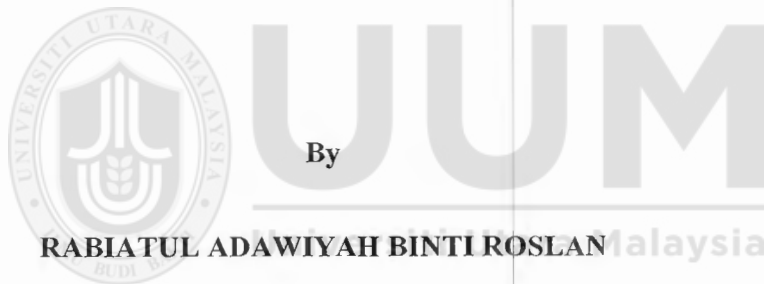


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**THE RELATIONSHIP BETWEEN SHIFT WORK AND QUALITY OF SLEEP
AMONG NURSES IN UMMC.**



Thesis Submitted to
Othman Yeop Abdullah Graduate School of Business,
Universiti Utara Malaysia,
In Partial Fulfilment of the Requirement for Master of Science (Occupational Safety and
Health Management)



**Pusat Pengajian Pengurusan
Perniagaan**

SCHOOL OF BUSINESS MANAGEMENT

Universiti Utara Malaysia

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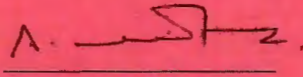
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Abstract

This study was carried out with the purpose to investigate the relationship between shift work status and quality of sleep among nurses in Surgery Department at University Malaya Medical Centre. Nurses perform an important role in patient care. They are the first person to detect and noticed any changes in patient condition and patient health status. Nurses also act as a supporter in terms of physical and emotional well -being of the patient during ongoing treatment. Therefore, this study held among nurses to access nurses' quality of sleep. Therefore, to investigate the sleep quality and its relations to shift work a Pittsburgh Sleep Quality Index questionnaire was used. The aim of this study was to investigate the level of sleep quality, differences between demographic factors and the relationship between shift works and sleep quality. Data was collected using a self-reported questionnaire and was analysed using SPSS Statistics Version 23.0. Sample for this study included a total of 97 participants. Findings show that participants whichever doing shift work or not are no significant differences with sleep quality and working in shift work also is not associated with poor sleep quality. From the result also, it can be seen that 87.6% of nurses working in the Surgery Department in UMMC are having poor sleep quality. It is can be concluded that regardless of working in shift work or standard shift nurses still have poor sleep quality. Further research with different variables needs to be carried out to study factors that affected sleep quality among nurses. A higher number of respondents and hospitals will be more significant for future research and could generate more distinct results. To increase the sample size, the inclusion of areas with more multiple disciplines and multiple staff is suggested.

Keywords: Shift work, Quality of sleep,

Abstrak

Kajian ini dijalankan dengan tujuan untuk mengkaji hubungan antara status kerja shift dan kualiti tidur di kalangan jururawat di Jabatan Pembedahan di Pusat Perubatan Universiti Malaya. Oleh itu, untuk menyiasat kualiti tidur dan perhubungannya borang soal selidik Indeks Kualiti Tidur Pittsburgh digunakan. Jururawat melakukan peranan penting dalam penjagaan pesakit. Mereka adalah orang pertama yang mengesan dan melihat sebarang perubahan dalam keadaan pesakit dan status kesihatan pesakit. Jururawat juga bertindak sebagai penyokong dari segi fizikal dan emosi kesejahteraan pesakit semasa rawatan berterusan. Oleh itu, kajian ini diadakan di kalangan jururawat untuk mengakses kualiti tidur jururawat. Untuk menyiasat kualiti tidur dan perhubungannya dengan kerja shift soal selidik Indeks Kualiti Tidur Pittsburgh digunakan. Tujuan kajian ini adalah untuk mengkaji tahap kualiti tidur, perbezaan antara faktor demografi dan hubungan antara kerja shift dan kualiti tidur. Data dikumpul menggunakan soal selidik yang dilaporkan sendiri dan dianalisis menggunakan Statistik SPSS Versi 23.0. Sampel kajian ini seramai 97 peserta. Keputusan menunjukkan bahawa peserta yang melakukan kerja shift tidak mempunyai perbezaan yang signifikan dengan kualiti tidur dan bekerja dalam kerja shift juga tidak dikaitkan dengan kualiti tidur yang kurang baik. Hasilnya juga, dapat dilihat bahawa 87.6% jururawat yang bekerja di Jabatan Pembedahan di UMMC mempunyai kualiti tidur yang kurang baik. Ia dapat disimpulkan bahawa tidak kira bekerja dalam kerja shift atau jururawat shift standard masih mempunyai kualiti tidur yang kurang baik. Kajian lanjut dengan pemboleh ubah yang berbeza perlu dilakukan untuk mengkaji faktor-faktor yang mempengaruhi kualiti tidur di kalangan jururawat. Bilangan responden dan hospital yang lebih tinggi akan menjadi lebih penting untuk penyelidikan masa depan dan dapat menjana lebih banyak keputusan yang berbeza. Untuk meningkatkan saiz sampel, kemasukan kawasan dengan lebih banyak disiplin dan banyak kakitangan dicadangkan.

Kata kunci: Kerja shift, Kualiti tidur.

ACKNOWLEDGEMENT

I would like to express my deepest appreciation to all those who provided me the possibility to complete this research. A special gratitude I give to my internal supervisor Mr. Syazwan Syah bin Zulkifly whose contribution in stimulating suggestions and encouragement to complete this also helped me to coordinate my research for my final year thesis. His challenges brought this work towards a completion. It is with his supervision that this work came into existence. For any faults I take full responsibility. I am so grateful to University Utara Malaysia for making it possible for me to study here.

Also my deepest appreciation to my acquaintances Saidah bt Satderi & Gayathri Naidu a/p Ramakrishnan, for their tremendous encouragement and assistance upon completion of this thesis.

I am also thankful to University Malaya Medical Centre who accepted and allowed for a valuable authorization to conduct this research at their facility. Finally, I thank all who in one way or another contributed in the completion of this thesis.

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LIST OF ABBREVIATIONS

UKMMC	University Kebangsaan Malaysia Medical Center
UMMC	University Malaya Medical Center
ISO	International Organization for Standardization
DOSH	Department of Occupational Safety and Health
OSHA	Occupational Safety and Health Act
EU	European Union
SWD	Shift Work Disorder
PSQI	Pittsburgh Sleep Quality Index
SPSS	Statistical Package for the Social Sciences



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LIST OF APPENDICES

Appendix A Research Questionnaire

Appendix B Ethics Approval form

Appendix C Duties of Employer to their employees according to OSHA ACT

514,1994 Part IV; Section 15(1)



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CHAPTER ONE

INTRODUCTION

1.0 Introduction

This chapter comprises of the background of the study, problem statement, research question, objective, the scope of the study, significant of study and organization of the thesis.

1.1 Background of the study

Office of Disease Prevention and Health Promotion under the United States' Department of Health and Human Services stated that sleep health is a new subject matter of Healthy People 2020 (Wright, 2012). One of its goals is to raise the public awareness on the positive impacts of the adequacy of sleep and treatments for sleep disorders on the employees' health, productivity, wellness, satisfactory of life, and security on roads and in the place of job which includes the nurse or any paramedic working at the hospitals. This issue is becoming more important as there are increasing cases of fatalities caused by sleep deprivation and exhaustion. Moreover, low productivity is also observed among the shift workers due to their tendency to fall asleep during shift periods or being inactive.

Sleep is defined as the state of mind and body in a state of rest, where the eyes are usually closed and the level of consciousness is in a state of complete unconsciousness or half-consciousness, so the movement of the body and the level of reaction decrease (Houghton., 2004). Many factors influence the amount of sleep a person has, including age. The

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<https://doi.org/10.1016/j.ijnurstu.2017.04.002>



APPENDIX A RESEARCH QUESTIONNAIRE



PARTICIPANT INFORMATION SHEET

Study Title: The Relationship Between Shift Work And Quality Of Sleep Among Nurses In Ummc.

Version No: 1

Version Date: 12/2/2019

Name of investigator:

Rabiatul Adawiyah bt Roslan

Telephone number :

0133314849



We would like to invite you to take part in a research study. Before you decide whether to participate, you need to understand why the research is being done and what it would involve. Please take time to read the following information carefully; talk to others about the study if you wish.

Ask us if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

What is the purpose of this study?

- i. To investigate level of sleep quality.

- ii. To determine the relationship between shift work and sleep quality.

Why is this study important?

The administrators and management of University Malaya Medical Centre (UMMC) would find this research useful in understanding occurrence and extent of nurses nature of job. The findings of this research would be of crucial benefit to UMMC organization, which intend to make efforts at improving safety, mental and physical health of the workers.

Who Is looked for?

Nurses in UMMC.

Time & Place of research study:

1 march 2019 - 1 march 2020

Wards In UMMC

What will be the role of you in this study?

You will be participating in answering questionnaire to get the data to analyze.

Are there any risks? Do you have side effect?

There is no risk and side effect.



What will the data be used for?

The data will analyze to study the relationships of shift works towards quality of sleep among nurses.

What will happen if I agree now and withdraw later from the study?

Some of the research data will be invalid.

Who should I contact if I am unhappy with how the study is being conducted?

Medical Research Ethics Committee
University of Malaya Medical Centre
Telephone number: 03-7949 3209/2251



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BK-MIS-1116-E03

Consent Form

Research Tittle

The Relationship Between Shift Work And Quality Of Sleep Among Nurses In Ummc.

Name of the Principle Investigator

Rabiatul Adawiyah binti Roslan

Please tick the box if you agree with the statement given below:

1. I have read and understood the information provided in Participant Information Sheet for this study.
2. I have had the opportunity to ask questions about this study and these have been answered to my satisfaction.
3. I understand that my participation is voluntary and that I can notify the examiner to withdraw from the study at any point of time without my legal right being affected.
4. I understand that any information recorded during the study will be kept confidential and will only be used for the purpose of this study.
5. I give my written consent to take part in this study. I agree/ do not agree (delete as appropriate)

(if you haven't ticked any of the boxes please do not sign this form)

Name of Participant

Date

Signature

The Pittsburgh Sleep Quality Index (PSQI) is an effective instrument used to measure the quality and patterns of sleep in adults. It differentiates “poor” from “good” sleep quality by measuring seven areas (components): subjective sleep quality, sleep latency, sleep duration, habitual sleep efficiency, sleep disturbances, use of sleeping medications and daytime dysfunction over the last month.

SECTION A: Demographic

Please state the actual answer and tick (/) in the box provided.

1. Age?

<input type="checkbox"/>	18-25 years old
<input type="checkbox"/>	26-30 years old
<input type="checkbox"/>	31-35 years old
<input type="checkbox"/>	36-40 years old
<input type="checkbox"/>	41 years old and above

2. Gender?

<input type="checkbox"/>	Male
<input type="checkbox"/>	Female



3. Marital Status

<input type="checkbox"/>	Married
<input type="checkbox"/>	Single
<input type="checkbox"/>	Divorced/widowed

4. Do you have children?

<input type="checkbox"/>	Yes
<input type="checkbox"/>	No

5. Educational level

<input type="checkbox"/>	Diploma
<input type="checkbox"/>	Degree
<input type="checkbox"/>	Master and above

6. Working experience

<input type="checkbox"/>	Less than 5 years
<input type="checkbox"/>	5-9 years
<input type="checkbox"/>	10-14 years
<input type="checkbox"/>	15-19 years
<input type="checkbox"/>	20 years and above

7. Your shift work status:

<input type="checkbox"/>	Currently is doing shift work
<input type="checkbox"/>	Never do shift work
<input type="checkbox"/>	Previously doing shift work

8. Your work in which section in Department of Surgery?

<input type="checkbox"/>	Ward
<input type="checkbox"/>	Clinic
<input type="checkbox"/>	Surgery Operation Theatre

SECTION B: SLEEP QUALITY ASSESSMENT

INSTRUCTIONS:

The following questions relate to your usual sleep habits during the past month only. Your answers should indicate the most accurate reply for the majority of days and nights in the past month. Please answer all questions.

During the past month,

1. When have you usually gone to bed? (leave this question to answer as last question)
2. How long (in minutes) has it taken you to fall asleep each night?
3. What time have you usually gotten up in the morning?
4. A. How many hours of actual sleep did you get at night?
B. How many hours were you in bed?

5. During the past month, how often have you had trouble sleeping because you:	Not during the past month (0)	Less than once a week (1)	Once or twice a week (2)	Three or more times a week (3)
A. Cannot get to sleep within 30minutes				
B. Wake up in the middle of the night or early morning				
C. Have to get up to use the bathroom				
D. Cannot breathe comfortably				
E. Cough or snore loudly				
F. Feel too cold				
G. Feel too hot				
H. Have bad dreams				
I. Have pain				
J. Others reason(s), please describe, including how often you have had trouble sleeping because of this reason (s)				
6. During the past month, how often have you taken medicine (precribed or "over" the counter") to help you sleep?				
7. During the past month, how often have you had trouble staying awake while driving, eating meals , or engaging in social activity?				
8. During the past month, how much if a problem hat it been for you to keep up enthusiasm to get things done?				

9. During the past month, how would you rate your sleep quality overall? (place score for this question in question number 1)	Very good (0)	Fairly good (1)	Fairly bad (2)	Very bad (3)
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Scoring

Component 1	Score at question no.9	C1 _____
Component 2	Score no.2 (<15min (0), 16-30min (1), 31-60min (2), >60min (3)) + score no.5A (if sum is equal 0=0; 1-2=1; 3-4=2; 5-6=3)	C2 _____
Component 3	Score (>7(0), 6-7(1), 5-6 (2), <5 (3)	C3 _____
Component 4	(total number of hours sleep) / (total number of hours in bed) x100 >85%=0, 75%-84%=1, 65%-74%=2, <65%=3	C4 _____
Component 5	Sum of scores 5b to 5j (0=0; 1-9=1; 10-18=2; 19-27=3)	C5 _____
Component 6	Score no.6	C6 _____
Component 7	Score no.7 + score no.8 (0=0; 1-2=1; 3-4=2; 5-6=3)	C7 _____



UUM
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APPENDIX B ETHIC APPROVAL FORM

07/08/2019

Untitled Document



UNIVERSITY OF MALAYA **MEDICAL RESEARCH ETHICS COMMITTEE**
 (Formerly known as Medical Ethics Committee)
UNIVERSITY OF MALAYA MEDICAL CENTRE
 ADDRESS : LEMBAH PANTAI, 59100 KUALA LUMPUR, MALAYSIA
 TELEPHONE : 03-79493209/2251 FAXIMILE : 03-79492030

NAME OF ETHICS COMMITTEE/IRB Medical Research Ethics Committee, University Malaya Medical Centre	MREC ID NO. 2019122-7029
ADDRESS LEMBAH PANTAI, 59100 KUALA LUMPUR, MALAYSIA	
PROTOCOL NO(if applicable):	
TITLE: The Relationship Between Shift Work and Quality of Sleep Among Nurses in UMMC.	
PRINCIPAL INVESTIGATOR : puan rabiatul adawiyah binti roslan	SPONSOR

The following item have been received and reviewed in connection with the above study to conducted by the above investigator.

<input checked="" type="checkbox"/> Application to Conduct Research Project(form)	Ver.No :	Ver.Date : 22-01-2019
<input checked="" type="checkbox"/> Study Protocol	Ver.No : 001	Ver.Date : 12-02-2019
<input checked="" type="checkbox"/> Patient Information Sheet	Ver.No : 1	Ver.Date : 12-02-2019
<input checked="" type="checkbox"/> Consent Form	Ver.No : 001	Ver.Date : 12-02-2019
<input type="checkbox"/> Questionnaire	Ver.No :	Ver.Date :
<input checked="" type="checkbox"/> Investigator's CV / GCP (puan rabiatul adawiyah binti roslan, Syazwan Syah bin Zulkifly,)	Ver.No :	Ver.Date :
<input type="checkbox"/> Insurance certificate	Ver.No :	Ver.Date :
<input checked="" type="checkbox"/> Other documents		
1) The pittsburgh Sleep quality index questionnaire	Ver.No : 001	Ver.Date : 12-02-2019
2) Shift Work disorder Questionnaire	Ver.No : 001	Ver.Date : 12-02-2019

and the decision is

- Approved (Full Board)
- Approved (Expedited)
- Rejected(reasons specified below or in accompanying letter)

Comments:

Questionnaire study. Ethical issues addressed

The Investigators are required to:

- 1) follow instructions, guidelines and requirements of the Medical Research Ethics Committee.
- 2) report any protocol deviations/violations to Medical Research Ethics Committee.
- 3) provide annual and closure report to the Medical Research Ethics Committee.
- 4) comply with International Conference on Harmonization – Guidelines for Good Clinical Practice (ICH-GCP) and Declaration of Helsinki.
- 5) obtain a permission from the Director of UMMC to start research that involves recruitment of UMMC patient.
- 6) ensure that if the research is sponsored, the usage of consumable items and laboratory tests from UMMC services are not charged in the patient's hospital bills but are borne by research grant.
- 7) note that he/she can appeal to the Chairman of Medical Research Ethics Committee for studies that are rejected.
- 8) note that Medical Research Ethics Committee may audit the approved study.
- 9) ensure that the study does not take precedence over the safety of subjects.

Date of expedited approval : 14-03-2019

Approval By : LOOI LAI MENG (Chairman,MREC)

This is a computer generated letter. No signature required.

APPENDIX C DUTIES OF EMPLOYERS TO THEIR EMPLOYEES

[Occupational Safety and Health Act (OSHA) (Act 514, 1994) Part IV: Section 15(1)]

Every employer have their duty to taking care of the employees regarding their safety, health and welfare. It is compatible with Occupational Safety and Health Act (OSHA) (Act 514, 1994) Part IV: Section 15(1) “ it shall be the duty every employer and every self-employed person to ensure, so far as is practicable the safety, health and welfare at work for all of their workers. It is also compatible with: Section 15(2) “Without prejudice to the generality of subsection (1), the matters to which the duty extends include in particular” :-

- (a) the provision and maintenance of plant and systems of work that are, so far as is practicable, safe and without risks to health;
- (b) the making of arrangements for ensuring, so far as is practicable, safety and absence of risks to health in connection with the use or operation, handling, storage and transport of plant and substances;
- (c) the provision of such information, instruction training and supervision as is necessary to ensure, so far as is practicable, the safety and health at work of his employees;
- (d) so far as is practicable, as regards any place of work under the control of the employer or self-employed person, the maintenance of it in a condition that is safe and without risks to health and the provision and maintenance of the means of access to and egress from it that are safe and without such risks;
- (e) the provision and maintenance of a working environment for his employees that is, so far as is practicable, safe, without risks to health, and adequate as regards facilities for their welfare at work.