



شبكة المعلومات الجامعية  
التوثيق الإلكتروني والميكرو فيلم

# بسم الله الرحمن الرحيم



**MONA MAGHRABY**



شبكة المعلومات الجامعية  
التوثيق الإلكتروني والميكرو فيلم



# شبكة المعلومات الجامعية التوثيق الإلكتروني والميكرو فيلم



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التوثيق الإلكتروني والميكروفيلم

# جامعة عين شمس

## التوثيق الإلكتروني والميكروفيلم

### قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها  
علي هذه الأقراص المدمجة قد أعدت دون أية تغيرات



### يجب أن

تحفظ هذه الأقراص المدمجة بعيدا عن الغبار



**MONA MAGHRABY**

**REDUCING THE EFFECTS OF NOISE POLLUTION  
ON NURSES HEALTH IN PALESTINE MEDICAL  
COMPLEX IN RAMALLAH CITY-PALESTINE**

**( AN INTERVENTION STUDY)**

**Submitted By**

**May Ahmed Abdelrahman El-Afifi**

B.Sc. in Pharmacy, Al-Israa University, Jordan,1998

MPH, Al-Quds University, Palestine,2008

A Thesis Submitted in Partial Fulfillment  
Of  
The Requirement for the Doctor of Philosophy Degree  
In  
Environmental Sciences

Department of Environmental Medical Sciences  
faculty of Graduate Studies and Environmental Research  
Ain Shams University

**2022**

APPROVAL SHEET

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## *Dedication*

*This thesis is dedicated to my loved parents who have always teach me to trust in Allah, believe in hard work and teach me that so much could be done with little, who taught me that the best kind of knowledge to have is that learned for its sake. Special feeling of gratitude to my father and mother for their unconditional love and support throughout my life.*

*Dedicated to my brothers and sisters for their unconditional love and support and who never left my side and are very special and dedicated to their beautiful families.*

*Dedicated to Al-Afifi family and to my mother's family (Keblawi), and to those who have been a great source of motivation and inspiration.*

*Dedicated to my beloved and holy country "Palestine". Dedicated to the soul of our great leader Yasser Arafat. Dedicated to my beloved Palestinian people.*

*Dedicated to all those who believe in the richness of learning.*

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## *Abstract*

**Introduction:** Noise exposure has been known to affect the health negatively. Noise in hospitals affects the health care professionals as well as the patients. Knowledge about noise issue is limited among health care providers.

**Objectives:** To assess the knowledge, attitudes and practices (KAP) of nurses towards noise and determine the association between their KAP and certain socio demographic factors. To assess noise levels nurses exposed to during their work and to investigate the correlation between noise level and participants' blood pressure and heart rate and its' association with participants' complaints. To increase nurses' awareness towards noise issue through educational sessions.

**Methods:** The study consisted of two parts; the first part is a descriptive cross sectional study and the second one is an intervention program and evaluation of the intervention program. A total of 180 nurses working in different selected departments at Palestine Medical Complex (PMC) were subjected to interviewing questionnaire. An integrating sound level meter was used to measure noise levels in different departments. Measurements of blood pressure and heart rate were done and structured interview was conducted with PMC

managers and nursing supervisors. Educational intervention and then post intervention interviewing questionnaire were conducted.

**Results:** The findings showed that nurses' knowledge about noise was limited and poor with no statistical significant differences between gender, age, highest qualification obtained, total years of experience in the field and the knowledge level. Attitudes were relatively positive with a significant association between gender, qualification and the attitudes level ( $p=0.013$ ,  $p=0.025$ ) respectively. Nurses' practices towards noise were so poor and Statistically significant differences were revealed between different age groups, qualification and practices level ( $p=0.006$ ,  $p=0.021$ ) respectively. Noise levels in all departments exceeded what is recommended by WHO and the average LAeq in all departments was 64.48 dBA. No significant correlations appeared between noise levels and blood pressure, heart rates of the participants after six hours of working. All managers and supervisors interviewed perceived noise problem as a real risk that should be managed and paid attention by the policy makers in Ministry of Health (MOH). After the educational intervention, many participants had a good knowledge level regarding noise. The majority of them had positive attitudes but the practices level towards noise for most of them remained poor but it was better than before intervention.

**Conclusion:** Noise levels in the different selected departments were more than the recommended levels. Poor knowledge and practices, adequate attitudes were detected among the study subjects before the educational intervention. The participants' knowledge, attitudes and practices scores towards noise have improved after the intervention. Educational intervention for nurses and the whole health staff is essential to increase awareness and knowledge about noise issue and ways to reduce it. Modifiable noise sources should be dealt with to reduce noise levels in health institutions.

**Key words:** Noise pollution, hospitals noise, nurses knowledge, nurses attitudes, nurses practices, noise levels, educational intervention.

## *List of contents*

<b><u>Contents</u></b>	<b><u>Page No.</u></b>
<b>Abstract</b>	I
<b>List of contents</b>	IV
<b>List of tables</b>	V
<b>List of figures</b>	IX
<b>List of abbreviations</b>	X
<b>Introduction</b>	1
<b>Aim of the study</b>	4
<b>Literature review</b>	6
Chapter I Nature of sound and noise definition	6
Chapter II Sources and effects of noise on human health	8
Chapter III Noise pollution in hospitals	14
Chapter IV Noise levels in different hospital departments	17
Chapter V Nurses knowledge about noise & possible interventions	33
Chapter VI The healthy working environment for nurses	39
<b>Methodology</b>	43
<b>Results</b>	53
<b>Discussion</b>	99
<b>Conclusion</b>	121
<b>Recommendations</b>	123
<b>Summary</b>	125
<b>References</b>	129
<b>Appendices</b>	141
<b>Arabic Summary &amp; Arabic Abstract</b>	1

## *List of Tables*

<b><u>No. Table Title</u></b>	<b><u>Page No.</u></b>
1. Distribution of the participants by socio-demographic factors	53
2. Distribution of the participants by highest qualification obtained and experience	54
3. Distribution of the participants by managerial related factors	56
4. Mean for participants scores regarding knowledge, attitudes and practices (KAP) towards noise	58
5. Distribution of participants regarding level of knowledge, attitudes and practices (KAP)	59
6. Mean for participants scores regarding knowledge, attitudes and practices (KAP) towards noise based on gender	60
7. Mean for participants scores regarding knowledge, attitudes and practices (KAP) towards noise based on age	61
8. Mean for participants scores regarding knowledge, attitudes and practices (KAP) towards noise based on highest qualification obtained	62
9. Mean for participants scores regarding knowledge, attitudes and practices (KAP) towards noise based on years of experience in nursing field	63

<b><u>No.</u></b>	<b><u>Table Title</u></b>	<b><u>Page No.</u></b>
10.	Mean for participants scores regarding knowledge towards noise based on different departments	64
11.	Mean for participants scores regarding attitudes towards noise based on different departments	65
12.	Mean for participants scores regarding practices towards noise based on different departments	66
13.	Sources of noise in different Palestine Medical Complex departments as perceived by participants	68
14.	Noise complaints in different Palestine Medical Complex departments as reported by nurses	69
15.	Complaints related to noise exposure according to department.	71
16.	Complaints related to noise exposure according to gender	72
17.	Complaints related to noise exposure according to age	73
18.	Complaints related to noise exposure according to weekly working hours	74
19.	Levels of noise per shift as perceived by the study population.	74
20.	Distribution of the study population by perceptions towards workplace in terms of noise	75
21.	Continuous sound pressure level (LAeq), Maximum time-weighted and A-weighted sound pressure level (LAFmax) and Minimum time-weighted and A-weighted sound pressure level (LAFmin) in different selected departments	78

<b><u>No. Table Title</u></b>	<b><u>Page No.</u></b>
22. Association between noise levels and nurses' complaints	79
23. Association between noise levels and nurses' complaints	80
24. Descriptive measurements for Systolic Blood Pressure, Diastolic Blood Pressure and Heart Rate for participants before starting their work and six hours after	81
25. Descriptive measurements for Systolic Blood Pressure, Diastolic Blood Pressure and Heart for males and females before starting their work and six hours after	82
26. Descriptive measurements for Systolic Blood Pressure, Diastolic Blood Pressure and Heart for participants according to their department before starting their work and six hours after	83
27. Descriptive measurements for Heart Rate for participants according to their department before starting their work and six hours after	84
28. Correlation between noise levels and Systolic Blood Pressure, Diastolic Blood Pressure and Heart for participants before starting their work and six hours after	85
29. Mean for participants scores regarding knowledge, attitudes and practices (KAP) towards noise after the intervention	88
30. Knowledge, attitudes and practices (KAP) of the participants towards noise before and after intervention	89