Barriers and perceptions to medication administration error reporting among nurses in Saudi Arabia

by

Abdulrahman Abdullah Albukhodaah (N674020)

Diploma of Nursing (Abha College of Health Sciences, 2003)
Bachelor of Nursing (Queensland University of Technology, 2011)

Thesis Submitted in Partial Fulfilment of the Requirements for the Degree of Master of Nursing Science, School of Nursing, Faculty of Health Science

The University of Adelaide

November 2016
# Table of Contents

**CHAPTER 1: INTRODUCTION** ............................................................................................................. 1

1.1 INTRODUCTION ............................................................................................................................... 1

1.2 CONTEXT OF THE STUDY .................................................................................................................. 1

1.3 BACKGROUND ................................................................................................................................. 2

1.4 RESEARCH PROBLEM ...................................................................................................................... 3

1.5 AIM AND OBJECTIVES OF THE STUDY ......................................................................................... 4

1.6 RESEARCH QUESTIONS .................................................................................................................... 4

1.7 SIGNIFICANCE OF THE STUDY ....................................................................................................... 5

1.8 DEFINITION OF TERMS .................................................................................................................... 6

1.9 CONCLUSION ..................................................................................................................................... 7

**CHAPTER 2: LITERATURE REVIEW** ................................................................................................. 9

2.1 INTRODUCTION ............................................................................................................................... 9

2.2 SAFETY CULTURE .......................................................................................................................... 9

2.3 CULTURE OF BLAME .................................................................................................................... 10

2.4 PROCESS OF REPORTING MAEs .................................................................................................... 11

2.5 CONCLUSION .................................................................................................................................. 12

**CHAPTER 3: RESEARCH METHODS AND METHODOLOGY** .......................................................... 13

3.1 INTRODUCTION ............................................................................................................................... 13

3.2 STUDY DESIGN ............................................................................................................................... 13

3.3 SETTING ......................................................................................................................................... 14

3.4 SELECTION OF POPULATION ........................................................................................................ 14

3.5 RECRUITMENT STRATEGIES .......................................................................................................... 15

3.6 PILOT .............................................................................................................................................. 15

3.7 DATA GATHERING INSTRUMENT .................................................................................................. 16

3.8 VALIDITY OF THE INSTRUMENT .................................................................................................... 18

3.9 RELIABILITY OF THE INSTRUMENT .............................................................................................. 18

3.10 DATA COLLECTION ....................................................................................................................... 20

3.11 STATISTICAL DATA ANALYSIS .................................................................................................. 20

3.12 QUALITATIVE DATA ANALYSIS .................................................................................................. 24

3.13 ETHICAL CONSIDERATIONS ......................................................................................................... 24

3.13.1 Informed consent and Free of Harm ...................................................................................... 24

3.13.2 Anonymity, Privacy and Data Storage ................................................................................... 25

3.14 CONCLUSION .................................................................................................................................. 25

**CHAPTER 4: RESULTS** ....................................................................................................................... 27

4.1 INTRODUCTION ............................................................................................................................... 27

4.2 RESPONSE RATE ............................................................................................................................ 27
CHAPTER 5: DISCUSSION ........................................................................................................... 47

5.1 INTRODUCTION ..................................................................................................................... 47
5.2 RESTATEMENT OF THE PROBLEM ......................................................................................... 47
5.3 SUMMARY DESCRIPTION OF PROCEDURES........................................................................... 47
5.4 MAJOR FINDINGS AND THEIR SIGNIFICANCE TO CLINICAL PRACTICE................................. 48
5.5 NURSES’ PERCEPTIONS OF REPORTING MAES...................................................................... 49
5.6 POTENTIAL BARRIERS OF REPORTING MAES AS PERCEIVED BY NURSES......................... 49
5.6.1 I-ADMINISTRATION FACTORS: .......................................................................................... 49
5.6.2 PERSONAL FACTORS.......................................................................................................... 50
5.6.3 REPORTING PROCESS FACTORS ....................................................................................... 52
5.6.4 CAUSES OF MAEs ............................................................................................................ 53
5.7 APPLICATION TO CLINICAL PRACTICE.................................................................................... 54
5.8 LIMITATION ............................................................................................................................ 55
5.9 RECOMMENDATIONS FOR FURTHER RESEARCH ............................................................... 55
5.10 CONCLUSION ........................................................................................................................ 56

CHAPTER 6: APPENDICES ........................................................................................................... 64

6.1 APPENDIX 1: QUESTIONNAIRE ............................................................................................. 64
6.2 APPENDIX 2: STUDY AUTHORIZATION ............................................................................... 69
6.3 APPENDIX 3: ETHICS APPROVAL ....................................................................................... 70
6.4 APPENDIX 4: RESEARCH APPROVAL .................................................................................. 72
6.5 APPENDIX 5: RECRUITMENT NOTICE .................................................................................. 73
6.6 APPENDIX 6: PARTICIPANT INFORMATION SHEET ............................................................ 74
Table of Tables

Table 1: Reliability Statistics........................................................................................................... 19
Table 2: Coding.................................................................................................................................. 23
Table 3: Questionnaire Scales......................................................................................................... 33
Table 4: Administration Factors .................................................................................................... 39
Table 5: Reporting Processes Factors .......................................................................................... 41
Table 6: Gender distribution of nurses’ in the Saudi Ministry of Health (2014) and study participants...................................................................................................................... 48

Table of Figures

Figure 1: Participants by hospital (number of nurses employed) .................................................... 28
Figure 2: Gender distribution of research participants ................................................................. 28
Figure 3: Participants Age Category............................................................................................... 29
Figure 4: Participants’ Ethnicity ..................................................................................................... 29
Figure 5: Participants’ Education Level .......................................................................................... 30
Figure 6: Participants’ Nursing Experience .................................................................................. 30
Figure 7: Participants’ Area of Working ....................................................................................... 31
Figure 8: Participants’ Job Position ............................................................................................... 32
Figure 9: Ever Reported Medication administration errors ....................................................... 32
Figure 10: Nurse's perception to report medication administration error/s ............................... 34
Figure 11: Potential barriers of reporting MAEs as perceived by nurses..................................... 45
Abstract

Background: Medication administration errors (MAEs) are considered as a global problem which influences the safety of patients. Due to some factors MAEs are still underreported. However, MAEs have been under-researched in Saudi health settings. The reporting barriers of fear, perception of nurses towards reporting MAEs, and the process of reporting significantly contribute to failure to report. Understanding of factors that may inhibit reporting MAEs among nurses in Saudi Arabia is a primary step to improve the safety culture of hospitals. Furthermore, understanding nurses’ perception toward MAEs reporting is the initial step to increasing the reporting rate.

Aims: (1) To identify factors from the literature that facilitate or hinder the reporting of medication administration errors among nurses and (2) to identify factors that nurses perceive as major contributors in the culture of reporting medication administration errors in Saudi Arabia hospitals.

Methods: a questionnaire was developed consisting of four pages to examine the nurses’ perceptions and the potential barriers to the reporting of medication administration errors and an open-ended question to seek more understanding of this topic among nurses in Saudi Arabia. The questionnaire items included: demographics and background, nurses’ perceptions of reporting medication administration errors and potential barriers to reporting MAEs. Participants for this study were nurses from three hospitals in Saudi Arabia. The Statistical Package for the Social Sciences Software the IBM (SPSS) Statistics was used to analyses the quantitative data and content analysis was used to analyses the qualitative data.

Results: A total of 366 nurses participated in the study with response rate 63.3%. Nurses’ perception and awareness towards the importance of medication administration error reporting were positive. The major perceived barrier was fear of the consequences after reporting. This study found only 28.6% of nurses always reported MAEs when it occurs. Nursing administration (Head Nurse, Nursing Supervisor and/or Nursing Director) was the biggest concern affecting nurses’ willingness to report MAEs. Making the work environment, a non-blame environment may encourage a greater reporting of MAEs.
Conclusions: Most nurses in Saudi Arabia’s hospitals believed that MAEs must be reported. However, fear of blame or the possibility of legal action and administration factors lead to underreporting.

Implications for nursing management: Nursing administration should work towards establishing a blame free culture and support the safety culture to encourage reporting.

Key words: reporting barriers, medication administration errors, nurse, safety, reporting, report incident, culture of blame.