

## **DECLARATION**

I, Patricia Mambwe, hereby declare that the study titled “Knowledge and use of Bloom’s hierarchy of cognitive levels of educational objectives in setting examinations by nurse educators in Lusaka and Eastern provinces” is from my own hard work. It is being submitted for a degree of Masters in Nursing Sciences at the University of Zambia. It has not been submitted for any other purpose. All sources that have been used or quoted have been indicated and acknowledged by means of complete references.

Signature.....

Date.....

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**CERTIFICATE OF APPROVAL**

This Dissertation for Patricia Mambwe is approved as fulfilling the requirements for the award of a Masters Degree in Nursing Sciences from the University of Zambia.

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## **ABSTRACT**

The use of Bloom's hierarchy of cognitive levels of educational objectives as a tool for classroom assessments is rapidly increasing; therefore Nurse Educators' knowledge of the tool is vital (De Young, 2009; Kim, et al., 2012; Cook, 2013; Agbedia and Ogbe, 2014).

The prime objective of this study was to investigate nurse educators' knowledge of Bloom's hierarchy of cognitive levels of educational objectives and whether they use it when preparing test items for examinations.

A cross sectional study was conducted in nursing training schools in Lusaka and Eastern provinces of Zambia. The study sample comprised of 63 Nurse Educators who were selected using convenient sampling method and a total of 51 past examination question papers with 3,358 questions from all the levels of basic nursing programs were reviewed between 2011 and 2013. A self administered questionnaire was used to collect data from nurse educators while a checklist with cognitive levels of educational objectives was used to collect data from the past examination papers. Statistical Package for Social Sciences (SPSS) version 20 was used to analyse data. The Chi Square test was used to compare the proportions. A result yielding a P value of less than 5 percent was considered to be statistically significant.

The findings were that more than half (64%) of nurse educators had low knowledge on Bloom's hierarchy of cognitive levels of educational objectives. Majority (92%) of the respondents did not follow Bloom's hierarchy of cognitive levels while 8% followed it when preparing test items for examinations. The greater percentage (95%) of examination questions prepared by nurse educators were dominated by low order cognitive category (knowledge and comprehension). Only 5% of examination questions were prepared at higher order level (application, analysis, synthesis, evaluation).

The study also revealed that nursing schools had no standardized assessment guidelines to follow when preparing test items for examinations.

The study revealed that nurse educators did not have blue prints to act as a guide on the number of questions to prepare in each level of cognitive domain and test items/examination questions were not reviewed by either peers or any committee before being administered to students. Results from the study indicated that (90%) of nurse educators assented that Continuing Professional Development meetings on assessment techniques were not conducted in the schools of nursing.

The study found a significant relationship between knowledge and usage of Bloom's hierarchy of cognitive levels of educational objectives.

## **RECOMMENDATIONS**

The study recommended that the General Nursing Council of Zambia should develop a blueprint for examinations at each level of training and reinforce supervision on the preparation of test items across the cognitive domain. Special attention should also be given to the alignment of teaching and assessment in such a way that the level of complexity increases as students progress through the programme. Prior to test administration, a review process should be implemented to evaluate, eliminate item writing flaws, offer suggestions and encourage appropriateness of cognitive levels of educational objectives within the examination paper. This will promote quality in nursing education and uphold high standards of students' achievement. Continuing Professional Development meetings, workshops and seminars on questioning techniques using Bloom's hierarchy of cognitive levels of educational objectives should be developed and made mandatory for all academic staff in all nursing schools. This will improve quality in nursing education and keep all nurse educators abreast with the current information.

**Key words:** Knowledge, Bloom's hierarchy, cognitive levels, educational objectives,

Setting examinations, Nurse Educators

## **DEDICATION**

This Dissertation is dedicated to the following people. Firstly, it is dedicated to my lovely mother, Ruth, who encouraged me to further my studies and remained at my side supporting my journey in every way possible.

Secondly, to my sisters, Peggy, Precious, Priscilla and my brother Big, for their unwavering support and love. I hope and trust that this work will inspire them to continue valuing education and work extra hard in life.

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M.H.S.R.I.P

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## **LIST OF ABBREVIATIONS AND ACRONYMS**

CPD: Continuous Professional Development

CBE: Community – Based Education

GNC: General Nursing Council of Zambia

ERESC: Research Ethics and Science Converge

MCQ: Multiple Choice Questions

NCSBN: National Council of State Boards of Nurses

NCLEX – RN: National Council Licensure Examination for Registered Nurses

PBL: Problem Based Learning