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Research Article

Blackboard facilitation: Reflection as a tool used to explore students experiences on Evidence-based Practice

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1. Abstract

Introduction: Limited resources require EBP management that meets patients' needs and preferences using newest research and expertise. Seeking out the best practices will lead to decreased length of stay and costs [1]. An evidence-based curriculum embedded across courses and years in the academic and clinical setting fosters the best method of facilitation of evidence-based decision-making [2]. EBP is not fully integrated into the curriculum of undergraduate nursing students. The undergraduate nursing curriculum is where nursing students must be introduced to EBP thus making the need for EBP in the curriculum an essential priority.

Methods: The study was qualitative in nature. An EBP module was facilitated on Blackboard. Census sampling was used to select participants to ensure valuable information applicable to the research [3]. Informed consent were obtained from all final year undergraduate nursing students that agreed to participate. To ensure anonymity no student identifiers were used. Reflective journals served as qualitative data and were collected via Blackboard. Data were analyzed by using Tech's six steps of content analysis. The researcher did the coding of the data which was verified by an independent external expert. Text that reflects a specific theme can be adjoined to represent certain experiences.

Results: Reflective journals consist of memory and indicate opinions, perceptions, patterns and trends. Students could utilize Blackboard in a positive and safe environment. Timely feedback on a regular basis is a motivating experience and assists students to work through distressful clinical events, should any occur. There was a significant change in the students' beliefs on the significance of EBP. EBP implementation took place concluding that EBP in the curriculum will contribute to the use of research utilization in practice. Students experienced the teaching strategies useful and reflected professional development.

Conclusion: The reflective journals on Blackboard included self-assessment that involved organizing behavior. The knowledge gained from the EBP process motivated the students to implement EBP in the clinical setting. The students were facilitated to skilfully reflect and learn from each clinical situation. If a student is guided during the reflective process, it can lead to lifelong learning.

Key words: Evidence-Based Practice, Curriculum, Reflection.

2. Introduction

The aim of the study was to explore the students experiences on an implemented EBP module and in the clinical field with a reflective journal submitted via blackboard. Evidence based practice (EBP) is to utilize the most recent research while primarily taking patients preference into account and consult with expertise in the clinical field. EBP will improve the delivery of health care because it is rooted in clinical guidelines based on research [4]. EBP improves the quality of health care and make it more cost-effective while improving patients' results in practice [5].

Blackboard is one of the computer assisted educational programmes used to enrich and improve education. Education is moving towards web-based learning (WBL) to address faculty shortage as well as time and space restrictions [6]. WBL motivate students toward self-directed learning and appeal to students which are technologically driven. Students find the interaction stimulating and motivating.

Reflection together with Blackboard used in the study proofed valuable in the collection of qualitative data. Reflection facilitates thinking about clinical experiences. It student's ability to reflect is facilitated education is humanized. Students need an environment that encourages the act of reflection as part of learning [7].

Reflection is part of the EBP process and therefore essential to master before embarking on EBP. Health care professionals

(HCP) must appraise and incorporate research evidence into their professional judgment and clinical decision-making. The process of EBP unfortunately does not always realize due to factors such as poor literature searching skills and inability to do systematic reviews. When sound scientific research articles and information cannot be accessed, it will also not be executed in clinical practice.

It is essential to integrate EBP into the curriculum to prepare students to know and implement the process of EBP. The design of a module embedded in EBP as integrated part of the curriculum will ensure that undergraduate nursing students can find, critically appraise and utilise research in practice. The researcher chose reflective journals to facilitate the process of learning with students. An important goal of keeping reflective journals is to focus the students' attention on their role as active role-players in their learning and to become active adult learners. According to Willig [8], the words we use to describe our experiences play an important part in the meanings we attribute to those experiences. To reflect and put experiences into words increases the value of what we have gone through. Reflection on the process of EBP increases critical thinking and scientific reasoning.

3. Methods

In this study a qualitative approach was followed. Botma, Greeff, Mulaudzi and Wright [9] describe qualitative research as a dense description of a phenomenon where the researcher makes meaning from engagement and involvement in research. Reflective journals were used as they contained narrative data regarding experiences on EBP, clinical experiences and learning processes.

Ethical considerations were adhered to in the research. The researcher obtained signed written consent from each participant. Anonymity and confidentiality of data was maintained throughout the study. No participant identifier was known as data was analyzed as group data.

Sample

The researcher kept the purpose of the research in mind and

selected the participants on the basis of who would be the most representative [10]. Purposive census sampling were used and all final year students were asked for consent to participate. They had the right not to participate and could withdraw at any stage during the study. The students were not reimbursed for participation.

Data Collection Instrument

Reflective writing as to foster critical thinking, which is an essential skill for health care professionals, is highly recommended [11]. The reflective journals served as the research instruments. Confidentiality was assured, as the students could not access each other's journals on Blackboard (BB). Immediate communication on BB, an accessible highly interactive technology system, enables reflection on a daily basis and immediate feedback from the lecturer. An important goal of reflecting is to focus the students' attention on their role as active role-players and adult learners in learning.

Data Collection Method

Students kept reflective journals in the duration of the time the module was presented to them and submitted it on BB. Clear instructions were given to the students of what the reflective journal had to entail and EBP references were provided for them to use. Reflective journals are generated by participants regarding their experiences and are a sequential series of events which can be difficult to trace by other documents or methods. It consists of memory and indicates opinions, perceptions, patterns and trends [12].

Data Analysis

Data analysis of reflective journals of students was done using Tesch's descriptive method of open coding [13]. Tesch's method entails a combination of open, axial and selective coding. Coding involves taking segments of text and labelling them according to meaningful categories. Text that reflects a specific theme can be adjoined to represent certain experiences.

The researcher did data analysis and results were verified using an independent co-coder.

Rigour

Rigour in qualitative research is referred to as trustworthiness and is described by Lincoln and Cuba [14]. Trustworthiness is displayed in Table 1.1.

Table-1.1

Criteria	Strategies to ensure trustworthiness	Applied in this study
Credibility: Refers to the accuracy of the data collected to be believed as a true representation of the respondents' understanding of the area of the study (Polit & Beck, 2008:539).	Clear instructions to students ensured valuable data Prolonged engagement	In this study, guideline documents were handed out to the students for the reflective journals to ensure they knew the required format and content. A rubric was provided on Blackboard to guide them on what was expected of them. The researcher facilitated the module to the fourth-year undergraduate nursing students over a period of a year.

	Triangulation	During communication with the students' on the blackboard, researcher's field notes were helpful as the students' questions and concerns were addressed.
	Peer examination Reflexivity	The qualitative research process was scrutinised and discussed in depth with experienced promoters. The data analysis was verified with an independent co-coder and themes were identified and agreed upon. The researcher kept field notes to record experiences and verbatim discussions with significant peers that were valuable attributes to the study.
Dependability To ensure that the data are reliable (Polit & Beck, 2012:539).	Concurrence with credibility Rich description	It was done in this study as the researcher confirmed her findings of the data with that of an independent co-coder who did not know the students but did a control on the findings. A plain and clear explanation of the research process was provided.
Confirmability To ensure that there is congruency between two individuals' interpretation of the results. It reflects the objectivity of the researcher in the way she interprets the research data Confirmability shows the information provided by the participants is represented in the data and is not fictitious. The researcher's own opinions bias must not lead to the findings (Denscombe, 2007:300).	Discussion on the findings was held with a qualitative independent co-coder until consensus was reached Audit trail	In this study, two researchers confirmed findings on the qualitative data. Proof was kept of reflective journals, e-mails and field notes of the researcher
Transferability The possibility that the findings can be transferred to other groups of students and in other settings (Chirema, 2007:195).	Accurate description	Taking into consideration that the participants are tertiary students, the findings can be made applicable to other students at rural Universities. Students in urban universities will be expected to be more technologically advanced and will be expected to participate more in aspects of the module such as Blackboard. The educational, EBP and didactical principles would be beneficial if applied in other tertiary Institutions.

4. Results

a. Theme One:

The Students Changed Beliefs Regarding EBP

As the module was facilitated, it became apparent that there was a change in the student's beliefs of EBP. They showed more interest in the concept and as they moved into the clinical area they showed appreciation regarding the importance of the incorporation of research into the clinical field.

Participants/students indicated their realization that EBP when applied in the clinical field benefit the patients. They also indicate that the process and knowledge on EBP they gained from the module will be shared with other professionals. Their reflection on the fact that recent research is a priority is seen as significantly positive and the fact that old methods are regarded as unscientific is the change of beliefs the researcher aspired to.

Verbatim Quotes of Participants/Students:

"...Using evidenced based practice helped me because I found out why certain treatments were given and which treatment yields a better result..."

"...evidenced based practice facilitates a good health care system as people are being helped with the newest research and this will speed up the process of healing..."

"...if I have found what is better in the treatment of a patient's condition that is evidenced based and is clinically proven, I can also share with other professionals for the benefit of the client...."

Literature Control:

EBP are knowledge based methods that improve nursing practice and is a problem-solving approach to clinical decision making that improves the outcomes for the patient, family and community [15]. EBP essentially improve patient's experiences and increase the quality of the care rendered to them [16]. EBP changes the way nurses critically think about their doing, resulting in a culture of learning and an environment that supports EBP promoting patients and staff gratification [17].

b. Theme Two

The Significance of EBP

The students reflected that EBP could be applied to all their

subjects and in all fields. The students were critically thinking about the application in different health care environments. The process of EBP facilitated the utilization of higher order thinking and learning.

Verbatim Quotes of Participants/Students:

"...As the lecture proceed I realise that evidence based practice apply even on midwifery where we did different complications in Pregnancy..."

"...Wound care sisters use evidenced based practice..."

"... The good thing about evidence based practice is that we had to apply it in everything we do and in every subject or module we do..."

"...If all the Health Care Professionals can unite and use EBP in their practice, the hospitals/health care facilities would be a better place for all the patients..."

Literature Control:

Evidence-based practice must be implemented in these times of shrinking budgets by all communities in health care [18]. With the scarce resources that we are faced with in health care, health care professionals cannot afford to implement programs or make decisions regarding treatment that is not EBP. Treatment not based on EBP will ultimately be ineffective and result in increased length of stay in the hospital.

c. Theme Three

Implementation of EBP.

Students voiced their struggle to implement EBP in the clinical setting. Challenges were the lack of knowledge on the part of the registered nurses and the hesitancy on the part of the students to question practices in clinical practice.

Verbatim Quotes of Participants/Students:

"...What I found challenging in my learning process was to apply EBP to my clinical practice. As a student, it is not easy to change the way things is done. I got the answer that, this is the way things is done and should remain like that..."

"...One of the things that is challenging is that the majority of nurses don't use evidence- based practice and some don't even know what it is..."

"...I always believe what the nurses say and do in the hospital.

I did not ask for rationale or proof of what they are doing or saying because I know they have been in this industry longer than I have been and they know better, but I was wrong..."

"... It was good we started with EBP because it really helped in the hospital setting and some nurses were really interested in knowing more about it so that we can provide proper care ..."

Literature Control:

The knowledge, skills and implementation of EBP improved only when it was reinforced by the clinical learning environment. Class room teaching only improved the knowledge of EBP. Improved confidence gained from exposure to the clinical setting supports the belief that EBP should occur in concurrence with didactic classroom facilitation of the EBP process.

Some of the obstacles as indicated by more experienced nurses when using EBP are the inability to obtain relevant information. The validation of the evidence is a challenge and time limitations and limited resources as well as data sources is a reality [19].

d. Theme Four

The Module Experienced as a Positive Experience Influenced Their Professional Development

The students reflected that they were stimulated by the module through different teaching strategies and their learning increased. Interaction in class (group work) was experienced as conducive to learning. They experienced increased ability to access information.

Verbatim Quotes of Participants/Students:

".....Being taught about Evidence-Based Practice was very good because it increased my learning process by continuously having to go to the internet checking the latest research about the condition or the topic we were discussing in class. It also improved my learning process when coming to hospital setting because by having the latest research you will learn how to provide proper care and use the right resources....."

".....For me the most interesting part was the evidence based (EBP), now I know that you cannot do something without giving valid proof of what you are talking about....."

".....Another topic which was looked into was the research of a scientific journal, what they entail and how to obtain them from the internet. This was helpful as it promotes the skill of collecting data for evidence based practice that was discussed and also for collecting accurate information about the research conduction....."

".....I enjoyed group work, it made me to realize the importance

of a group especially when all of you are cooperative....."

".....During this year I am professionally developed and confident about my work. It also feels good as I am able to give some education to nursing staff about Evidence –Based Practice and apply it in patient's care....."

"...The newest research will speed up the process of healing and empower nurses with more knowledge....."

"...I learned so much during the module and I am going to apply what I was taught during my practical's ..."

".....The module was well planned and the lecturer always came to class prepared with new EBP things....."

".....The module that was taught in NUSA 401 was indeed educative and of excellence, in practice, I had the confidence and the knowledge to provide quality nursing....."

".....Most interesting module to start a year with. Good thing about the module was that we started it before going for clinical. We learned a lot during this module"

e. Theme Five

Experience of Blackboard as a Teaching Strategy.

The use of Blackboard proved to be challenging to the students as unavailability of the internet was experienced at times. Less privileged students experienced money constraints and had to use the internet on campus, which was mostly unavailable. Students that could utilize Blackboard were positive and enjoyed the interaction and especially the timely feedback on a daily to weekly basis. Surprisingly the researcher realized that some of these fourth year students had never used this global database, BB.

Verbatim quotes of participants/students: Valuable electronic interaction

"....We were taught on how to use black board. In the past years I never saw the importance of black board but this year it's about blackboard and I think I will enjoy it...."

"... I cannot believe the lecturer communicated with us every day when I submitted something on blackboard, this made me to be motivated and I felt as if I was important to her and she cared about my learning"

"...Blackboard was so exciting later on because we could communicate with our fellow students ask questions and discuss issues..."

Literature control:

Blackboard is a learning management system that provides

the student with learning material and content that can be accessed at anytime and anywhere for the convenience of the student. It enables on-going communication and immediate feedback that will enhance learning through discussions via chat rooms and wiki's [20].

5. Discussion

The aim of this study was to educate undergraduate nursing students in EBP and give them the skills to incorporate EBP into practice. From verbatim quotes the evidence is clear that the module's benefits were far reaching. The positive responses from students indicated development in EBP knowledge. Computer literacy and skills in obtaining and evaluating research evidence and articles enhanced the student's professional development. There were a significant positive change in the students' EBP beliefs and EBP implementation skills.

Lessons learned during the research study include the following:

- EBP knowledge empowers nurses to change practice and will benefit patients towards speedy recovery.
- The facilitated module was valuable because it was presented before the students went to the clinical area.
- Blackboard (BB) communication proofed very much valued. Interaction between the lecturer and the students was enriched and students felt respected.
- IT support is essential for the entire BB learning management process to succeed.
- Student and staff training programs on BB were identified as an important need.
- Group work can become an experience of mutual support and motivation.
- Reflection must be exercised with well-structured support from the facilitator.
- It is important for the facilitator to explain group dynamics, group members must be chosen regarding gender, age, academic performance etc. for performance of all members.

In conclusion, it became clear that EBP must be facilitated from the first year of study and must be reinforced by clinical accompaniment in the clinical environment. The findings indicate that students at times realized that patient care in the clinical field was not always based on newest research. They however indicated that they found it challenging at times as registered nurses lacked knowledge on EBP. Students voiced their inspiration to change clinical practice. Findings indicate a further need for training programs to implement EBP.

6. Acknowledgements

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Africa (UNEDSA) project. The researcher wishes to thank the University of Limpopo for the allocation of the grant.

7. Declarations

The following declarations are presented.

a. Conflict of Interest

No conflict of interest was experienced during the duration of the study.

b. Ethical approval

Ethical approval was granted by the research committee in the tertiary institution the study was conducted in. Reference number MREC/H/58/2012:PG

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