



BASELINE STUDY ON THE SOURCE OF OCCUPATIONAL STRESS AND STRESS MANAGEMENT OF PUBLIC AND PRIVATE HOSPITALS IN PUERTO PRINCESA CITY, PALAWAN, PHILIPPINES

Erma B. Miranda¹, Ellen Grace U. Ybo² and Randy G. Olano²

¹Lyceum of the Philippines University, ²Western Philippines University

Correspondence: ermamiranda1977@gmail.com

Article history:	Abstract:
<p>Received: 20th February 2023</p> <p>Accepted: 10th March 2023</p> <p>Published: 26th March 2023</p>	<p>Currently there are no published study related on the stresses of the hospital personnel in Palawan that can be used to develop effective strategies of stress reduction programs in the hospitals in Palawan. Hence the objective of the current study is to identify sources of work related stress, level of stress and stress management and reduction strategies of those who work at the hospitals and correlate the socio-demographic profile with the stress management and reduction strategies of those who work at private and public hospital in Puerto Princesa City, Palawan.</p> <p>The excessive workload is the main source of stress, listening to music were the primary stress management and reduction strategies implied by the hospital personnel and civil status, educational attainment, monthly salary, department where the health professionals and hospital staff belong, occupation, number of years employed and number of years in position significantly affect the stresss management or reduction strategies by the employees of private and public hospitals in Puerto Princesa City, Palawan.</p>
<p>Keywords: stress, hospital personnel, stress management, Puerto Princesa City</p>	

INTRODUCTION

Stress is an integral part of human life but is also one of the common issues in the modern society that causes disorders (Vilagut et al. 2016; Wang et al. 2020). One of the most stressful work that causes mental health problem includes the nursing and those who work at hospitals (Noorbala et al. 2002; Salari et al. 2020). People who works at the hospitals are commonly exposed to night work, shift work and long work hours (Chou et al. 2014). The frequent exposure to stress can lead to mental health problems, affects employees performance and trigger negative consequences family and social life (Gilboa et al. 2008; Nakao 2010b; Shirazi et al. 2011; Koinis et al. 2015).

There are numbers of study who already identified the causes of stress among health professionals and hospital staff (Asadi et al. 2016; Ali and Thahira 2017; Trifunovic et al. 2017; Aly et al. 2021; Germa et al. 2021; Odonkor and Admas 2021). Factors like work overload, work unit, work experience, conflict at work place, marital status, educational attainment, job satisfaction, working environment and not being rewarded were significantly associated with occupational stress among health professionals and hospital staff (Dagget et al. 2016).

There are 994, 101 people in Puerto Princesa City, Palawan, Philippines in 2020 (PSA 2020). Currently, there are four major hospitals in Puerto Princesa City namely the MMG-Cooperative hospital, Ospital ng Palawan, Adventist hospital and Ace hospital that accommodates health related needs of the current population of the City. According to Tamayo et al. (2022) the usual nurse-to- patient ratio in general wards in the Philippines is 1:20, above the standard set by the Department of Health, which is 1:12. This could cause stress among health professionals and hospital staff particularly in the hospitals in Puerto Princesa City. High stress level among health professionals and hospital staff can cause chances of medical errors and suboptimal quality of care (West et al. 2006; Williams et al. 2007).

But currently there are no published study related on the stresses of the health professionals and hospital staff in Palawan that can be used to develop effective strategies of stress reduction programs in the hospitals in Palawan. Previous study on the effect of stress on the performance of the health care professionals focused on the nurses, public hospitals and were conducted pre-pandemic (Godifay et al. 2018; Panhwar et al. 2019). Hence the objective of the current study is to identify sources of work related stress, level of stress and stress management and reduction strategies of those who work at the hospitals and correlate the socio-demographic profile with the stress management and reduction strategies of those who work at private and public hospital in Puerto Princesa City, Palawan.

MATERIALS AND METHODS

Survey questionnaires design and survey methods

This study was conducted in Puerto Princesa City, Palawan in year 2019. There where 271 respondents selected though stratified sampling from Adventist Hospital Palawan (private) and MMG-PPC Cooperative Hospital (public) participated in the survey.

All necessary communications and permits needed in the conduct of study was undertaken prior to the conduct of the survey. An informed consent was secured from the respondents prior to the survey. Survey questionnaires were modified from the published Weiman Occupational Stress Scale (Weiman 1978) and modified from the study of Adzakupah et al. 2017. The survey questionnaire was divided into four (4) parts: Part I- socio-demographic profile of the respondents, Part II- source of occupational stress, Part III-stress management or reduction strategies by the employees of hospitals in Puerto Princesa City. Descriptive rating scales were used in the questionnaires for source work-related stress, level of work-related stress, and coping-up stress strategies.

Statistical analysis

The data collected were tabulated using excel and interpreted using frequency counts, means, percentage and correlation. The relationship between the selected profile characteristics and coping-up stress strategies were analyzed using Pearson-r and difference between the coping-up stress strategies adopted by the employees were analyzed using T-test.

RESULTS

Demographic profile

Table 1 shows that out of 271 employees, majority of the respondents were at 20-25 years old (38%) age bracket, single (58.3%), female (64.9%), has a religion of Seventh Day Adventist (55.7%), belongs to Tagalog (46.5%) ethnicity, has bachelor’s degree (73.4%) with a monthly salary of P10,001.00-20,000.00 (68.6%), working under medical department (47.2%) as nurse (22.9%) for 1-5 years (79.3%) (Table 1).

Table 1. Demographic profile of the respondents (n=271).

Profile	Frequency	Percentage
<i>Age</i>		
20-25	103	38.0
26-30	72	26.6
31-35	34	12.5
36-40	29	10.7
41-45	10	3.7
46-50	17	6.3
51-55	3	1.1
56-60	2	0.7
61-65	1	0.4
<i>Gender</i>		
Male	95	35.1
Female	176	64.9
<i>Civil Status</i>		
Single	158	58.3
Married	111	40.9
Separated	1	0.4
Widower	1	0.4
<i>Religious affiliation</i>		
Seventh Day Adventist	151	55.7
Roman Catholic	85	31.4
Baptist	14	5.2
Born again	11	4.0
Islam	6	2.2
Christian	3	1.1
Church of God International	1	0.4
<i>Ethnic Affiliation</i>		
Tagalog	129	46.5
Ilonggo	52	19.2
Cutuno	43	15.9
Cebuano	37	13.6
Ilokano	10	3.7
Bisaya	2	0.7

Agutaynen	1	0.4
<i>Educational Attainment</i>		
High School Graduate	19	7.1
Vocational Graduate	7	2.6
College Level	18	6.6
Bachelor's Degree	199	73.4
Master's Degree	2	0.7
Diploma's Degree	26	9.6
<i>Monthly Salary</i>		
Below Php. 10,000	42	15.4
Php. 10,001-20,000	186	68.6
Php. 20,001-30,000	41	15.2
Php. 40,001-50,000	2	0.7
<i>Department</i>		
Medical	128	47.2
Food industries	27	10.0
Finance	26	9.6
Dietary	18	6.6
Operation	15	5.5
Administrative	13	4.8
Laundry/ linen	10	3.7
Cafeteria	9	3.3
Utility	8	3.0
Accounting	6	2.2
Chaplaincy	4	1.5
CSR	4	1.5
PBO	3	1.1
<i>Occupation</i>		
Nurse	62	22.9
Technologist	44	16.2
Others	40	14.8
Industries Dept staff	26	9.6
Finance staff	26	9.6
Administrative staff	18	6.6
Dietary staff	17	6.3
Laundry/ linen staff	12	4.4
Cafeteria staff	10	3.7
Pharmacist	9	3.3
Accounting Staff	7	2.6
<i>Number of years employed</i>		
1-5	215	79.3
6-10	24	8.8
11-15	15	5.5
16-20	6	2.2
21-25	5	1.9
26-30	5	1.9
31-35	1	0.4

Source of occupational stress

There are five subcategory where the researcher determined the source of work-related stress among namely task, physical, role, interpersonal demand and other sources.

Based on the descriptive methods, the grand mean of the sources of stress was 1.66 categorized as "sometimes" (Table 2). Based on the overall mean for each sub-category, the majority of the sources of stress were only experienced "sometimes" by the respondents except interpersonal source of stress that were categorized as "never" experienced by the respondents (Table 2).

For the source of stress coming from task demand, the excessive workload were mostly experienced by the respondents (2.10) followed by the time pressure or deadlines (1.99) (Table 2). The increased accessibility (the boss can make contact any time and follow-up work) was the main source of stress under physical demand with mean of 1.94. While under the role demand, responsibility to other had high response with a mean of 1.91. The insecure job climate in the hospital had the high mean of 1.48 under interpersonal demand sub-category but were described by the

respondents as “never” experienced these (Table 2). Further, the inadequate training and possibilities for learning new skills with mean of 1.72 was the main source other factors that causes stress (Table 2).

Table 2. Sources of occupational stress

Statements	Mean	Descriptive
A. Task Demands		
Excessive Workload	2.10	Sometimes
Time deadline/pressures	1.99	Sometimes
Poor quality of supervision	1.73	Sometimes
Change in type on job responsibilities	1.78	Sometimes
Lack of job variety	1.63	Sometimes
Insufficient skills for the job	1.65	Sometimes
Long working hours	1.80	Sometimes
Inflexible working hours	1.66	Sometimes
Underutilization of skills	1.59	Sometimes
Unreasonable demands for performance	1.67	Sometimes
Overall mean	1.76	Sometimes
B. Physical Demands		
Poor lighting in the work area	1.46	Never
Lack of equipment necessary to get the job done	1.70	Sometimes
Excessive noise in the working area	1.81	Sometimes
Overcrowding in the working area	1.82	Sometimes
Poor facilities	1.64	Sometimes
High temperature in the working area	1.82	Sometimes
Increased accessibility	1.94	Sometimes
Overall mean	1.74	Sometimes
C. Role Demands		
Lack of personal control on roles expected at work	1.71	Sometimes
Inadequate authority to match responsibility	1.65	Sometimes
Role conflict and ambiguity	1.62	Sometimes
Difference between company and employee values	1.67	Sometimes
Responsibility for others	1.91	Sometimes
Confusion about duties and responsibilities	1.66	Sometimes
Overall mean	1.71	Sometimes
D. Interpersonal Demands		
Insecure job climate	1.48	Never
Poor relationship with colleagues	1.42	Never
Poor relationship with bosses	1.46	Never
Lack of contact with colleagues	1.37	Never
Office politics	1.44	Never
Overall mean	1.44	Never
E. Other Sources		
Major change in work procedures and instructions	1.67	Sometimes
Demands brought about in the use of technology	1.70	Sometimes
Managerial style of the immediate supervisor	1.71	Sometimes
Too much control by the supervisor	1.55	Sometimes
Personal harassment in the form of unkind words or behavior	1.46	Never
Political discrimination	1.37	Never
Uncertainty over job prospects	1.46	Never
Few promotional opportunities	1.69	Sometimes
Inadequate training and possibilities for learning new skills	1.72	Sometimes
Overall mean	1.59	Sometimes
Grand mean	1.66	Sometimes

*Rating scale: Always (2.51-3.0); sometimes (1.51-2.50) and Never (1.0-1.5).

Table 3 presents the data on the stress management or reduction strategies of the hospital health professionals. Listening to music had the high response of 2.45 followed by face/ solving the problem (2.39). Most of the stress management or reduction strategies were implemented at rage of “sometimes” except for drinking alcohol/ smoking which was resulted to “never” range.

Table 3. Stress management or reduction strategies.

Statements	Mean	Descriptive
Go out with friends	2.26	Sometimes
Watch television/ movie	2.21	Sometimes
Drink alcohol/ smoke	1.34	Never
Ask advice of friends/ co-workers	2.10	Sometimes
Talk to special someone	2.20	Sometimes
Keep self-busy	2.17	Sometimes
Listen to music	2.45	Sometimes
Control emotion	2.24	Sometimes
Ignore the problems	1.98	Sometimes
Go shopping	1.95	Sometimes
Hide my reaction/ emotion	2.06	Sometimes
Seek professional help	1.84	Sometimes
Ask the help of parents/ relative	2.01	Sometimes
Spend some time being alone	2.01	Sometimes
Complain/ argue	1.83	Sometimes
Get adequate sleep and rest	2.23	Sometimes
Accept the situation	2.32	Sometimes
Face/ solve the problem	2.39	Sometimes
Take time off from work	1.99	Sometimes
Decline additional work load	1.72	Sometimes
Maintain healthy, balanced nutritious diet	2.18	Sometimes
Have a regular exercise	2.01	Sometimes
Seek religious comfort	2.24	Sometimes
Seek counselling	1.88	Sometimes
Find time to pursue non-work activities such as hobbies and recreational activities	2.03	Sometimes
Travel	1.98	Sometimes
I do proper planning of my activities	2.09	Sometimes
I take immediate action to matters that need my attention	2.20	Sometimes
I manage my time better	2.23	Sometimes
I adjust my standards/ attitudes	2.21	Sometimes
Grand mean	2.08	Sometimes

*Rating scale: Always (2.51-3.0); sometimes (1.51-2.50) and Never (1.0-1.5).

Based on the statistical analysis, civil status, educational attainment, monthly salary, department where the health professionals and hospital staff belong, occupation, number of years employed and number of years in position significantly affect the stress management or reduction strategies by the employees of hospitals in Puerto Princesa City (Table 4).

Table 4. Relationship between selected profile characteristics and stress management and reduction strategies among hospital employees in Puerto Princesa City.

Profile variables	Coefficient r	P-Value
Age	-0.041	0.496
Sex	0.091	0.137
Civil status	-0.120	0.049
Educational attainment	-0.191	0.002
Monthly salary	-0.132	0.030
Department	-0.163	0.007
Occupation	-0.160	0.008
No. of years employed	-0.173	0.004
Position	-0.127	0.663
No. of years in position	-0.226	0.000

The source of occupational stress between private and public hospital showed no significant difference (Table 5).

Table 5. Difference between the source of occupational stress private (Adventist Hospital Palawan) and public (MMG-PPC Cooperative Hospital).

Variables	Mean Rating	t-value	P-value
Adventist Hospital	2.04	1.633	.106
Coop Hospital	2.10		

DISCUSSION

The excessive workload is the main source of stress for those who work either in private and public hospital in Puerto Princesa City, Palawan. This result was similar to the results obtained by the study of Gholamzadeh et al. (2011); Salam (2016) and Birmanu et al. (2018). Excessive workload was defined by Spector and Jex (1998) as work demand that refers to having too much to do in too little time. Mismatched between workers and their assigned job (Leiter and Maslach, 2003), low nurse to patient ratio (Aiken et al. 2022), and loss of job control (Karasek and Theorell 1990) are only some of the factors identified to cause excessive workload. Although the level of excessive workload in both hospitals in Puerto Princesa City, Palawan was not at high level, the current study suggests the presence of excess workload in these hospitals.

Based on the result of the current study, listening to music were the primary stress management and reduction strategies implied by the hospital personnel. This might be due to the fact that music can easily be accessed through mobile phones, and that listening to music is the easiest and cheapest way to relax. Numbers of studies were already published stating the positive effect of music on health (MacDonald 2013; Fallek et al. 2019; Giordano et al. 2020; and Dingle et al. 2021). Listening to music lowers blood pressure, increase oxytocin level, and decrease the cortisol level (Dingle et al. 2021). According to Thoma et al. (2013), nervous system are mostly affected when we are listening to music, and to a lesser degree the endocrine and psychological stress response.

When stress management and reduction strategies is correlated with the socio-demographic profile of the respondents, only several socio-demographic were significantly affecting the stress management and reduction strategies of the respondents.

The result of the study do not show significant difference in terms of stress management and reduction strategies for men and women. This result was similar to the study of Faraji et al. (2019), and Odonkor and Adams (2021). In terms of marital status, married people significantly have higher stress reduction and stress management ability. Married individual has lower level of cortisol than those who are single, divorced or widowed (Brian et al. 2017). According to Brian et al. (2017), the lower cortisol level on married individual is associated with the satisfaction with their relationship and that married individual to not stress themselves with being poor in relationship of being unmarried. Number of published study stated that people with higher educational attainment tend to have better mental health thus enable them manage their stress (Mirowsky and Ross 2003; Muñoz and Lozada 2021).

This is the first paper that reported the source of stress, stress management and reduction strategies and the correlation of stress management and reduction strategies to the socio-demographic profile of those who work at the private and public hospitals in Puerto Princesa City, Palawan. It was clear that people who works at the hospitals experience stress but only sometimes, and that music was the main stress management and reduction strategies for them. Some socio-demographic factors affect the stress management and reduction strategies. This survey should be conducted every two years to monitor if the level of the stress in hospitals in Palawan are

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