



بعض الوثائق

الأصلية تالفة



SALWA AKL



بالرسالة صفحات

لم ترد بالأصل



SALWA AKL



B17017

**THE RELATIONSHIP BETWEEN WORK SETTING AND
THE OCCURRENCE OF MEDICATION ERRORS
AMONG NURSES OF ASSIUT UNIVERSITY HOSPITAL**

thesis

Submitted In Partial Fulfillment of the Master Degree in
Nursing Services Administration

By

Nahed Shawkat Abo El-Magd

Demonstrator, Faculty of Nursing, Assiut University

supervisors

A. Prof. Harrisa M.A. El-Shemy

*A. Professor of Nursing Administration
Faculty of Nursing, Ain Shams University*

Dr. Ehsan Ahmed Gaber

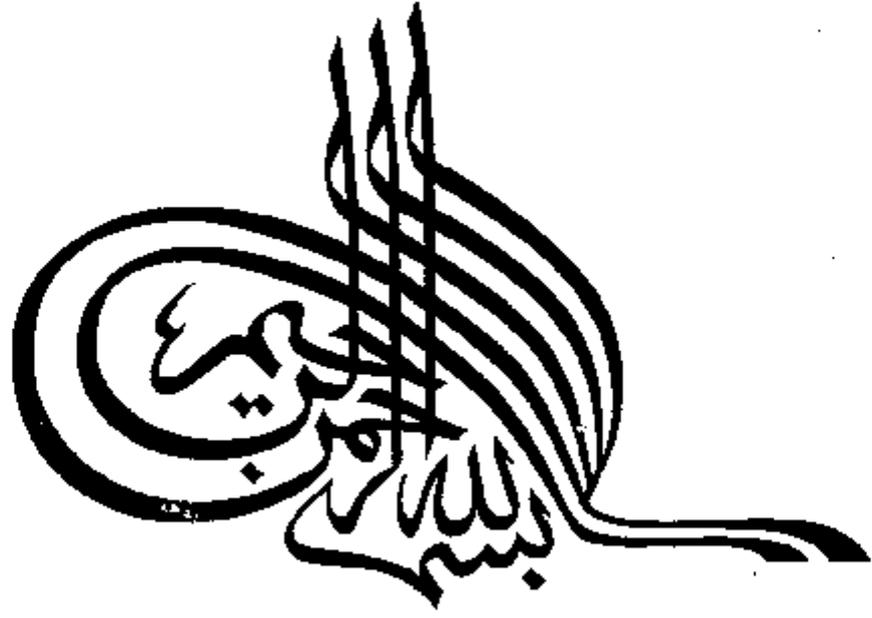
*Lecturer of Nursing Service Administration
Faculty of Nursing, Assiut University*

Dr. Mohamad H. Hassan El-Maghraby

*A. Professor of Medical, Faculty of Medicine,
Assiut University*

Faculty of Nursing
Assiut University

2002



﴿ وما أوتيتم من العلم إلا قليلا ﴾

صدق الله العظيم

(سورة الإسراء آية ٨٥)

TO MY PARENTS ...

FOR THEIR SUPPORT & ENCOURAGEMENT

TO MY HUSBAND ...

FOR HIS CONTINUED ENCOURAGEMENT

TO MY LOVELY DAUGHTER ...

MY SOURCE OF INSPIRATION

ACKNOWLEDGMENTS

Praised be *Allah*, the Merciful, the Compassionate for all the countless gifts I have been offered. Of these gifts, are those persons who were assigned to give me a precious hand to be able to fulfill this study. They deserve much more than being cordially acknowledged.

I am lucky to be supervised and directed by *Dr. Harisa El-Shemy*, Assistant Professor of Nursing Service Administration, Faculty of Nursing, Ain Shams University, who kindly offered her remarkable experience through revising this thesis. I am grateful for her unlimited help during the steps of the study, which was encouraging towards its accomplishment.

With considerable appreciation, I express my great indebtedness to *Dr. Ehsan Gaber*, Lecturer of Nursing Service Administration, Faculty of Nursing, Assiut University, for her kind support, patience, comprehensive advice, continuous and faithful guidance. I do appreciate her efforts and the precious time she has devoted for the perfection of this work.

I also acknowledge the sincere directions of *Dr. Mohamad El-Maghraby*, Lecturer of Internal Medicine, Faculty of Medicine, Assiut University. I am quite thankful to his outstanding help and distinguished support.

My gratitude is expressed to *Dr. Soad Ghallab*, Assistant professor of Nursing Service Administration, Faculty of Nursing, Assiut University, for the generous provision of scientific material pertinent to this work.

I need to express my great indebtedness to *Dr. Sanaa Soliman Karoosh*, dean of the Faculty of Nursing, for her kind help and encouragement.

Lastly, I would like to thank my study subjects and every person helps me in the conduction of my study.

TABLE OF CONTENTS

Items	Page
INTRODUCTION	1
AIM OF THE STUDY	5
REVIEW OF LITERATURE	6
I. MEDICATION ERRORS	8
Definitions	8
2-Administration of medications	9
- Transcription phase	9
- Storing and handling drug	10
- Drug administration	11
Oral medication	12
Parental injection	15
Intramuscular injection	15
Intravenous injection	17
Subcutaneous injection	18
Intradermal injection	19
3. Documentation of medication administration	19
4. Types of medication errors	21
5. Severity of medication errors	21
6. Causes of medication errors	22
7. Consequences of medication errors	25
- Effect on patient	25

- Effect on nurse	26
- Effect on hospital	26
- Effect on community	27
8. Incident report (medication error record)	28
II. NURSE ROLE IN MEDICATION ADMINISTRATION	29
Safe medication administration	29
Calculation prescribed doses	29
SUBJECTS AND METHODS	34
RESULTS	44
DISCUSSION	71
CONCLUSION	83
RECOMMENDATIONS	84
SUMMARY	86
REFERENCES	90
APPENDICES	
ARABIC SUMMARY	

LIST OF TABLES

Table		Page
1	Frequency Distribution of the Personal and Job Characteristics of Nurses in the Study Sample by Departments	44
2	Frequency of Medication Errors in the Auditing Sheet by Departments	46
3	Frequency of Medication Errors in the Auditing Sheet by Age Groups of Nurses	48
4	Frequency of Medication Errors in the Auditing Sheet by Qualification of Nurses	50
5	Frequency of Medication Errors in the Auditing Sheet by Experience Years of Nurses	51
6	Frequency of Medication Errors in the Auditing Sheet by Job Position of Nurses	52
7	Frequency of Errors in Administration of Medications as Observed among Nurses by Departments	53
8	Frequency of Errors in Administration of Medications as Observed among Nurses by Age	55
9	Frequency of Errors in Administration of Medications as Observed among Nurses by Qualifications	57
10	Frequency of Errors in Administration of Medications as Observed among Nurses by Experience Years	59
11	Frequency of Errors in Administration of Medications as Observed among Nurses by Job Position	61

Table		Page
12	Frequency of Errors in Storage of Drugs as Observed among Nurses by Departments	63
13	Frequency of Errors in Storage of Drugs as Observed among Nurses by Age	64
14	Frequency of Errors in Storage of Drugs as Observed among Nurses by Qualifications	65
15	Frequency of Errors in Storage of Drugs as Observed among Nurses by Experience Years	66
16	Frequency of Errors in Storage of Drugs as Observed among Nurses by Job Position	67
17	Frequency of Medication Errors by departments(n=200)	69
18	Correlation Matrix of Scores of Correct Dealing with Medications at its Different Stages, and the Age and Experience of Nurses	70

INTRODUCTION

INTRODUCTION

Nursing is a very complex activity. As with any complex human activity, errors can do arise in medicine administration. There is no doubt that today's consumers value nursing but are demanding visible demonstration of competence. Therefore, the nurse has the responsibility to protect the patient from unsafe and incompetent health care providers (*Luckenbill-Brett and Stuhler-Schlag, 1987; Joel, 1999*).

Ahmed and Hamrah (1999) have stated that the nurse is the last line of defense between a medication order and its administration. Assessing side effects closely, as well as taking the time to check a patient's medication history and its relationship to medication, may be a life saving intervention for the patients.

A drug error can be broadly defined as the act of commission that militates against the achievement of the therapeutic objective, in other words benefit for the patient (*Williams, 1996; Cobb, 1986*).

Medication errors are usually defined according to the established hospital protocol. Errors include omission of a scheduled medication, medication given at the wrong timing, medication administration with wrong dose, medication given to wrong patient, and administration of the wrong drug. Also, they include errors related to transcription of the physicians' order to the medication administration record, medication repeated without doctor's order, medication given to patient with a known allergy to the drug, and medication discontinued without an authorized physician order (*Roseman and Booker, 1995*).

Medication errors are multi-factorial and multidisciplinary. These mistakes that are made during the prescription, transcription, dispensing, and administration phases of drug preparation and distribution (*Wolf and Flynn, 1996*).

There are five categories of sources for medication errors. These categories include physician, system, pharmacy, individual, and knowledge-related factors (*Wallefield and Uden-Holman, 1998*).

Cobb (1986) has stated that drug administration to hospital inpatients is a major responsibility of the nurse. Workload factors have been shown to affect the rate of medication errors. In addition to workload, seasonal changes in daylight may help to explain the occurrence of errors in the administration of medication by hospital nursing staff. The symptoms of seasonal affective disorder include recurrent fall-winter sleep difficulties, depressed mood, and loss of energy (*Jacobsen and Wehr, 1987; Booker and Hellekson, 1992*).

Errors in medication administration often arise due to a combination of different factors. An error by pharmacy may pass unnoticed at ward level, resulting in an incorrect dose or medicine being administered to a patient (*Betz and Levy, 1985*). Hence, *Dean (1996)* has stressed that all health care professionals should seek a double check to confirm their calculation and final dose.

The *World Health Organization (1998)* drafted a broad strategy to promote the safety of all injections. The overall aim of this strategy was to develop and implement policies and programs in collaboration with countries and other partners, which will raise awareness to the unsafe injection practices,

ensure safe and national use of injections, and reduce death and diseases by unsafe injection practices.

There are growing concerns about errors in clinical practice, particularly when they affect the quality of care or put patient's life at risk. Medication errors exist in every organization, at intensive care units, and at general care units. They were a major public health problem, representing the seventh largest cause of death in the United States. Also, it is estimated that large number of mortality accrues all over the world every year as a result of medication errors (*Battersby et al, 1999*).

Therefore, it is a pressing necessity to start an action for the assessment of this problem. This research aims at investigating the relationship between the work site and the occurrence of medication errors.