employed to identify correlation between dependent and independent variables.

The Determination of the validity test is done by means of a correlation test between the scores of each items statements with a score corresponding to a significance level of 5%.

3 RESULT

The study was conducted in June 2017 at In-Patient Unit Gedung A of Cipto Mangunkusumo Hospital Jakarta by involving 243 participants.

Table 1: Participant's Characteristics (n=243).

Characteristic	Frequency	(%)
Gender		
- Male	42	17,3
- Female	201	82,7
Age		
- < 25 years	111	45,6
- 26-35 years	60	24,7
- 36-45 years	46	19
- 46-55 years	26	10,7
Characteristic	Frequency	(%)
Marital Status		
- Married	112	46,1
- Single	118	48,5
- Widow/Widower	13	5,4
Educational Background		

Table 1 indicates that majority of participants were females (n= 201, 82.7 %), aged between 17 to 25 years old (n=111, 45.6 %), and single (n=118, 48.6 %). Most of them were Diploma III/Vocational nursing graduates (n=222, 91.3 %) and had been working for less than 5 years (n=137, 56.5 %).

Table 2: Correlation between Demographic Characteristics and Work Stress (n=243).

Variable	Work Stress				Total	P Value	OR C I 95%
	Mild		Moderate				
	n	%	n	%			
Gender							
Male	32	76,2	1	23,8	42	0,9	2,78
Female	12	62,7	7	37,3	20	5	5
Age							
17-25 years	10	97,3	3	2,7	11		
26-35 years	8	100	0	0	1	0,5	3,59
36-45 years	60	80,4	9	19,6	60	8	5
46-55 years	37	100	0	0	46		
Marital Status							
Single			5		11		
Married	66	56	2	44	8		
Widow/widowed	79	70,5	3	29,5	11	0,0	12,7
Education							
Nursing Diploma	14	64,4	7	35,6	22		
Bachelor of Nursing	3		9		2	0,5	0,41
Years of Service							
< 5 years	15	71,4	6	28,6	21	19	5
5-10 yrs							
> 10 years	73	53,3	4	46,7	13	0,0	19,7
	25	80,7	6	19,3	7	01	44
	60	80	1	20	31		
			5		75		

Table 2 indicates that 126 female nurses and 32 male nurses were affected by mild stress. The statistical analysis revealed p value 0.95 > 0.05 which implied a there is no correlation between gender and work stress in nurses working in Inpatient

Department in Building A of Dr. Cipto Mangunkusumo hospital

Majority of participants aged 17 to 25 years old and 108 participants were affected by mild stress, 60 participants aged 26 to 35 years old affected mild stress, 39 participants aged 36 to 45 years old affected mild stress, and 26 participants aged 46 to 55 years old were affected by mild stress. The statistical analysis revealed p value $0.58 > 0.05$ which implied a there is no correlation between age and work stress in nurses working in Inpatient Department in Building A

The table also shows that most of single participants were affected by mild stress and 79 married participants were affected by mild stress. The statistical analysis revealed p value $0.002 < 0.05$ which implied a significant correlation between marital status and work stress in nurses working in Inpatient Department in Building A of Dr. Cipto Mangunkusumo hospital. OR values was 12,777 which suggested that participants with single status marital were 12,777 times more likely to be affected by moderate stress than those with married/widow/widowed.

Majority of Diploma III/Vocational graduate nurses were affected by mild stress and 15 undergraduate nurses were affected by mild stress. The statistical analysis revealed p value $0.519 > 0.05$ which implied a there is no correlation between education and work stress in nurses working in Inpatient Department in Building A

The table also describes that most participants who had been working for less than 5 years 73 nurses were affected by mild stress and those with 5 to 10 years of service 25 nurses or more than 10 years of service 60 nurses were affected by mild stress. The statistical analysis revealed p value $0.001 < 0.05$ which implied a significant correlation between years of service and work stress in nurses working in Inpatient Department in Building A of Dr. Cipto Mangunkusumo hospital. OR values was 19,744 which suggested that participants with years of service < 5 years were 19,744 times more likely to be affected by moderate stress than those with years of service 5-10 years and > 10 years.

Table 3 reveals that 146 out of 231 participants (63.2%) with moderate workload were affected by mild stress and 85 of them were affected by moderate stress (36.8%). All 12 participants with higher workload were affected by mild stress (100%).

The statistical analysis revealed p value $0.009 < 0.05$ which implied a significant correlation between workload and work stress in nurses working in Inpatient Department in Building A of Dr. Cipto

Mangunkusumo hospital. OR values was 6,791 which suggested that participants with moderate workload were 6.791 times more likely to be affected by moderate stress than those with higher workload.

Table 3: Correlation between Workload and Stress-Related Work (n=243).

Workload	Work Stress				Total	P Value	OR CI 95%
	Mild		Moderate				
	n	%	n	%			
Low	0	0	0	0	0	0,009	6,791
Moderate	146	63,2	85	36,8	231		
High	12	100	0	0	12		
Total	158	65	85	35	243		

4 DISCUSSION

4.1 Participant Characteristics

Demographic characteristics in this study included gender, age, marital status, educational background, years of service, and workload. Majority of participants were females (n=201, 82.7%), aged 17 to 25 years old (n=111, 45.6%), single (n=118, 48.5%), Diploma III graduates (n=222, 91.3%), had been working for less than 5 years (n=137, 56.5%) and had moderate workload (n=231, 95%). Therefore, it can be concluded that most participants were females, aged 17 to 25 years old, single, Diploma III graduate nurses who had been working for less than 5 years and had moderate workload.

4.2 Relationship between Participant Characteristics and Nurses Job Stress

The findings revealed that majority of nurses in Building A of RSCM were females (n=201, 82.7%). A study by Khoddin (2012) revealed that 75 out of 94 (79.8%) participants were females and only 19 of them were males (20.2%) which indicated greater number of female nurses than the male ones. Guntur's study (2009) described that marginalization of female roles in public associated with power relation which established and developed in nursing profession generates stereotype that nursing profession is more suitable for females rather than males. Furthermore, some patients perceive that female nurses are somehow more agile in performing their duties and marginalization process which creates the stereotype that nurse is a female's job leads to domination of females in organization structure in nursing.

Authors believed that it was resulted from the notion that nursing profession is less appealing for males and that females are more conscientious and careful in performing their duties than males; nursing academic is known to have higher number of female students than the male ones; females show more respect than males; and that females show higher level of patience and sincerity than their male counterparts which lead to greater number of female nurses recruited by hospital.

A study conducted by Ismafiaty (2012) reported that 66.7% female nurses were affected by work-related stress; it was possibly because female mostly uses her feeling in dealing with a problem. Males are required to be stronger than females which encourage them to use their mind in solving a problem over their own feelings.

The finding corresponded with Khoddin's study (2012) which revealed that 75 out of 94 participants were females (79.8%) and only 19 of them were males (20.2%). Chi square test revealed a significant correlation between gender and work stress among nurses with X value 7.733 and p value $0.021 < \alpha$ (0.05). Individual's personality contributed to this result. A male is more likely to be extrovert than female who tends to be introvert. The tendency makes female to be restrictive in sharing her problems with coworker that, in turn, becomes a psychological burden and may turn into a stressor if it is not solved appropriately and eventually lead to stress-related work.

The study findings suggest disproportionate number of female and male participants (201 females or 82.7% and 42 males or 17.3%) which did not allow a conclusion to be drawn from such circumstance in Inpatient Department in Building A of Dr. Cipto Mangunkusumo hospital.

The study result also reveals that 111 out of 243 participants were aged between 17 to 25 years old (48.5%). A study conducted by Anwar (2007) reported that adolescents aged 17 to 25 years started to regard themselves as adults and were able to demonstrate maturity in mind, attitude, and behavior which encourage them to seek for job. An organization infrequently hires employee older than 25 years for a job that is masses, routine, and repetitive in nature since it requires high durability, precision, pace, and accuracy; all of which are difficult for older employee (Nugroho, 2010). Authors reckoned it was because people aged between 17 to 25 years are within their productive age. People in productive age tend to work harder. Building A of RSCM is an inpatient unit with highest bed capacity among other units that require power of

youths who are able to work hard and possess stronger physical capability rather than those in late adulthood who are more likely to have declining physical capability and lower work performance.

The study results also indicated that 111 out of 243 participants were aged between 17 to 25 years old (48.5%), 60 of them were aged between 26 to 35 years old (25.7%), 46 of them were aged between 36 to 45 years old (19%), and 26 of them were aged between 46 to 55 years old (10.7%). Febriandini's study (2016) suggested that there was a significant association between age and work stress in nurses. This study finding revealed that 24 out of 46 participants aged between 22 to 31 years old were affected by moderate stress (82.7%). Individual older than 30 years may possess better understanding of various issues which reduces stress; it is also linked with more stable thinking process and maturity in making a decision.

A study conducted by Jusnimar (2012) reported that 25.9% out of 33 participants aged 20 to 40 years old were suffering from mild stress and 74.1% of them were affected by moderate stress. 66.7% of participants aged between 41 to 65 years old were affected by mild stress while 33.3% of them were suffering from moderate stress. It shows that older participants had lower stress due to higher competence in performing duties and easier adjustment with new environment which facilitated stress management.

The findings show that participants aged between 17 to 25 years old and between 26 to 35 years old were more likely to be affected by stress (n=171, 70.3%) than participants aged between 36 to 45 years old and between 46 to 55 years old (n=72 orang, 29.3%). Authors believed that advancing age contributed to this finding. Advancing age enables people to control their emotions, think rationally, be wiser, more tolerant, and open to another's opinion or view thus facilitate stress management at work. Moreover, Dr Cipto Mangunkusumo hospital is a national reference hospital providing health services for patients with various medical conditions and complications; such condition may be difficult for nurses aged between 17 to 25 years old with least experience in providing nursing care and may eventually lead to stress.

The study result indicates that 118 out of 243 participants were singles (48.5%), 112 of them were married (46.1%) and 13 of them were widows or widowers (5.4%). It implies that most participants were yet to get married. Marriage compels greater responsibility on individual which makes him regard a stable job as important and valuable matter (Siagian,

2009). However, Rizal (2010) stated that many organizations prefer to hire single people as employee as they tend to be more focused at work and prioritize their job rather than married people who may have had their focus divided for their family. Such condition also applied among nurses in Building A of RSCM since majority of them were aged 17 to 25 years old, an age group in which single status is common. Absence rate is also higher among married women, especially those who have children. In addition, married nurses' role and responsibility are shared between their community and profession, increasing their vulnerability to various issues. Allowances may also contribute to this as hospital is not required to provide allowance for employee's family if the employee is yet to get married since RSCM is a Public Service Agency that also hires non-civil servant staff whose wage is independently managed and provided by the hospital itself.

A study conducted by Ismafiaty (2012) reported that there was a significant association between marital status and work-related stress. 13 out of 27 participants were singles and 2 of them were affected by work-related stress (15.4%) and 4 out of 14 married participants (50%) were also affected by work-related stress. It suggested that work stress was more common among married participants than the single ones. It was probably because married participants were burdened with marriage issues while the single ones were not; the issues hinder their work performances and lower their concentration at work and eventually lead to work stress.

The study result coincided with Jusnimar's study (2012) which reported that work stress was frequently affecting married participants (73.9%). The stress could be a result of internal conflict within family or financial issues which strain them at work.

Authors presumed that married people have higher possibility to be affected by stress that may influence their lives. The stress was resulted from greater responsibility and role in family, society, and job. Inappropriate management of stress will certainly affect one's performance at work. Nurse should be able to manage, prevent, and cope with the stress resulting from duties and responsibilities in family so it does not turn into stressor at work and cause work-related stress.

The study findings suggested that there were 222 Diploma III graduate nurses (91.3%), and 21 undergraduate nurses (8.7%). A study by Jusnimar (2012) revealed that 26 out of 33 participants were Diploma III graduate nurses (78.8%) and 7 of them were undergraduate nurses (21.2%) which indicated greater number of Diploma III graduate nurses than

the undergraduate nurses. Education is an indicator reflecting individual's competence in doing a job. Individual with certain educational background is considered worthy of certain position at work (Hasibuan, 2005). Mandini (2013) described that Diploma III/Vocational nursing education is aimed to prepare its graduates with skills/vocations which encompasses 60% practice and 40% theory in its curriculum so the graduates are ready to be employed. Authors suggested that higher number of vocational nurses in Indonesia is partly responsible for this phenomenon which leads to higher number of vocational nurses employed by hospitals. Information of job vacancy in RSCM which is distributed among fellow vocational nursing graduates promotes them to apply to work in RSCM. Undergraduate nurses do not only provide nursing care for patients but also manage them and serve as a coordinator, planner, and developer in nursing thus cause most of them to hold certain managerial position while vocational nurses are mostly assigned in patient service.

Authors suggested that vocational nurses are more likely to be affected by work-related stress than undergraduate nurses. It was possible because undergraduate nurses had greater understanding on stress, adaptation, and coping than the vocational ones which indirectly affected them in coping with stress and dealing with all stressors in their working environment. Disproportionate number of participants based on educational background (222 Diploma III nurses or 91.3% compared with 21 undergraduate nurses or 8.7%) complicates authors in drawing conclusion from such condition.

The study findings revealed that 137 out of 243 participants had been working in Dr Cipto Mangunkusumo hospital for less than 5 years (56.5%), 31 of them had been working for 5 to 10 years (12.6%), and 75 of them had been working for more than 10 years (30.9%). Jusnimar's study (2012) reported that 17 participants had been working in hospital for 1 to 5 years (51.5%), 7 participants had been working for 5 to 10 years (21.2%), and 9 participants had been working for more than 10 years (27.3%) which suggested that majority of them had been working for 1 to 5 years. Siagian (2009) stated that longer years of service in organization does not always mean higher productivity. Authors believed that there was higher number of participants with 1 to 5 years of service due to greater work satisfaction in early years of service and it gradually decreases over the next 5 or 8 years and steadily increases again over 8 years. Fresh graduate is thought to have better comprehension of nursing theory and its application.

Moreover, RSCM opens job vacancy 3 times a year and the recruited graduates are mostly assigned in Building A that possesses highest bed capacity among other units.

Ismafiaty (2012) described that 6 out of 18 nurses with less than 5 years of service were suffering from work-related stress (22.2%) and 3 out of 9 nurses with over than 5 years of service were also affected by work-related stress (11.11%). That finding suggested that nurses with less than 5 years of service were more likely to be affected by work-related stress; it was due to lack of experience than those with longer years of service.

The finding contradicted Giriwati's study result (2011) revealing that majority of nurses who had been working for over than 10 years were affected by work-related stress (52.6%). It is probably because nurses with longer years of service are given higher position in organization which includes greater responsibility and work demand that eventually lead to work-related stress. The stress may also be resulting from boredom due to following similar routines for decades.

Authors concluded that majority of nurses with less than 5 years of service were more vulnerable to work-related stress. Lack of experience in managing stressors at work contributed to the development of stress. There is a discrepancy in capacity between junior and senior nurse in managing pressures and stressors at work. The longer years of service, the more competent a nurse is in doing his job; however, junior nurse is required to be able to adjust himself with working environment before gaining mastery over his job which indirectly results in stress and burden.

4.3 Relationship between Workload and Nurses Job Stress

Workload is a strain perceived by participants in providing nursing care in Dr Cipto Mangunkusumo Jakarta hospital. 231 out of 243 nurses perceived moderate workload (95%) and 12 of them perceived higher workload (5%).

Adiprana (2008) outlined 3 aspects in calculating workload which includes physical, mental, and time. Physical workload emphasizes on activity that requires physics such as bed making, lifting patient, pushing medical instruments, and imbalance patient-nurse ratio. Mental workload focuses on role conflict, poor relationship with supervisor or colleague, and facing patient's family who is in panic. Time workload includes pressure to complete nursing care

documentation on time, pressure to make a decision promptly, and working overtime due to inadequate number of nurse.

The statement corresponds with Rodahl's study (2000, in Pracinasari, 2013) describing that workload is influenced by internal and external factors. External factor originates from the outside of employee's body and it includes 3 stressors, namely duty, organization, and working environment. Internal factor stems from within the nurse himself that includes psychological factor, motivation, satisfaction, and perception. The internal and external factors consist of workload either in the form of physical, mental, or time.

This study finding suggested that 231 out of 243 nurses perceived moderate workload (95%) and 12 of them perceived higher workload (5%). Authors believed the imbalance nurse-patient ratio in which amount of patient overwhelms amount of nurse results in additional nursing interventions that should be provided by a nurse thus increase his workload. In addition, Dr Cipto Mangunkusumo hospital is a national reference hospital providing health services for patients with various medical conditions and dependency level, partial care through total care, which directly doubles the nurse's workload depending on patient's dependency level. Providing direct and indirect nursing intervention and health education also bring impact on nurse's workload. These factors made participants perceive moderate to severe workload, either in form of physical, mental, or time. Workload should be designated to each individual according to his age and gender since disproportionate workload will lead to strain at work.

The study result revealed that 158 out of 243 nurses were affected by mild stress (65%) and 85 of them were affected by moderate stress (35%).

Robbins (2008) described that sources of stress may stem from environmental, organizational, and individual factors. Environmental factors that provoke stress include noise, poor ventilation, and insufficient facility. Organizational factors include conflict with supervisor, colleague or coworker, poor communication, pressure to complete a task in limited time and working climate. Individual factors include individual needs and characteristics (age, gender, and educational background).

The findings indicated that participants aged between 17 to 25 years old and between 26 to 35 years old were more vulnerable to work-related stress (n=171, 70.3%) than those in the age group of 36 to 45 years and 46 to 55 years (n=72, 29.3%). Authors reckoned that it was because advancing age enables people to control their emotions, think logically, be

wiser, more tolerant, and open to another's opinion or view thus facilitates stress management at work. Inadequate interaction and communication in working milieu such as poor communication between associate nurse and his head nurse, fellow nurse, other health professionals, or employees from another hospital may turn into a stressor. Poor communication often results in misunderstanding or misperception on information that may lead to error in providing nursing care and provoke stress. The distinction in human personality causes friction and conflict in the organization and results in work stress. However, the hospital has organized attempts to refresh and maintain interaction or relation among employees by organizing staf / family gathering twice a year, however, no other activities implemented such as exercise in hospital to maintain physical and mental well-being.

146 out of 231 participants with moderate workload were affected by mild stress (63.2%) and all 12 participants with higher workload were also affected by mild stress (100%). The statistical analysis revealed p value $0.009 < 0.05$ suggesting that there was a significant correlation between workload and work stress in nurses working in Inpatient Department in Building A of Dr. Cipto Mangunkusumo hospital. It was also revealed OR value of 6.791 implying that participants with moderate workload were 6,791 times more likely to be affected by stress than those with higher workload.

This result was supported by Khoddin's study (2012) which reported a significant association between workload and stress-related work in nurses with Chi Square test revealing p value 0,010. Higher workload brings impact on employee's physic and mental and may become a stressor at work.

A study conducted by Dewi (2014) on nurses in Pasar Rebo hospital reported that participants with higher workload were affected by severe work-related stress (46.7%). Furthermore, the study also revealed that nurses with lower workload were also affected by severe work-related stress (44.4%). Mild work-related stress affected 53.3% nurses with higher workload and 56% nurses with lower workload.

This finding is supported by Aoki's study (2010) in Ratchaburi Thailand which concluded a significant link between workload and work stress among nurses. His study also reported that higher workload may increase the risk for stress among nurses. The study also mentioned that 70% nurses perceived high workload and 30% of them perceived moderate workload, while 70% of them were affected by moderate work stress and 30% of them were affected by severe work stress.

Irwandi (2007) defined workload as frequency of activity based on mean of each activity in certain time interval and consists of physical or mental workload that may lead to work-related disorder or disease.

Authors presumed the correlation between workload and work stress in nurses working in Inpatient Department in Building A of Dr. Cipto Mangunkusumo hospital stemmed from moderate or severe physical workload which affected them in a way or may even result in work-related disorder or disease. All mental activities involve interpretation, perception, and processing of acquired information. At work, nurse meets and interacts with patient, family, visitor, fellow nurse, and other health professionals from multidisciplinary team and also complies with policies in working environment. It may result in excessive workload that overwhelms his physical, emotional, and psychological condition.

Adiprana (2008) outlined 3 aspects in calculating workload which includes physical, mental, and time. Physical workload emphasizes on activity that requires physics such as bed making, lifting patient, pushing medical instruments, and imbalance patient-nurse ratio. Mental workload focuses on role conflict, poor relationship with supervisor or colleague, and facing patient's family in panic. Time workload includes pressure to complete nursing care documentation on time, pressure to make a decision promptly, and working overtime due to inadequate number of nurse.

Individual who experiences mental burden such as role conflict, poor relation with supervisor or coworker and responsibility for patient's recovery would be affected by stress at work. In addition, job demand that seldom exceeds employee's capacity or, in other word, excessive workload that is difficult to deal with would provoke stress in such employee. Work-related stress can also be caused by amount of patient that surpasses amount of nurses thus require nurses to work overtime.

It is safe to conclude that nurse who is assigned with a workload that exceeds his own capacity would experience burnout which affect his mental and result in fatigue, mood change, boredom, irritability, and distress. A high job demand, pressure to improve performance from both patient and supervisor, conflict with coworker or supervisor or another health profession, shift work, exposure to dying patient, number of patients overwhelming number of nurses, and requirement to fill out non-nursing documentation (such as filling out incidence report for monthly performance evaluation) may become a burden leading to work-related stress.

5 CONCLUSION

Authors concluded that majority of participants were aged 17 to 25 years old, females, single, Diploma III/vocational nursing graduates, had been working for less than 5 years, perceived moderate workload, and affected by mild stress.

There was a significant correlation between marital status, years of service, and work-related stress. There was also significant association between workload and work-related stress in nurses. Furthermore, participants with moderate workload were more likely to be affected by moderate stress than those with higher workload.

It is recommended for hospital to improve communication and inform nursing manager to take employee's age and gender into consideration when assigning workload. Hospital is expected to designate the nurse with a workload that is suitable with his own competency. Furthermore, hospital is also expected to maintain and improve staff and family gathering activity in order to refresh nurse's physical and psychological condition and to regularly organize exercise for employee at least once a week to maintain physical and psychological well-being.

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