

COMPARATIVE STUDY ON  
OCCUPATIONAL STRESS AMONG NURSING  
STAFF IN RURAL AND URBAN HEALTHCARE  
INSTITUTIONS

KAREN JENNIFER A/P GANASEN

UNIVERSITI MALAYSIA PAHANG



## **SUPERVISOR'S DECLARATION**

I hereby declare that I have checked this thesis and in my opinion, this thesis is adequate in terms of scope and quality for the award of the degree of Bachelor of Occupational Safety and Health (Hons).

---

(Supervisor's Signature)

Full Name : Profesor Madya Mohd Fadzil Bin Mohd Idris

Position : Lecturer of Occupational Safety and Health

Date :



## **STUDENT'S DECLARATION**

I hereby declare that the work in this thesis is based on my original work except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree at Universiti Malaysia Pahang or any other institutions.

---

(Student's Signature)

Full Name : KAREN JENNIFER A/P GANASEN

ID Number : PA15015

Date :

COMPARATIVE STUDY ON OCCUPATIONAL STRESS AMONG NURSING  
STAFF IN RURAL AND URBAN HEALTHCARE INSTITUTIONS

KAREN JENNIFER A/P GANASEN

Thesis submitted in fulfillment of the requirements  
for the award of the degree of  
Bachelor of Occupational Safety and Health

Faculty of Engineering Technology  
UNIVERSITI MALAYSIA PAHANG

JANUARY 2019

## ACKNOWLEDGEMENTS

All praise to the god who have given me the knowledge, skills, patience and strength that all I need in completing this Final Year Project.

At this moment, I would like to express my deepest gratitude to my supportive and helpful supervisor, Profesor Madya Mohd Fadzil Bin Mohd Idris, for guiding and encouraging me in the completion of this research. I am truly grateful to his persistent support and cooperation as well as being prepared at all times in assisting me all along the completion this research.

At the same time, I would also like to give a token of appreciation to the authorities of the Hospital Tengku Ampuan Afzan and Hospital Pekan for granting me the permission to conduct my study in the hospitals and not forgetting all the respondents involved for giving a good cooperation to complete this research.

Besides that, I want to thank my family members for their help in terms of financial and emotional throughout the completion of this research study. I am eternally grateful to them as I would not have endured all this without their continual support.

Last but not least, my heartfelt thanks to my friends for their encouragement and motivation throughout my project as well as helping me in developing the project.

## ABSTRAK

Latar Belakang: Tekanan kerja adalah rakyat balas mungkin mempunyai apabila dibentangkan dengan tuntutan kerja dan tekanan yang tidak bersamaan dengan pengetahuan dan kebolehan.

Objektif: Tujuan kajian ini adalah untuk membandingkan tekanan pekerjaan dan meneroka hubungan antara pembolehubah demografi dan kerja di kalangan jururawat terlatih dari institusi penjagaan kesihatan bandar and luar bandar.

Metodologi: Terdapat enam puluh jururawat dari wad yang dipilih secara rawak daripada Hospital Tengku Ampuan Afzan dan Hospital Pekan telah mengambil bahagian dalam kajian ini. Data untuk kajian ini diperolehi melalui soal selidik untuk menentukan maklumat sosio-demografi manakala "Cara-cara Mengatasi Stress Inventory" telah digunakan untuk mengenal pasti strategi yang biasa digunakan oleh jururawat dalam menguruskan tekanan kerja. Di samping itu, "Nursing Skala Stress" (NSS) () juga gunakan untuk membandingkan tekanan kerja di kalangan jururawat di kedua-dua institusi penjagaan kesihatan bandar dan luar bandar. Berikutan itu, penilaian kortisol air liur telah dijalankan antara yang pertama sepuluh responden dari setiap institusi penjagaan kesihatan untuk mengkaji kehadiran tekanan penanda kortisol dalam air liur daripada responden apabila mereka bermasalah. Semua data dianalisis dengan menggunakan "Statistical Package for Social Science" (SPSS) dan kit ELISA untuk diagnosis kehadiran kortisol dalam air liur.

Keputusan: Dalam membandingkan tekanan kerja di kalangan jururawat di kedua-dua institusi penjagaan kesihatan bandar dan luar bandar, tidak ada perbezaan dalam skor faktor kerja seperti persekitaran kerja, waktu kerja, tuntutan kerja dan hubungan kerja di Hospital Pekan dan Hospital Tengku Ampuan Afzan. Kedua-dua skor hospital sedikit sama dalam nilai min. waktu kerja diperolehi dengan nilai min yang paling tinggi dalam kedua-dua institusi penjagaan kesihatan di kawasan luar bandar dan bandar. Sedangkan, kedua-dua hospital diperolehi dengan nilai min yang paling rendah untuk persekitaran kerja. Ini menunjukkan persekitaran kerja bukan faktor penyumbang kepada tekanan kerja di kalangan jururawat semasa waktu kerja adalah faktor yang mempengaruhi yang boleh menyebabkan tekanan kerja di kalangan jururawat.

Kesimpulan: Faktor-faktor ini perlu diambil kira untuk membangunkan program pengurusan stres di kalangan jururawat dari wad pada masa hadapan.

## ABSTRACT

**Background:** Occupational stress was the response people may have when presented with work demands and pressures that were not equivalent to their knowledge and abilities and which challenge their ability to cope.

**Objective:** The purpose of this study is to compare the occupational stress and explore the relationship between demographic and work variables among staff nurses from urban and rural healthcare institutions.

**Methodology:** A total of thirty staff nurses from wards of Hospital Tengku Ampuan Afzan that randomly selected and Hospital Pekan had participated in this study. The data for the study were collected through questionnaires to determine the socio-demographic information while the “Ways of Coping with Stress Inventory” was used to identify the strategy that commonly used by nurses in managing occupational stress. Besides that, the “Nursing Stress Scale” (NSS) () was also use to compare the occupational stress among nurses in both urban and rural healthcare institutions. Following this, a salivary cortisol assessment was conducted among the first ten respondents from each healthcare institution to study the presence of stress marker cortisol in saliva of respondents when they are distressed. All data is analyzed by using “Statistical Package for Social Science” (SPSS) and ELISA kit to diagnosis the presence of cortisol in saliva.

**Results:** In comparing the occupational stress among staff nurses in both rural and urban healthcare institutions, there is no difference in scores of work factors such as work environment, work hours, work demands and work relationship in Hospital Pekan and Hospital Tengku Ampuan Afzan. Both hospitals scores slightly similar in the mean value. Work hours scored with the highest mean value in both healthcare institutions in rural and urban area. Whereas, both hospitals scored with lowest mean value for the work environment. This shows working environment is not the contributing factor of occupational stress among nurses while working hours is the influencing factor that can cause occupational stress among nurses.

**Conclusion:** These factors should be taken into consideration for developing stress management program among staff nurses from wards in the future.

## TABLE OF CONTENT

<b>DECLARATION</b>	
<b>TITLE PAGE</b>	<b>i</b>
<b>ACKNOWLEDGEMENTS</b>	<b>ii</b>
<b>ABSTRAK</b>	<b>iii</b>
<b>ABSTRACT</b>	<b>iv</b>
<b>TABLE OF CONTENT</b>	<b>v</b>
<b>LIST OF TABLES</b>	<b>ix</b>
<b>LIST OF FIGURES</b>	<b>x</b>
<b>LIST OF SYMBOLS</b>	<b>xi</b>
<b>LIST OF ABBREVIATIONS</b>	<b>xii</b>
<b>CHAPTER 1 INTRODUCTION</b>	<b>1</b>
1.0 Introduction	1
1.1 Study Background	4
1.2 Problem Statement	5
1.3 Research Objectives	8
1.3.1 General Objective	8
1.3.2 Specific Objective	8
1.4 Research Questions	8
1.5 Hypothesis	8
1.6 Significance of Study	9
1.7 Scope of Study	10
1.8 Expected Results	11



1.9	Conceptual Framework	12
1.10	Definition of Variables (Conceptual and Operational)	13
<b>CHAPTER 2 LITERATURE REVIEW</b>		<b>15</b>
2.0	Introduction	15
2.1	Demographic Factors	15
2.2	Work Factors	18
2.3	Salivary Cortisol Assessment	21
2.4	Conclusion	22
<b>CHAPTER 3 METHODOLOGY</b>		<b>23</b>
3.0	Introduction	23
3.1	Study Design	23
3.2	Study Location	23
3.3	Study Population	25
3.4	Study Sample	25
3.5	Study Size	25
3.6	Inclusion and Exclusion Criteria	26
3.7	Data Collection Instrument	27
	3.7.1 Socio-Demographic Data	28
	3.7.2 Nursing Stress Scale (NSS)	28
	3.7.3 Salivary Cortisol Assessment	28
3.8	Data Analysis	33
3.9	Process and Procedure	34
3.10	Ethical Consideration	36
3.11	Conclusion	36

<b>CHAPTER 4 RESULTS AND DISCUSSION</b>	<b>37</b>
4.0 Introduction	37
4.1 Demographic factor in Healthcare Institutions	37
4.1.1 Hospital Pekan (Rural)	37
4.1.2 Demographic factor in Hospital Tengku Ampuan Afzan (Urban)	42
4.2 Overall Stress Level among Staff Nurses in Healthcare Institutions	47
4.2.1 Overall Stress Level among Staff Nurses in Hospital Pekan	48
4.2.2 Overall Stress Level among Staff Nurses in Hospital Tengku Ampuan Afzan	48
4.3 ANOVA Test	49
4.3.1 ANOVA Test in Hospital Pekan	49
4.3.2 ANOVA Test in Hospital Tengku Ampuan Afzan	50
4.4 Spearman Correlation study	51
4.4.1 Spearman Correlation study in Hospital Pekan	51
4.4.2 Spearman Correlation study in Hospital Tengku Ampuan Afzan	52
4.5 Salivary Cortisol Analysis	53
4.5.1 Concentration of cortisol in saliva of Hospital Pekan	53
4.5.2 Concentration of cortisol in saliva of Hospital Tengku Ampuan Afzan	53
4.6 Conclusion	54
<b>CHAPTER 5 CONCLUSION</b>	<b>55</b>
5.1 Introduction	55
5.2 Conclusion	55
5.3 Recommendations	56
5.4 Limitations of Study	56

<b>REFERENCES</b>	<b>58</b>
<b>APPENDIX A DETAIL OF DATA ANALYSIS</b>	<b>62</b>
<b>CORRELATION STUDY</b>	<b>70</b>
<b>APPENDIX B COVER PAGE OF INSTRUCTION</b>	<b>73</b>
<b>APPENDIX C QUESTIONNAIRES</b>	<b>74</b>
<b>APPENDIX D GANTT CHART</b>	<b>78</b>
<b>APPENDIX E CONSENT FORM</b>	<b>79</b>

## LIST OF TABLES

Table 2.1	Causes of occupational stress experienced among staff nurses	20
Table 3.1	Determining Sample Size of a Known Population	26
Table 3.2	Types of data collection instrument in associate with objectives	27
Table 3.3	The materials supplied with single ELISA kit	31
Table 3.4	The types of test in associate with objectives	33
Table 4.1	Gender Distribution of Nurses in Hospital Pekan	38
Table 4.2	Marital Status of Nurses In Hospital Pekan	39
Table 4.3	Years of Experience of Nurses in Hospital Pekan	40
Table 4.4	Monthly Salary Income of Nurses in Rural Area	41
Table 4.5	Gender Distribution of Nurses in Hospital Tengku Ampuan Afzan	43
Table 4.6	Marital Status of Nurses In Hospital Tengku Ampuan Afzan	44
Table 4.7	Years of Experience of Nurses in Hospital Tengku Ampuan Afzan	45
Table 4.8	Monthly Salary Income of Nurses in Urban Area	46
Table 4.9	Distribution of Score of Nurses Stress Level	47
Table 4.10	Overall Occupational Stress Level among Staff Nurses in Hospital Pekan	48
Table 4.11	Overall Occupational Stress Level among Staff Nurses in Hospital Tengku Ampuan Afzan	49
Table 4.12	Shows the ANOVA Test conducted in Hospital Pekan	50
Table 4.13	Shows the ANOVA Test conducted in Hospital Tengku Ampuan Afzan	50
Table 4.14	Shows the Correlation Study conducted in Hospital Pekan	51
Table 4.15	Shows the Correlation Study conducted in Hospital Tengku Ampuan Afzan	52
Table 4.16	Shows the concentration of cortisol in Hospital Pekan	53
Table 4.17	Shows the concentration of cortisol in Hospital Tengku Ampuan Afzan	54

## LIST OF FIGURES

Figure 1.1	Responsibilities and duties of nursing staff in healthcare institutions	3
Figure 2.1	Level of cortisol in saliva in a “diurnal variation” pattern	22
Figure 3.1	Hospital Tengku Ampuan Afzan & Hospital pekan	24
Figure 3.2	ELISA Kit	29
Figure 3.3	Shows the steps for collecting saliva for cortisol assessment	30
Figure 3.4	Mixing in each tube	31
Figure 3.5	Flow chart of overall assay procedure in diagnosis the cortisol of saliva	32
Figure 3.6	Flow chart shows the complete process of the research study	35
Figure 4.1	Graphical Representation of Gender Distribution of Nurses in Hospital Pekan	38
Figure 4.2	Graphical Representation of Marital Satus Distribution of Nurses in Hospital Pekan	39
Figure 4.3	Graphical Representation of Experience Years Distribution of Nurses in Hospital Pekan	40
Figure 4.4	Graphical Representation of Monthly Salary Income Distribution of Nurses in Hospital Pekan	42
Figure 4.5	Graphical Representation of Gender Distribution of Nurses in Hospital Tengku Ampuan Afzan	43
Figure 4.6	Graphical Representation of Marital Satus Distribution of Nurses in Hospital Tengku Ampuan Afzan	44
Figure 4.7	Graphical Representation of Experience Years Distribution of Nurses in Hospital Tengku Ampuan Afzan	45
Figure 4.8	Graphical Representation of Monthly Salary Income Distribution of Nurses in Hospital Tengku Ampuan Afzan	47

## LIST OF SYMBOLS

%	Percentage
°C	Degree Celsius
±	Plus minus
μl	Microliters

## LIST OF ABBREVIATIONS

rpm	Revolutions per minute
mL	Millilitres
s	Second
nm	Nanometres

## CHAPTER 1

### INTRODUCTION

#### 1.0 Introduction

The nursing occupation is portrayed as one of the most stressful careers because of their wide job scope compared than other healthcare professionals in healthcare institutions. Figure 1.1 shows the daily basis responsibilities and duties that need to be carried out by staff nurses in their healthcare institutions. It is also showing that the nurses are required to do too many of non-nursing tasks such as clerical work. Besides that, staff nurses are responsible in providing physical and psychological support to patients and families, maintaining nursing inventory of supplies, supervising assigned team members, recording patients pulses and temperature, setting up the medical equipment to examine the patient or perhaps moving the heavy medical equipment from one to another room and helping patients with their basic needs such as serving meals for the patients, making beds and cleaning out their bedpans.

The aim of this research is to compare the risk occupational stress among nursing staff in rural and urban healthcare institutions. Occupation playing a pivotal role in every individuals' lives by contributing support in term of incomes, experiences and self-respect (Miranda, Filha, Aparecida De Souza Costa, & Rodrigues Guilam, 2013). However, at the same time this occupation might bring bad reflects or consequences to the worker's health and life. For figuring out the consequences of occupational stress that may affect their health many ways or approaches have been established to overcome this problem. It has been confirmed by few researchers that in several parts of the world occupational stress puts a significant impact among staff nurses in healthcare institutions including hospitals and clinics.



Moreover, occupational stress was the response people may have when presented with work demands and pressures that were not equivalent to their knowledge and abilities and which challenge their ability to cope. Job stress helps to improve performance up to a limit and then starts deteriorating. These are the factors or types of job stress such as high work demands, long working hours, poor relationship with family members and colleagues, poor work environment, clothing, economic challenges and so forth. Nursing profession has become a stressful occupation nowadays. The impact of job stress experienced by nursing staff was highly significant because it may affect not only the health care personnel but also their patient care services. Staff nurses are engaging with multiple roles such as carrying out medications to provide first-hand care to ill patients, be in charge of Intensive Unit Care, monitoring the conditions of the patients in wards, reviewing and maintaining patients' records and reports and also interacting with medical doctors. Female experienced more stress than male is one of our demographic factor. It was because male and female nursing staff perceived work-related stress differently.

In addition, patient behavior was the greatest source of stress in inter-relationship component. Extended work shift or on-call duty at night, long working duration, work relationship, working environments, job position and inadequate salaries were directly related to pressure experienced by staff nurses in healthcare institutions. Heavy work load and the adverse psychological environment at work were also the cause of stress among staff nurses in healthcare institutions. Several studies showed that higher levels of stress were reported arising from lack of resources, perpetual workload inadequate paying scale according to the educational level, poor relationships with colleagues and family and unrealistic expectations from management. The demand of nursing staff job causes the development and high offering of nursing courses in every private and government universities in Malaysia. This shows our country require more nurses in the healthcare institutions due to their heavy workloads.

If nursing staffs experience too many stress in their work and they failed to manage their stress effectively and efficiently this might lead to decreasing productivity and negative impact will later be experienced by their patients, colleagues and familial members. A review revealed that high proportion of caregivers has strong desire to leave their career or regret choosing the healthcare professionals (Godwin, Alexander

Suuk, & Harrison Selorm, 2017). These serious implications not only affect the quality of life for the individuals themselves, but also will affect the quality of healthcare institutions as well.

However, to our knowledge, a few studies pertaining to prevalence of occupational stress was conducted among those healthcare professionals who are nursing staffs in some healthcare institutions. Those studies explored different stressor factors in terms of demographic factors, workplace factors and other factors. Therefore, this study aimed to investigate the associated risk factors with occupational stress among nursing staff in healthcare institutions including hospitals and clinics in rural and urban areas. Hopefully, these findings can be used to guide in planning the coping ways in managing and reducing the stress related-health problem besides maintaining the quality of healthcare services in both rural and urban healthcare institutions.

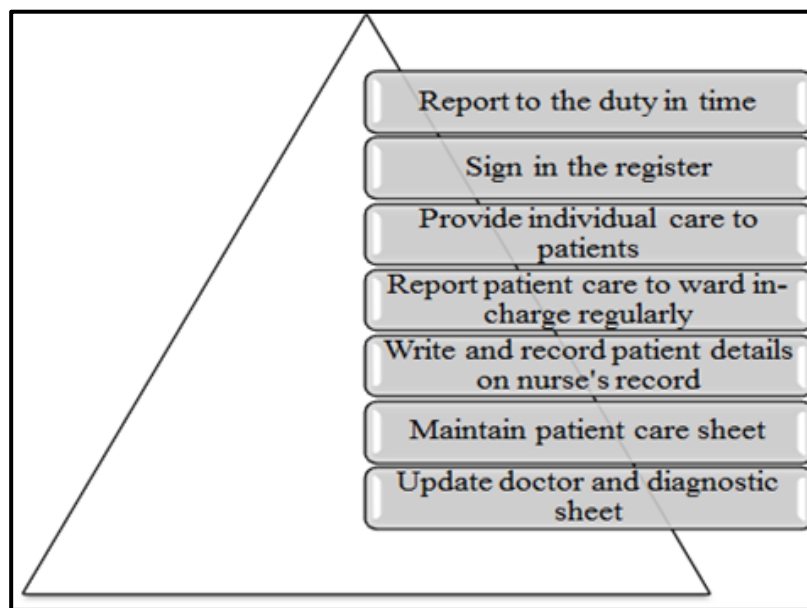


Figure 1.1: The responsibilities and duties of nursing staff in healthcare institutions

## REFERENCES

- Cocco, E., Gatti, M., Lima, C. A., & Camus, V. (2002). A comparative study of stress and burnout among staff caregivers in nursing homes and acute geriatric wards. *International Journal of Geriatric Psychiatry*, 18(1), 78-85. doi:10.1002/gps.800
- Maderthaner, M. (1987). Stress, Psychosomatics, and Stress Coping from a Clinical-Psychological Point of View. *Perspectives on Stress and Stress-Related Topics*, 126-161. Doi: 10.1007/978-3-642-69057-0\_9
- Terakado, A., & Watanabe, T. (2012). Creation of a questionnaire to measure stress among nurses engaged in palliative care on general wards. *Supportive Care in Cancer*, 20(10), 2537-2544. doi:10.1007/s00520-011-1368-5
- Filha, M. M., Costa, M. A., & Guilam, M. C. (2013). Occupational stress and self-rated health among nurses. *Revista Latino-Americana De Enfermagem*, 21(2), 475-483. doi:10.1590/s0104-11692013000200002
- Hasan, A. A., Elsayed, S., & Tumah, H. (2018). Occupational stress, coping strategies, and psychological-related outcomes of nurses working in psychiatric hospitals. *Perspectives in Psychiatric Care*. doi:10.1111/ppc.12262
- Yiu-Chung, K., Lai, G., & Kwok-Bun, C. (2013). Coping resources, coping strategies and work stress among six professional groups: A comparative analysis By Gina Lai, Chan Kwok-Bun And Ko Yiu-Chung. *Work Stress and Coping Among Professionals*, 203-240. doi:10.1163/ej.9789004154803.i-262.98
- Zyga, S., Mitrousi, S., Alikari, V., Sachlas, A., Stathoulis, J., Fradelos, E., . . . Maria, L. (2016). Assessing Factors That Affect Coping Strategies Among Nursing Personnel. *Materia Socio Medica*, 28(2), 146. doi:10.5455/msm.2016.28.146-150
- Ojekou, G. P., & Dorothy, O. T. (2015). Effect of Work Environment on Level of Work Stress and Burnout among Nurses in a Teaching Hospital in Nigeria. *Open Journal of Nursing*, 05(10), 948-955. doi:10.4236/ojn.2015.510100
- Jose, D. (2013). A descriptive study on stress and coping of nurses working in selected hospitals of Udupi and Mangalore districts Karnataka, India. *IOSR Journal of Nursing and Health Science*, 3(1), 10-18. doi:10.9790/1959-03111018
- Saiful, B. Y. (2013). Dealing with Occupational Stress – A Self-Changed Model. *Occupational Medicine & Health Affairs*, 01(07). doi:10.4172/2329-6879.1000138

- Godwin, A., Suuk, L. A., & Selorm, F. H. (2017). Occupational Stress and its Management among Nurses at St. Dominic Hospital, Akwatia, Ghana. *Health Science Journal*,10(6). doi:10.21767/1791-809x.1000467
- Mccarthy, V. J., Power, S., & Greiner, B. A. (2010). Perceived occupational stress in nurses working in Ireland. *Occupational Medicine*,60(8), 604-610. doi:10.1093/occmed/kqq148
- Raleigh, E. D. (1980). The Stress Response. *Occupational Health Nursing*,28(12), 11-14. doi:10.1177/216507998002801202
- Golbasi, Z., Kelleci, M., & Dogan, S. (2008). Relationships between coping strategies, individual characteristics and job satisfaction in a sample of hospital nurses: Cross-sectional questionnaire survey. *International Journal of Nursing Studies*,45(12), 1800-1806. doi:10.1016/j.ijnurstu.2008.06.009
- Landa, J. M., López-Zafra, E., Martos, M. P., & Aguilar-Luzón, M. D. (2008). The relationship between emotional intelligence, occupational stress and health in nurses: A questionnaire survey. *International Journal of Nursing Studies*,45(6), 888-901. doi:10.1016/j.ijnurstu.2007.03.005
- Lyne, K. D., Barrett, P. T., Williams, C., & Coaley, K. (2000). A psychometric evaluation of the Occupational Stress Indicator. *Journal of Occupational and Organizational Psychology*,73(2), 195-220. doi:10.1348/096317900166985
- Lukose, S., & E.p., A. A. (2015). Occupational Stress, Mental Health and Attitude Towards Mental Illness of Nursing Staff Working in General and Psychiatric Hospital: A Comparative Study. *Journal of Organization and Human Behaviour*,4(4). doi:10.21863/johb/2015.4.4.017
- The Role of Demographics in Occupational Stress and Well Being. (2014). *Research in Occupational Stress and Well-being The Role of Demographics in Occupational Stress and Well Being*,I. doi:10.1108/s1479-3555\_2014\_0000012019
- Lee, J. (2015). Job Stress and Stress Coping Strategies among Male and Female Korean Nurses. *The Health Journal*. doi:10.14257/astl.2015.120.138
- Work-Related Stress of Registered Nurses in a Hospital Setting. (2004). *Journal for Nurses in Staff Development (JNSD)*,20(1), 15-16. doi:10.1097/00124645-200401000-00003

- Cocco, E., Gatti, M., Lima, C. A., & Camus, V. (2002). A comparative study of stress and burnout among staff caregivers in nursing homes and acute geriatric wards. *International Journal of Geriatric Psychiatry*, 18(1), 78-85. doi:10.1002/gps.800
- Maderthaner, M. (1987). Stress, Psychosomatics, and Stress Coping from a Clinical-Psychological Point of View. *Perspectives on Stress and Stress-Related Topics*, 126-161. Doi: 10.1007/978-3-642-69057-0\_9
- Terakado, A., & Watanabe, T. (2012). Creation of a questionnaire to measure stress among nurses engaged in palliative care on general wards. *Supportive Care in Cancer*, 20(10), 2537-2544. doi:10.1007/s00520-011-1368-5
- Filha, M. M., Costa, M. A., & Guilam, M. C. (2013). Occupational stress and self-rated health among nurses. *Revista Latino-Americana De Enfermagem*, 21(2), 475-483. doi:10.1590/s0104-11692013000200002
- Hasan, A. A., Elsayed, S., & Tumah, H. (2018). Occupational stress, coping strategies, and psychological-related outcomes of nurses working in psychiatric hospitals. *Perspectives in Psychiatric Care*. doi:10.1111/ppc.12262
- Yiu-Chung, K., Lai, G., & Kwok-Bun, C. (2013). Coping resources, coping strategies and work stress among six professional groups: A comparative analysis By Gina Lai, Chan Kwok-Bun And Ko Yiu-Chung. *Work Stress and Coping Among Professionals*, 203-240. doi:10.1163/ej.9789004154803.i-262.98
- Zyga, S., Mitrousi, S., Alikari, V., Sachlas, A., Stathoulis, J., Fradelos, E., . . . Maria, L. (2016). Assessing Factors That Affect Coping Strategies Among Nursing Personnel. *Materia Socio Medica*, 28(2), 146. doi:10.5455/msm.2016.28.146-150
- Ojekou, G. P., & Dorothy, O. T. (2015). Effect of Work Environment on Level of Work Stress and Burnout among Nurses in a Teaching Hospital in Nigeria. *Open Journal of Nursing*, 05(10), 948-955. doi:10.4236/ojn.2015.510100
- Jose, D. (2013). A descriptive study on stress and coping of nurses working in selected hospitals of Udupi and Mangalore districts Karnataka, India. *IOSR Journal of Nursing and Health Science*, 3(1), 10-18. doi:10.9790/1959-03111018
- Saiful, B. Y. (2013). Dealing with Occupational Stress – A Self-Changed Model. *Occupational Medicine & Health Affairs*, 01(07). doi:10.4172/2329-6879.1000138

- Godwin, A., Suuk, L. A., & Selorm, F. H. (2017). Occupational Stress and its Management among Nurses at St. Dominic Hospital, Akwatia, Ghana. *Health Science Journal*,10(6). doi:10.21767/1791-809x.1000467
- Mccarthy, V. J., Power, S., & Greiner, B. A. (2010). Perceived occupational stress in nurses working in Ireland. *Occupational Medicine*,60(8), 604-610. doi:10.1093/occmed/kqq148
- Raleigh, E. D. (1980). The Stress Response. *Occupational Health Nursing*,28(12), 11-14. doi:10.1177/216507998002801202
- Golbasi, Z., Kelleci, M., & Dogan, S. (2008). Relationships between coping strategies, individual characteristics and job satisfaction in a sample of hospital nurses: Cross-sectional questionnaire survey. *International Journal of Nursing Studies*,45(12), 1800-1806. doi:10.1016/j.ijnurstu.2008.06.009
- Landa, J. M., López-Zafra, E., Martos, M. P., & Aguilar-Luzón, M. D. (2008). The relationship between emotional intelligence, occupational stress and health in nurses: A questionnaire survey. *International Journal of Nursing Studies*,45(6), 888-901. doi:10.1016/j.ijnurstu.2007.03.005
- Lyne, K. D., Barrett, P. T., Williams, C., & Coaley, K. (2000). A psychometric evaluation of the Occupational Stress Indicator. *Journal of Occupational and Organizational Psychology*,73(2), 195-220. doi:10.1348/096317900166985
- Lukose, S., & E.p., A. A. (2015). Occupational Stress, Mental Health and Attitude Towards Mental Illness of Nursing Staff Working in General and Psychiatric Hospital: A Comparative Study. *Journal of Organization and Human Behaviour*,4(4). doi:10.21863/johb/2015.4.4.017
- The Role of Demographics in Occupational Stress and Well Being. (2014). *Research in Occupational Stress and Well-being The Role of Demographics in Occupational Stress and Well Being*,I. doi:10.1108/s1479-3555\_2014\_0000012019
- Lee, J. (2015). Job Stress and Stress Coping Strategies among Male and Female Korean Nurses. *The Health Journal*. doi:10.14257/astl.2015.120.138
- Work-Related Stress of Registered Nurses in a Hospital Setting. (2004). *Journal for Nurses in Staff Development (JNSD)*,20(1), 15-16. doi:10.1097/00124645-200401000-00003