

**IMPLEMENTATION OF PDCA PROCESS  
OF QUALITY AND MEASURING ITS  
EFFECT ON NURSES' PRACTICE OF  
PATIENT SAFETY GOALS**

Thesis submitted for partial fulfillment of the  
requirements of the Doctorate Degree in Nursing  
Sciences  
(Nursing Administration)

*By*

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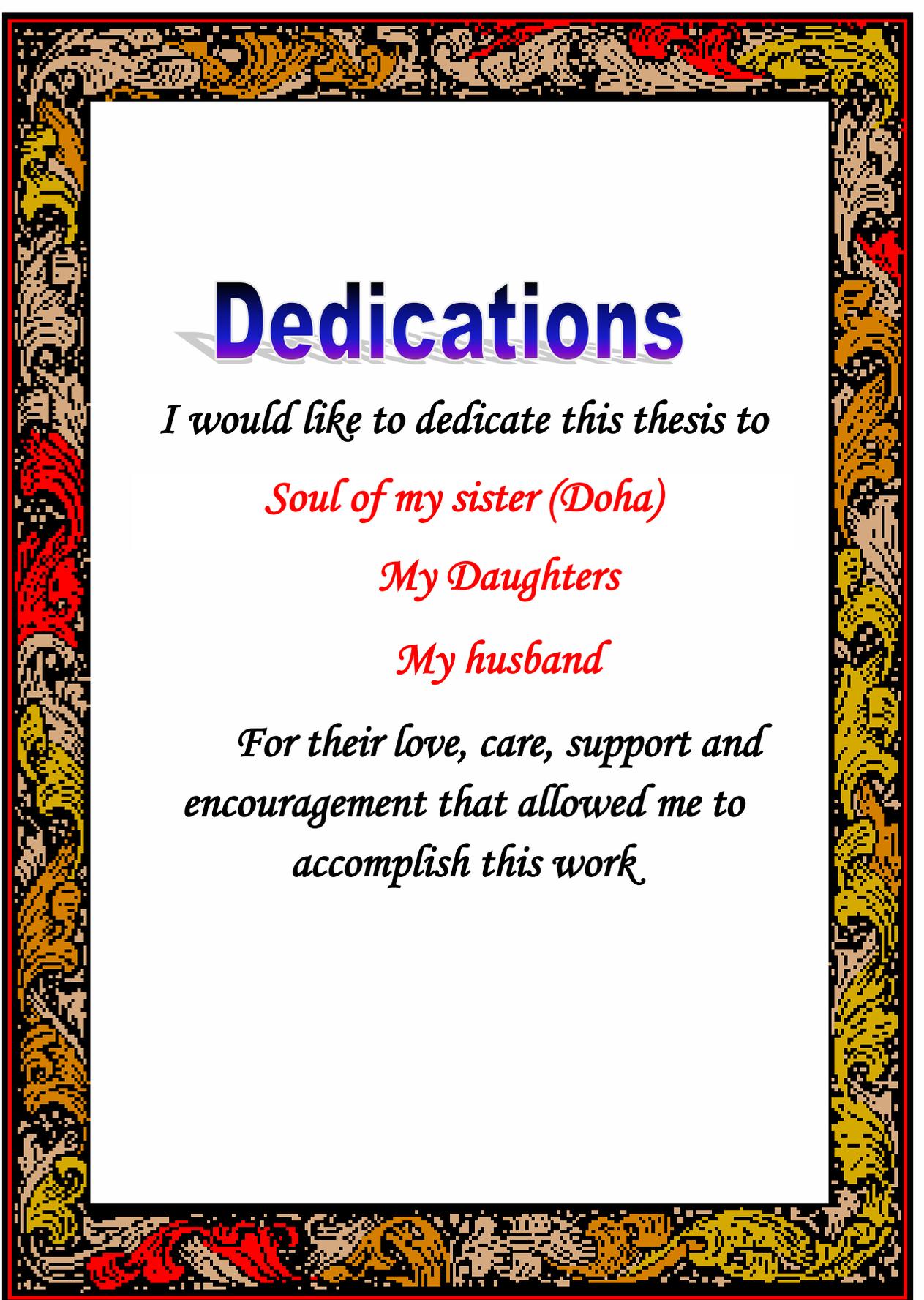
*First and foremost, I feel always indebted to **ALLAH** the kind and merciful.*

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# Dedications

*I would like to dedicate this thesis to*

*Soul of my sister (Doha)*

*My Daughters*

*My husband*

*For their love, care, support and  
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## List of abbreviations

<b>Abb.</b>	<b>Meaning</b>
<b>AHRQ</b>	Agency for Healthcare Research and Quality
<b>CDC</b>	Centers for Disease Control and Prevention
<b>DMAIC</b>	Define, Measure, Analyze, Improve and Control
<b>FMEA</b>	Failure Mode and Effect Analysis
<b>HAI</b> s	Healthcare Associated Infections
<b>HCAI</b>	Healthcare Associated Infection
<b>HFMEA</b>	Healthcare Failure Mode and Effect Analysis
<b>HRA</b>	Human Reliability Associates
<b>ICU</b>	Intensive Care Unit
<b>IOM</b>	Institute of Medicine
<b>ISQUA</b>	the International Society for Quality in Health Care
<b>JCI</b>	Joint Commission International
<b>MAR</b>	Medical Administration Record
<b>NAO</b>	National Audit Office
<b>NASA</b>	Aeronautics and Space Administration
<b>NLRB</b>	National Labor Relations Board
<b>NPSA</b>	National Patient Safety Agency

 List of abbreviations 

<b>Abb.</b>	<b>Meaning</b>
<b>OR</b>	Operating room
<b>PDCA</b>	Plan- Do- Check – Act
<b>PDSA</b>	Plan–Do–Study–Act
<b>PPE</b>	Personal Protective Equipment
<b>PSGs</b>	Patient Safety Goals
<b>RCA</b>	Root Cause Analysis
<b>SBAR</b>	Situation, Background, Assessment and Recommendation
<b>VAP</b>	Ventilator –associated Pneumonia
<b>WHO</b>	World Health Organization

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**Abstract**

**Background:** The PDCA (plan–do–check–act) management method could improve nursing care. **Aim:** The aim of this study was to investigate the effect of head nurses' and staff nurses' use of PDCA on their practice of patient safety goals. **Design:** one group pre –post assessment. **Setting:** inpatient units in Nasser Institute Hospital. **Subject:** 30 head nurses and 50 staff nurses. **Tools:** four tools used to collect data, two self-administered questionnaires for head nurses and staff nurses' knowledge, and two observation checklists for their practice related to patient safety goals. **Results:** the study results are presented in to two sections (section A for head nurses and section B for staff nurses). **Head nurses':** None of them had total satisfactory knowledge before the intervention, compared to 100.0% after ( $p<0.001$ ); none had total adequate practice before the intervention, which increased to 86.7% after ( $p<0.001$ ). In multivariate analysis, the intervention was a significant positive predictor of the knowledge and practice scores. **Staff nurses':** None of them had satisfactory knowledge before the intervention, compared to 88.0% after ( $p<0.001$ ); none had adequate practice before the intervention, compared to 92.0% after ( $p<0.001$ ). In multivariate analysis, the intervention was a main positive predictor of the knowledge score, in addition to training courses in quality, and a main positive predictor of the practice scores, in addition to knowledge score. **Conclusion:** The training program is effective in improving nurses' knowledge and practice of PDCA. **Recommendations** The study recommends applying PDCA training program to all head and staff nurses in the study setting, and in other similar ones. Further research is proposed to examine the effect of repeated PDCA cycles in patient safety on patient and nurses' outcomes.

**Keywords:** PDCA, patient safety, practice, quality, nurses