Reported Work-related Stressors among Staff Nurses in Metro Manila

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Abstract: Work-related stress became an increasing global problem affecting all categories of workers including healthcare professionals. World Health Organization reported that stress, especially related to work is currently the second most frequent health problem and is a significant problem of our times. Several studies revealed that nurses are under greatest work stress and highest physical, psychological, and emotional strain. This study also examined relationships between work-related stressors and selected socio-demographic factors. It utilized the Modified Expanded Nurses Stress Scale (ENSS). A descriptive-correlation and cross-sectional design were used. The study was conducted by hospital staff nurses in a tertiary government and non-government hospital in Metro Manila. The predominant work-related stressor that occasionally occurs in the work setting was workload while discrimination stressors never occur. Respondents reported the moderate level of stress (M=2.66, SD=0.85) on the nine subscales. Work-related stressors are significantly related to age (χ^2 = 20.05), civil status (χ^2 = 17.48) number of patients (χ^2 = 16.11) and length of service (χ^2 = 21.27). Sixty-six (58.41%) respondents claimed that there is stress management program seminar offered in their hospital. Twenty-three (20.35%) respondents claimed that there is no stress management program being conducted in their hospital. Nurses reported the moderate level of stress in all subscale of the modified, expanded nursing stress scale. Effective coping mechanisms and stress management program, and policies are emphasized. It is recommended to revisit the staffing and scheduling plan and provide enough staff to cover the unit to address workload stressors. It may be useful to consider teambuilding activities between nurses and physicians to strengthen team work and collaboration. A training program can be devised that culturally-fit and evidence-based.

Keywords: stress; work-related stress; nursing stress; coping mechanism

1. INTRODUCTION

1.1 Background

Work-related stress becomes an increasing global problem affecting all categories of workers including healthcare professionals. This is brought by a fast changing technological world that creates waves of demands and pressures at work settings. Stress, especially related to work is the second most frequent health problem and is a significant problem of our times that affects both physical and mental health of the people (WHO, 2014).

National Institute of Occupational Safety and Health (2014) defined work stress as harmful physical and emotional responses that occur when job requirement do not match the worker's capabilities, resources, and needs. Nursing is recognized as a stressful demanding occupation (Higgins, 2003; Zaghloul, 2008). Stress has been observed among various professionals without exemption. Previous researches reported that nurses, regardless of workplace or culture, are confronted with a variety of stressors. Indeed, nursing is considered as the highest stressful job among 40 stressful professions (Mozhdeh et al., 2007). The First Asia Health Survey in 2006 by Reader's Digest and Nielsen Media across seven Asian countries including the Philippines, found out that Filipinos are the most stressed-out in which two out of five Filipinos (43%) are affected by stress-related illness like hypertension.

In the Philippines, work-related stress has received very minimal attention. There are only a few studies related to stress being done. As a future administrator, it is important to look at specific areas and to investigate those issues affecting our staff and our patient as well in the organization. Thus, this study determined the most prevalent work-related stressors and the level of stress utilized by nurses working in selected public and private hospitals in Metro Manila. Nurses' awareness about the different types of work-related stressors will help them in taking the first step to manage or handle even before they encounter it. This can provide the basis for the administration in designing an evidenced-based stress management program to develop a healthy and competent nurse.

To reach this end, the study answered the following question:

1. What are the predominant work-related stressors experienced by nurses regarding the following factors:
   1.1 workload stressors
   1.2 death and dying stressors
   1.3 patient and family stressors
   1.4 uncertainty concerning treatment
   1.5 conflict with physician
   1.6 inadequate emotional preparations
   1.7 problem with supervision stressors
   1.8 problem with peer stressors
   1.9 discrimination
2. What is the work-related stress level of nurses working in a hospital regarding the following work-related stressors:
   1.1 Physical
   1.2 Psychological
   1.3 Social working environment
3. Is there a relationship between the work-related stressors and the following selected socio-demographic variables:
   3.1. Age
   3.2. Civil status
   3.3. Acuity of care

3.4. Highest educational attainment
3.5. Length of service
3.6. Type of hospital
3.7 Area of assignment

1.2 Statistics of Stress

Work-related stress accounts for $200-300 billion a year in American work-related worker stress is implicated in 60-90% of medical problems.

The First Asia Health Survey conducted by Reader's Digest and Nielsen Media Research among 24,000 Asians from the Philippines, Hong Kong, India, Malaysia, Singapore, Taiwan, and Thailand. It was found out that Filipinos were the most stressed-out people, where more than two out of five Filipinos (43 %) said they were affected by stress, which is contrary to the popular belief that Filipinos are most laid-back in Asia.

1.3 Signs and symptoms of stress

Williams (2003) listed the symptoms of a person who is suffering from stress. Among these symptoms include changes in appearance, in behavior and habits. Furthermore, Cartwright and Cooper (1997) identified stress symptoms as individual and organizational. The identified individual symptoms include raise in blood pressure; depressed mood; excessive drinking; irritability; and chest pain while organizational symptoms are manifested by high absenteeism; high labor turnover; industrial relations difficulties; and poor quality control are organizational symptoms encountered in response to stressors. It can be noted that signs and symptoms of stress affect the physical, psychological, social and cultural well-being.

1.4 Stress Level of Hospital Nurses

Several studies done globally have shown that occupational stress is prevalent in nursing profession. Saini et al. (2011) reported that 92 % of nurses in their study experienced average stress while 8% experienced high levels of stress. Similarly, Jahromi et al. (2014) reported that most nurses (76.41%) also suffered medium levels of stress. Makie (2006) emphasized that stress and coping among registered nurses working in a South African tertiary hospital revealed a high case of the reported stress which he admitted was high enough to be considered serious.

1.5 Socio-Demographic Factors and Stress of Nurses

The literature reveals factors such as age, gender, marital status, salary, family income, job position, number of children, number of patients handled per shift, highest educational attainment, length of service, working hours per shift, and type of hospital are related to work-related stressors.

Myhren et al. (2013) showed that the experienced staffs were less vulnerable than inexperience staff to job stress. Similarly, Miriam (2008) reported a significant association was found between level of stress and age and years of experience. She concluded that nurses who were older, with

more experience and high income, had low-stress level. Hussein et al. (2012) reported that with every increase of one year experience the score of stress level decreases. Likewise, On the other hand, Lee (2003) and Makie (2006) reported that the longer the nurses had worked in their units, the more likely they were to experience stress.

It was reported in Germany that married individuals handled stress better that those who never get married, divorced, separated and widowed (Wilson & Oswald, 2005). This showed as evidence of how marriage affects physical and psychological health. Ghareeb et al. (2014), reported moderate to severe stress among those who are not married in their study on assessment of work stress and organizational commitment among female nurses in Egypt. This explained the feeling of loneliness and unhappiness felt by single female single nurses. Previous studies had concluded that job-related stress, emotional labor, and depressive symptoms among unmarried or single Korean nurses are vulnerable to depressive symptoms. This finding is also similar in the study of Hussein et al (2012) which reported that married participants showed lower stress levels than those who were single.

Carayon and Gurses (2008) explained the impact of workload on nursing stress and burnout. It emphasized that high workload is a key job stressor for nurses in a variety of care settings, such as ICUs. Saini et al. (2011) found that nurses with high levels of professional accomplishment perceived significantly lesser degree of stress among intensive care nurses at tertiary care hospital in Chandigarh, India.

Rasasi et al (2015) found that 60% of the nurses reporting severe stress are coming from private sector compared to 40% from the governmental sector in their study on work-related stress among 295 nurses working in Dubai. In contrast, Katyal et al. (2013) reported that governmental hospital nurses were found to have significantly higher emotional exhaustion and depersonalization as compared to nurses working in private hospitals.

1.6 Synthesis

Nurses working in hospitals are exposed in a very stressful environment that could affect their health, the delivery of quality patient care, and consequently the organization they belong.

Foreign and local literature showed high statistics on work-related stress. In the Philippines, there were only few studies on stress from the nurses' point of view. The recognition of work-related stress issue remains low and unmanaged. Several studies identified other factors that might have direct or indirect influence on stress level like age, gender, marital status, job position, number of children, salary per month, family income, number of patients handled per shift, highest educational attainment, length of service, working hours per shift, and type of hospital. However, only age, civil status, number of patients handled per shift or acuity of care, highest educational attainment, length of service, and type of hospital were proven by literature

to have a strong association with work-related stress among nurses working in hospitals.

This study will focus on doing a preliminary assessment of nurses' perceived work-related stressors before recommending a stress management program at the patient care unit level.

1.7 Conceptual Framework

The concepts of this study are anchored in the identified work-related stressors by French et al. (2000) such physical, psychological and social working environment. These identified work-related stressors are the dependent variable of the study. On the other hand, the socio-demographic factors including age, civil status, number of patients handled per day or acuity of care, highest educational attainment, length of service, and type of hospital are the independent variables.

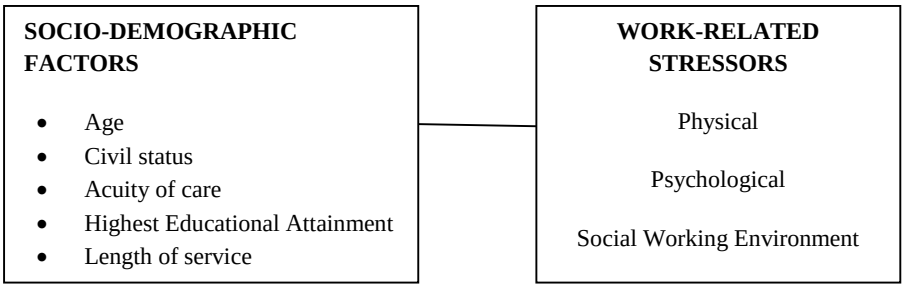

Fig 1. The Relationship between Selected Socio-demographic Factors and Work-related Stressors

2. METHODOLOGY

2.1 Study Design

The study utilized a descriptive-correlation and single cross-sectional design. A survey method was utilized in the data collection.

2.2 Study Setting

The study was conducted to hospital staff nurses in a tertiary government and non-government hospital in Metro Manila. The study setting was selected because of the accessibility of the researcher and a former employee in one hospital selected in this study. Hospital A is an 800- bed capacity private tertiary hospital within Manila. It is one of the oldest and most advanced hospitals in Manila which was founded in 1878 during the Spanish times. It has steadily grown in excellence, fame and service in its 138 years of existence. Now in the new millennium, it has continued to expand its breath of charity services. On the other hand, Hospital B is a tertiary government hospital with 1200 bed capacity. This hospital provides excellent tertiary medical care, hospitalization, and out-patient services. This

hospital is also committed to deliver compassionate and sustainable health services through proficient professionals and top line technology. Both hospitals have 300-350 personnel under nursing services. The nurse-patient ratio for both hospitals ranges 1:15-20.

2.3 Sample

The respondents are registered nurses assigned to the general ward and special unit to have direct contact to the adult patient and their relatives for at least one-year experience as a nurse. The special areas include emergency unit, paediatrics, ICU, operating room, delivery room, and post-anesthesia care unit. It excluded nurse volunteers, trainee nurses, nurse supervisors, and nurse.

2.4 Sampling Design

Stratified random sampling was used in selecting participants for the study. They were divided into two strata: general ward nurses and special area nurses.

2.5 Sample Size

The sample size was computed using proportional allocation. The formula below was used to calculate the sample size assumed at 95% confidence level.

$$n_i(sample\ size\ per\ stratum) = n * \frac{N_i}{N}$$

Where:

$$n = \frac{NPQ}{\frac{N}{D^2} + PQ}$$

$$D = \frac{Z_{tab}}{B}$$

$n = sample\ size$
$N_i = population\ per\ stratum$
$P = proportion = 0.5$
$Q = 1 - P = 0.5$
$N = population$
$Z_{tab} = critical\ value = 1.644854$, where $\alpha = 0.05$
$B = margin\ of\ error = 0.05$

Using the above formula, this study required a total of 277 respondents. The required sample size for public hospital includes 104 general ward nurses and 77 special areas for a total of 181 respondents. On the other hand, 70 general ward nurses and 26 for the special areas, a total of 96 respondents in the private hospital.

A post-hoc power analysis revealed that for an effect size (0.35), power (0.90) as significant at the 5% level, a sample of 234 respondents

would be required. In this study, an oversampling of 20 % for possible attrition was considered making it 280. However, only 275 responded the study.

A computer-generated randomizer was used in the selection of samples.

2.6 Expanded Nursing Stress Scale

The Expanded Nursing Stress Scale (ENSS) is a 34- item self-report questionnaire that measures the frequency and level of work-related stress among nurses (French et al., 2000). It incorporates 57 items with nine-subscales. Among these subscales are categorized it into three dimensions such as: a) Physical which includes *Workload*; b) Psychological which includes *Death and Dying, Inadequate Emotional Preparation, and Uncertainty Concerning Treatment*; c) Social Working Environment which includes *Conflict with Physicians, Problems with Peers, Problems with Supervisor, Patients, and their Families, and Discrimination*.

2.7 Psychometrics

Internal consistency reliability was assessed using Cronbach's coefficient alpha. The 57-item ENSS demonstrated improved reliability (α = .96) (French et al, 2000) over the original NSS (α = .89) of Gray-Toft & Anderson (1981). Individual subscale reliability ranged from α =.88 (problems with supervisors) to α = .65 (discrimination). For this study, the overall Cronbach alpha was 0.97 and for the frequency of stressors was 0.98 and considered reliable.

2.8 Data Collection Procedure

An ethics approval was attained UP Manila Review Ethics Board (UPMREB) with assigned protocol no. UPMREB 2015-421-01. A pilot test was conducted prior the conduct of this study. The researchers sought permission from the Chief of the hospital and the chief nurses to administer the survey in their institution. After hospital approval was gained, the researcher with the aid of a research assistant started to hand down the brown envelopes the different unit heads. The letter addressed the purpose of the study and the direction for completing the survey. After two weeks that survey questionnaire was distributed, the researcher and the research assistant returned to collect the questionnaires. Respondents who did not answer the questionnaires within the given period were followed up personally.

2.9 Data Analysis

Obtained data was encoded in MS Excel and was analyzed using the software R. Both descriptive and inferential statistics were used.

Descriptive statistics was used in determining the main work-related stressors and in measuring the level of stress among nurses.

Chi-square tests the relationship between the demographic characteristics and level of stress (per dimension). Spearman Rank

Correlation was utilized to test the relationship between level of stress and coping mechanism.

Moreover, to test the significant difference in the level of stress between public and private hospitals, Wilcoxon Rank Sum test was employed.

The respondents were asked an open-ended question on other work-related stressors they encountered at their workplace, on the availability of stress management program offered in their hospital, on other strategies they were using to cope with work-related stress, and on other occupational hazards. Thematic analysis of qualitative responses was done.

Table 1 describes the socio-demographic characteristics of the respondents from the two (2) participating hospitals.

3.RESULTS

3.1 Demographics

As shown in Table 1, the respondents in this study belong to the age range of 22 to 60 years old. Majority of them or 191 (69.5%) belongs to the age group of 21 to 30 years old while the lowest number (3.7%) of nurses is from the age group of above 50 years old. Most respondents are single with 188 (68.4%). More than half of the respondents are assigned in general wards, 150 (54.5%). On the other hand, there are 123 (44.7%) assigned in the special areas. Regarding number of patients handled per shift, the highest percentages are those handling more than 1 to 5 patients per shift with 90 (32.7%). Majority of the respondents or 240 (87.3%) surveyed are college graduate. 177 (64.4%) respondents are in the service between 1 to 5 years as a nurse.

Table 1. Demographic Characteristics of Respondents

Socio-Demographic Characteristics	**Frequency (N=275)**	**Percent (%)**

Age		
21-30	191	69.5
31-40	34	12.4
41-50	26	9.5
>50	10	3.6
Civil Status		
Single	188	68.4
Married	82	29.8
Separated/ Divorced	2	0.7
Widow/er	2	0.7
Area of Assignment		
General Ward	150	54.5
Special Area/Ward	123	44.7
No. of Patients Handled		
1-5	*90*	*32.7*
6-10	56	20.4
11-15	43	15.6
16-20	14	5.1
>20	71	25.8
Highest Educational Attainment		
College	240	87.3
with MA units	26	9.5
MA/S graduate	4	1.5
with Ph.D. units	2	0.7
Ph.D. graduate	1	0.4
Others	1	0.4
Length of service (in years)		
1-5	177	64.4
6-10	42	15.3
11-15	19	6.9
16-20	12	4.4
21-25	5	1.8
26-30	8	2.9

Table 2 presents the summary of the frequency of occurrence of stressors in the work-related of nurses in this study. Topped off the list is workload stressors that have been reported to occur occasionally at work setting. Similarly, stress was occasionally experienced from sources such as death and dying, patient and family, uncertainty concerning treatment, conflict with a physician, inadequate emotional preparation, the problem with supervision stressors, and the problem with peer stressors follows. Lastly, discrimination stressor never occurs.

Table 2 Work-Related Stressors among Hospital Nurses

Work-Related Stressors	Mean (SD)	Interpretation
Workload Stressors	2.73 (0.75)	Occasionally
Death and Dying stressors	2.55 (0.59)	Occasionally
Patient and Family Stressors	2.42 (0.75)	Occasionally
Uncertainty Concerning Treatment	2.31 (0.58)	Occasionally
Conflict with Physician	2.28 (0.58)	Occasionally
Inadequate Emotional Preparation	2.25 (0.59)	Occasionally
Problem with Supervision Stressors	2.20 (0.78)	Occasionally
Problem with Peers Stressors	2.10 (0.57)	Occasionally
Discrimination	1.42 (0.67)	Never

Table 3 shows the summary of the over-all stress level of nurses. Findings reveal that nurses from hospitals experienced a moderate level of stress on the nine subscales. The patient and family were identified as the source of stress at a moderate level. Three work-related stressors yield the second highest source including workload, death and dying, and uncertainty concerning treatment. Other sources of stress that were identified conflict with a physician, discrimination, the problem with supervision stressor, inadequate emotional preparation, and problem with a peer.

Table 3. Level of Stress among Hospital Nurses

Measures of Stress	Mean (SD)	Interpretation
Physical		
Workload Stressors	2.75(0.80)	moderate
Psychological		
Death and Dying Stressors	2.75(0.92)	moderate
Uncertainty Concerning Treatment	2.75(0.81)	moderate
Inadequate Emotional Preparation	2.42(0.74)	moderate
Social Working Environment		
Patient and Family Stressors	2.91(0.95)	moderate
Conflict with Physicians	2.64(0.82)	moderate
Discrimination	2.63(1.29)	moderate
Problem with Supervision Stressors	2.59(0.93)	moderate
Problem with Peers Stressors	2.12(0.68)	moderate

Table 4 shows the relationship between work-related stressors and selected socio-demographic variables. It can be noted that work-related stressors is significantly related to age (χ^2 = 20.05, p=0.02), civil status (χ^2 = 17.48, p=0.02), number of patients (χ^2 = 16.11, p=0.00), and length of service (χ^2 = 21.27, p=0.03). However, there was no relationship was found with educational attainment (χ^2 = 1.75, p=0.55) type of hospital (χ^2 =9.58, p=0.15), area of assignment (χ^2 =5.08, p=0.36), and type of hospital (χ^2 =9.58, p=0.15).

Table 4. Relationship between Work-related Stressors and Socio demographic Variables

Socio-Demographic Variables	**χ^2**	**the**
Age	20.05	0.02*
Civil status	17.48	0.02*
No. of patients	11.27	0.18
Educational attainment	1.75	0.55
Length of service	21.27	0.03*
Type of Hospital	9.57	0.15
Area of Assignment	5.08	0.36

**p-value <0.05 is considered significance*

3.2 Qualitative Responses

To enrich the result of gathered quantitative data, respondents were asked an open-ended question on other work-related stressors they encountered at their workplace, on the availability of stress management program offered in their hospital, on other strategies they were using to cope with work-related stress, and on other occupational hazards.

Table 5 below shows the qualitative responses generated from the 96 respondents of Hospital A (public) and Hospital B (private). The responses are categorized as physical, psychological, social, organizational, and personal or nurse factors.

The physical factor has the highest identified other stressor among nurses (30%, N=29). This is followed by a social factor (29%, N=28). Psychological factor obtained the least number of responses (3%, N=3).

Table 5. Other Stressors Encountered among Nurses

Other Identified stressors	Frequency (%) (N=96)
Physical Factor	
Understaff	9 (9.38)
work overload	5 (5.21)
pulled to other unfamiliar areas	4 (4.17)
Overtime	3 (3.13)
frequent schedule change	2 (2.08)
time pressure	2 (2.08)
additional research works	1 (1.04)
administrative work	1 (1.04)
asking a professional fee from doctors	1 (1.04)
staff absenteeism	1 (1.04)
Psychological Factor	
the insufficient financial capacity of patients/ relatives	2 (2.08)
death of a patient	1 (1.04)
Social Factor	
conflict with co-staff/ among patient's	14 (14.8)
demanding and uncooperative relatives	5 (5.21)
conflict with co-staff/ among patient's relatives	3 (3.13)
demanding and uncooperative patient	3 (3.13)
demanding doctors	1 (1.04)
lack of team support	1(1.04)
miscommunication among staff	1 (1.04)
Organizational Factor	
lack/ defective/ malfunctioning equipments	9 (9.38)
inadequate supply of medicines	7 (7.29)
conflicting policies/ new policies	3 (3.13)
not paid well	2 (2.08)
Personal/Nurse Factor	
personal issues	6 (6.25)
distance from home	2 (2.08)
sudden illness	2 (2.08)
acquiring diseases	2 (2.08)
disorganized family relationship (nurse)	1 (1.04)
home rules	1 (1.04

Table 6. Stress Management Program Utilized by Nurses

Stress Management Programs	Frequency (N=113)	Percent
Stress management seminar	66	58.41
None at all	23	20.35
Yoga/ laughter therapy/zumba/outing	7	6.19
Conflict management seminar	6	5.31
Do not know/ not sure	6	5.31
Not all staff given opportunity to participate	3	2.65
Physical exercise	1	0.88
Spiritual seminar	1	0.88

Table 6 shows the themes generated from the qualitative responses among 113 participants. Sixty-six (58.41%) respondents claimed that there is stress management program seminar offered in their hospital. Twenty-three (20.35%) respondents said there is no stress management program is being conducted in their hospital.

4. DISCUSSION

This study indicated that age of the participants significantly affects his/her stress level psychologically and socially. This means that younger nurses experienced a higher level of stress compared to older nurses due to differences in work experiences. This was supported in the study of Ghareeb et al. (2014) which found that highest percentage of moderate to severe level of stress were from ages less than 30 years old. Similarly, Miriam (2008) reported a significant association was found between level of stress and age and years of experience. She concluded that nurses who were older, with more experience and high income, had low-stress level. However, this is inconsistent with the findings of Galdikiene et al (2016) found that nurse with older age reported increased levels of experienced stress.

It is evident in this study that single has higher stress level compared to those who are married. This was contradicting to the idea that single should be less stressful since they don't have a double burden like those who are married who have enormous responsibilities to their families. A possible explanation why married ones have less stress level compared to those who are single is mainly because of the influence of marriage as a major support system in the Filipino culture that could be considered as a factor that decreases the level of stress among married respondents. However, these findings contrasted with the study in Germany that married individuals handled stress better that those who never get married, divorced, separated and widowed (Wilson & Oswald, 2005).

The number of patients handled per shift considerably influences their level of stress, probably because the respondents lack competency to

handle high patient load due insufficient experiences leading them to feel that they are unable to provide the needed psychosocial care.

Most respondents of this study are college graduate. However, it was found out that work-stressor is not significantly related to educational attainment. Likewise, Ayed et al. (2014) reported that educational attainment has no relationship on job stress among the respondents in their study on exploring the work-related stress sources and its effect among the Palestinian Nurses at the Government Hospitals. However, this finding was contrasted in the study by Saini et al. (2011) which showed that nurses with high levels of professional accomplishment perceived the significantly lesser degree of stress among intensive care nurses at tertiary care hospital in Chandigarh, India. This explains the greater amount of stress experienced by ICU staff nurses who perform hand-on care for the patient than those who perform supervisory and administrative functions.

This study did not support that work stressors have a significant relationship to the type of hospital. It only means that workload of a nurse either in public or private hospital does not significantly affect the level of stress felt by the staff nurse. However, Rasasi et al. (2015) found that 60% of the nurses reporting severe stress are coming from private sector compared to 40% from the governmental sector in their study on work-related stress among 295 nurses working in Dubai. This can be inferred that work-stressors do not matter whether the nurse works in public or private hospitals. This further validated the findings of Rasasi et al. (2015) which reported that nurses from both public and private hospitals report a similar pattern of stressful experiences.

As a summary, findings revealed a significant relationship between work-related stressors and age, civil status, and length of service. However, there was no significant relationship between work-related stressors and number of patients, education attainment, type of hospital, and area of assignment.

5. CONCLUSION

It is predominant that work-related stressor occasionally occurs in the work setting as reported by the respondents in this study. Nurses reported moderate level of stress in all subscale of the modified, expanded nursing stress scale. This implies that their level of stress was within the borderline between mild and severe stress. Hence, effective coping mechanisms or stress management program, and policies is vital before turning this out into a severe level which may have a negative effect in the health, job performance, and quality patient care of these nurses. Respondents reported the highest moderate level of stress on patient and family stressors. Age, civil status, and length of service had a significant relationship to the work-related stress level. On the other hand, a number of patients handled per shift, educational attainment, type of hospital, and area of assignment had no significant relationship to work-related stress level. Given the findings, it is

recommended to revisit the staffing and scheduling plan and provide enough staff to cover the unit to address workload stressors. It may be useful to consider teambuilding activities between nurses and physicians to strengthen team work and collaboration. A training program can be devised that culturally-fit and evidence-based. This has an implication for policy-making for the occupational health condition of the staff.

It is suggested that future studies increase the number of hospitals and widen the population size including to other specialty areas such as emergency room, operating room, intensive pediatrics, post-anesthesia care unit, etc. to enhance the generalizability of the findings. It may be considerable to look at the effect of stress on nurses' health, job performance, and patient safety in the Philippine setting.

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