

African Journal for Physical, Health Education, Recreation and Dance (AJPHERD) Supplement 1:1 (October), 2014, pp. 154-165.

Assessing level of affective learning of undergraduate nursing students at a university in the Western Cape regarding rendering prevention of mother-to-child transmission services

L.S. VAN DER BERG AND S.L. WALKER

School of Nursing, University of the Western Cape, Private Bag X17, Bellville, 7535, South Africa. E-mail: lvanderberg@uwc.ac.za.

Abstract

Nursing assessment and teaching strategies focus mainly on the cognitive and psychomotor areas of learning. This is eminent in research studies that state that the cognitive approach is taken because of challenges in investigating the affective domain. This study assesses undergraduate nursing students' level of affective learning with regard to rendering prevention of mother-to-child transmission (PMTCT) services, which is key to working with at-risk populations. A qualitative exploratory descriptive and contextual design was utilised to assess the level of affective learning based on the students' reflective journaling. Ninety reflective journals were analysed by means of content analysis using Atlas.ti 7. Students were able to reflect at all the levels of the affective domain, and it was found that the use of reflective journaling is an appropriate teaching and assessment tool to enhance this learning domain. However, further research is needed on the interrelationship between the affective domain and the cognitive and psychomotor domains.

Keywords: Undergraduate student nurses, affective domain, learning, reflective journals, PMTCT.

How to cite this article:

van der Berg, L.S. & Walker, S.L. (2014). Assessing level of affective learning of undergraduate nursing students at a university in the Western Cape regarding rendering prevention of mother-to-child transmission services. *African Journal for Physical, Health Education, Recreation and Dance*, October (Supplement 1:1), 154-165.

Introduction

Mbombo and Bimerew (2012) investigated the effectiveness of integration of prevention of mother-to-child transmission (PMTCT) core skills into midwifery training. Their study assessed undergraduate nursing students' clinical performance of the core PMTCT competencies that were integrated into the curriculum in order to evaluate the effectiveness and relevance of the PMTCT training programme. They recommended that the assessment of the affective domain, for example caring (which is crucial when rendering services to at-risk populations, such as those living with terminal conditions such as AIDS) should be researched.

In Bloom's taxonomy, education leans towards knowledge transmission and recollection, taking into account that this is the lowest degree of preparation when compared with genuine, principled individual growth. This remains a core challenge

for academics as well as tutors currently. Bloom's taxonomy speaks to the definition of competence as defined by the International Council of Nurses (ICN), which refers to the three prongs as knowledge, skills and attitude. Internationally medical education requires that education should focus on knowledge, skills and attitudes (Ghosh & Agravat, 2009). These three parts ultimately relate to competency (ICN, 2008; World Health Organization, 2012). Bloom's taxonomy is an unassuming, rich and actual model that can be used for the accomplishment of learning objectives, education strategies and assessment of educational success. This classification consists of three overlapping parts or domains called the cognitive (knowledge), affective (attitude) and psychomotor (skills) learning domains and existing systematic degrees of complexity. A key principle of this taxonomy is that the student needs to become proficient in each of the levels prior to moving towards the following level (Utley, 2010).

Competency has become a national priority and a statutory demand (Morolong & Chabeli, 2005). Educational institutions are responsible for preparing students who, on completion of their training, should display professional competence. Nurses too need to be educated in a wide range of competencies for effective clinical practice, that requires changes in curricula of nursing programmes in higher education. In order to assess competence all three prongs need to be taken into account.

Nursing educators are familiar with the three domains of learning; however, nursing assessment and teaching strategies focus mainly on the cognitive and psychomotor areas of learning. This is eminent in research studies, that state that the cognitive approach is taken because of challenges in investigating the affective domain (Leng, 2002). Thus there is a tendency to focus more on knowledge and skills assessment.

Harrison and Fopma-Loy (2010) propose the preparation of emotionally intelligent nurses instead of "safe practitioners" or "critical thinkers", as so many educational institutions aspire to train. They state that educators often complain that students are so focused on the skill that they become detached from the patient as a whole. Furthermore, educators often overlook the fact that emotions are "critical motivators in the decisions and actions of nurses" (Harrison & Fopma-Loy, 2010). These two authors found that what is lacking is a structure that assists nursing students, and ultimately educators and education institutions, in becoming emotionally competent practitioners. They speak about students and educators often lacking comfort with, competence in or valuing self-awareness as an important part of reflection, even if structured guidelines are provided. They argue that self-awareness is the basis of higher-level emotional competencies; therefore it is of utmost importance that this be addressed. Hence there is a need to assess the emotional aspect of students in order to find them competent as a whole.

In the current study the focus is on the second domain of Bloom's taxonomy, namely the affective domain, to evolve attitude, which is routinely mentioned as 'beliefs' in the current world of personal development (Utley, 2010). This domain comprises five levels: receiving, responding, valuing, organisation and characterisation. At the lowest level, receiving, the student understands and also attends to the educative experience, while at the second level, responding, the student takes action within the educative experience. As soon as the student exhibits that voluntary excitement around the educative experience, he/she is basically performing within the third level, valuing, while demonstration of internalisation with regard to a value system will usually be at level four, that is certainly organisation. The highest level of this domain, characterisation, is reached in the event that the student continually behaves inside the value system (Utley, 2010). The affective domain can be described as more challenging to comprehend than the other domains. The dissimilarities among the levels, particularly among valuing and organisation as well as characterisation, stand hidden as opposed to clear differences in other places of the taxonomy.

The literature has shown that writing could be used to assess students' level of reflection (Bulman & Schutz, 2013; Johns & Freshwater, 2005; Moon, 2004; Utley, 2010). The question is whether undergraduate nursing students' reflective journals would provide evidence of affective competency with regard to the rendering of PMTCT care to patients.

Boud et al. (as cited in Bulman and Schutz, 2013: 1945), defines reflection as "those intellectual and affective activities in which individuals engage to explore their experiences in order to lead to new understandings and appreciations". Reflection consists of revealing feelings, observations, concepts, as well as views related to a learning activity (Moon, 2004). While reflection normally takes various forms, reflective writing is usually utilised to help students to search into subject matter at a deeper level (Utley, 2010).

Four different types of reflective writing are done by students (Moon, 2004; Utley, 2010). The first is descriptive writing (not reflective), wherein the student very easily points out the event; for example, the student will write about a patient that did not attend the antenatal clinic and only arrived to give birth. Then upon receiving counselling and testing, the patient tests positive, and it becomes clear that she was aware of the risk of being HIV positive. The student is merely describing the event. Students may begin their reflective writing using this method to set the platform for further discussion (Moon, 2004). The fact is that some students never move outside of this stage.

The second type, descriptive reflection, utilises the student's unique opinion in descriptive reflection of an event. A student may well refer to personal types of

reasons for supplementing with a specific concept or position at this level; for example, the student will reflect that if he or she was in the position of the patient, he/she will have put aside the fear of testing in order to protect the innocent baby from contracting the virus by going on the PMTCT programme.

In dialogic reflection, the third type of reflective writing, students get involved in conversing personally from where he/she takes a look at probable causes of the event; for example, the student will now start to consider other reasons why something happened in the way it did, and not just his or her own personal justification. The student becomes aware that there are other reasons; for example, the patient might not have had money to come to the clinic, the patient might not have known that she might transmit the virus to the baby or, if so, she might not have known that it can be prevented.

The most in-depth level is critical reflection. At this level, the student includes explanations for the event in the much wider social, political, or historic contexts (Utley, 2010). With this type of reflection the student might now take into consideration, for example, that due to stigmatisation in the community or society.

As nurse educators we often assign writing assessments to students as we realise how valuable writing is. Reflective journal writing becomes an assessment tool, since students acquire self-evaluation skills and adjust their behaviour built on what they have concluded from their consideration, and educators have the opportunity to assess which students require intervention, reassignment, recommendations for extra resources, or additional discussions. There are advantages for the use of reflective journals as a means of assessment. Nursing science relies greatly on objective data for learning, but when students write reflective journals they include both detached and personal information. In this way subjective data can be obtained in order to assess the affective domain of the competencies performed by the students.

The affective domain consists of five levels that can be used to assess the student's affective part of learning; for example, their interests, attitudes, values, etc. This can be determined for a given topic or content area. In this case it was used to assess their experiences with rendering the PMTCT programme to clients. In nursing the content continuously includes both the cognitive and affective domains, hence attention needs to be given to both in order to promote learning as there is a reciprocal relationship between the two (Denton & McKinney, 2004). The students tend to internalise the information, and this promotes a change in attitude, belief and values which helps mould caring nursing professionals.

The knowledge and skills of undergraduate nursing students rendering PMTCT services were previously assessed, but not the attitude. Therefore the purpose of this study was to assess the affective learning level of undergraduate nursing students

based on their reflective journals about their experiences with regard to rendering PMTCT services.

Methodology

A qualitative exploratory descriptive and contextual design was utilised to attain the overall aim of this study, which was to assess the level of affective learning based on the students' reflective journaling. During the first semester of 2012, ninety (90) third-year undergraduate nursing students were placed in a low-risk midwife-led obstetric unit for a seven-week period. This total population served as the sample for the study.

Ethical clearance and permission to conduct the study were obtained from the University of the Western Cape Research Ethics Committee prior to implementing the study. During the orientation to reflective journaling students' permission and informed consent regarding the usage of journals for research were obtained. Students were informed that the data obtained from these reflective journals formed part of the formative assessments in the undergraduate midwifery course, and no incentives were offered. Students were also assured of confidentiality and anonymity in terms of data used for analysis, and that they may withdraw from the study at any time without jeopardising the mark allocated to the activity. No potential physical or psychological harm to the students was anticipated.

The students were exposed to the PMTCT services during their clinical placement in order to reflect on their experiences. Students were tasked to write a reflective journal on all their experiences of rendering PMTCT services during their seven-week clinical placement in the first quarter of 2012. Students were orientated to the study during orientation to midwifery in the first week of the course. A PowerPoint presentation focusing on the importance of reflective journaling was given by one of the lecturers.

Students were given the instruction to write down every incident that they encountered in the facility regarding rendering of PMTCT services. This could be a personal encounter or an incident that they witnessed while observing either the professional nurse or the counsellor, both positive or negative. They had to write about how they felt about the incident, what they have learned, what scared them and how they overcame the situation. They needed to reflect on the situation throughout the placement by keeping a notebook, and to hand in the final typed reflective journal at the end. They were orientated on how to write a reflective journal, what assessment criteria would be used in the grading of the the journal, and were given a few tips and an example of a previous student's relective journal to make the process easier. They had to submit the reflective journal in week six of their placement for grading purposes.

Data analysis

In this study reflective journals were used, and these comprised written text about the students' experiences with the rendering of PMTCT care. For this reason the researchers decided on content analysis according to Babbie (2010). Content analysis allows for a condensed and broad description of the phenomenon, and the outcome of the analysis is concepts or categories describing the phenomenon (Elo & Kyngäs, 2008). A computer software package, Atlas.ti 7, was used to analyse the data. Each reflective journal was coded with a number to ensure anonymity.

Each reflective journal was read by the authors and action verbs from the affective domain were highlighted and categorised by levels. Sentences and phrases were extracted from the journals to provide clarity and context for interpretation. In the first phase of data analysis the authors read and coded the first ten reflective journals independently. They then met to deliberate and establish agreement on the descriptive examples of the affective domain constructs within the reflective journals identified and coded. In the second round the authors again independently read and coded all remaining journals to ensure consistency with the coding. When coding differences occurred, the authors discussed the differences until they reached consensus.

They met again to determine agreement on the content of each entry, group the codes into categories and finally determine major themes. This process allowed insightful reading of the reflective journals to determine the concepts and categories. The constantly comparative method allowed the authors to integrate data (descriptive reflective journals) and theory (affective taxonomy) using joint coding and analysis (Lincoln & Guba, 1985). An 'audit trail' is available to ensure that the research process was open, transparent and justifiable (Driessen, van der Vleuten, Schuwirth, van Tartwijk, & Vermunt, 2005).

Verbs used to assess the first level of the affective domain (receiving) included: ask, listen, focus, attend, take part, discuss, acknowledge, hear, be open to, retain, follow, concentrate, read, do and feel.

In the next level of the affective domain, where the focus was on active participation, attendance or reaction to the experience (to assess responding), verbs used were: react, respond, seek clarification, interpret, clarify, provide other references and examples, contribute, question, present, cite, become animated or excited, help team, write, perform.

For value, verbs included: argue, challenge, debate, refute, confront, justify, persuade, criticise, which were included in order to see the meaning the student attached to the experience.

In the next level, organizing and conceptualising of values, students start to develop a value system and resolve internal conflicts. Action verbs used here were: build, develop, formulate, defend, modify, relate, prioritise, reconcile, contrast, arrange, compare.

Internalisation and characterisation of values, which is the highest level of affective domain, is where students start to adopt a belief system and/or philosophy, and verbs used to assess this were: act, display, influence, solve and practice.

Results

Due to the nature of the instruction that the students received, it was expected that they would write at the descriptive reflection level whereby they had to give their personal opinion of the experience they encountered (Moon, 2004).

Receiving

The majority of the students reflected on this level, which is expected seeing that they had to complete this particular assignment. An example here would be a student who stated:

I asked, 'What is that test for?' the counsellor replied, 'I will tell you later.' At that moment I felt extremely confused. I learnt that if the HIV rapid test is appearing to be positive, another needs to be done just for confirmation.

Responding

Once again, with the instruction of this assignment it was expected of students to be functioning at this level. A typical example of a student functioning at this level is:

... sometimes it's really sad to see young people who are infected with HIV, fortunately [sic] there is nothing I can do to change the fact that they are infected but to take care of them while they are in hospital and make sure that they take their tablets as prescribed to prevent mother-to-child transmission and give them health education that would change their life style [sic] and live a better life than what we do.[sic]

Value

Demonstration of a student functioning at this level was when students could select the value and relevance of ideas or experiences. Other evidence would be whether a student accepted or committed to a specific position or action. One student reflected:

After seeing this incident I have decided that even though I am having a bad day I will never treat a patient in this manner because I know that I wouldn't want others to treat me that way and it is only human to be kind to others

Organising and conceptualising of values

Evidence of functioning at this level was whether students can qualify and measure personal views. Students are able to state their personal position and reasons for that or could state their beliefs. At this level, one of the students reflected that:

At this point I was feeling sad and sorry for her. I really had empathy. We were the same age and that could easily have been me in that chair having my life flashed in front of me. A life I have not even started living or reaching my dreams that I have dreamt about. Feeling dead inside knowing there is no cure for the disease and still somehow manage to find some happiness because I have been blessed with a precious baby. All of this was going through my mind as I watched this young girl, thinking how brave she is because if it was me, I honestly would not know how to deal with it or even find a way of continuing with my life.

Internalisation and characterisation of values

At this level evidence of level functioning was whether the student was autonomous and behaved consistently within their personal value set. A student reflected:

I still feel very bad because she is so young. I showed my compassion by listening to her as she shared this information with me and asking her how she feels. She was very grateful that she had someone to talk to and ask about her condition. I am happy that I could make her feel some relief in such a difficult time for her. Most of the time patients just need you to be a little patient with them when it comes to revealing sensitive information or just their feelings.

It was interesting to note that students that functioned on the highest level of the affective domain also reflected more deeply in their writing. They were conversing with themselves in the journals, which points to dialogic reflection (Moon, 2004).

Discussion

As is evident from this study, students were able to reflect that learning occurred at all of the levels of the affective domain. However, the majority of the students reflected at the receiving and responding levels. Rendering of PMTCT services and working with these vulnerable patients was a new experience to the students, but in any educational setting, regardless of the context, one would expect students to

function at these lower levels. However, in preparing students to become competent practitioners, it is expected that they should be functioning at the higher levels of the affective domain, which are value; organisation and conceptualisation of values; and internalisation and characterisation of values.

Keeping in mind that these students are third-year students in a four-year degree programme, one would expect that they would be functioning at the higher levels of the affective domain. A limitation of this study is that the journals were not continuously reviewed throughout the term, which would have provided the opportunity for feedback from the lecturers in order to help the students to progress to the next level of reflection. Taylor-Haslip (2010) found in her study that as students progressed through the semester, so did their level of reflection with the guidance of the instructor on a weekly basis.

Reflections on the higher three levels might impact students' choices and empathy toward others, as can be seen in the following quote:

I have a sensitive feeling towards HIV-positive pregnant women, because they have lots of things to worry about. They have to worry about the well-being of the baby, caring for themselves and also still trying to hide their status from their family and friends because of the fear that they will be rejected and judged. So I'm trying to make them feel better by my attitude and manage the patient according to what we are being taught [sic] and to try and decrease the babies chances of getting the virus.

Some students realised that they are working with people with emotions and can therefore not be treated without empathy, as is evident from the following:

I learned today that I should stop having a prejudiced opinion regarding people with HIV. I can fully admit that I have grown up in an isolated world and HIV/AIDS was just another class discussion for me and I had a preformed idea that people who test positive feel very sorry for themselves. Now that I work directly with the patients affected by this disease, I have gained so much more respect for people living with HIV/AIDS. I started appreciating my own health and that I am in the position to reach out to them, even if it means to just put a hand on their shoulder and letting them know that someone cares for them and that I will do everything I can to ensure the healthiest possible life for the mother and her baby.

This is in line with what Harrison and Fopma-Loy (2010: 644) stated with regard to emotions being "critical motivators in the decisions and actions of nurses". By reflecting, students become more aware of these emotions and may use this for future improvement of self and practice (Hobbs, 2012; Horton-Deutsch &

Sherwood, 2008).

Recommendations

Educators should consider the use of reflective writing not only to improve students' cognitive domains but also to assess their affective domain. The fact that the students were instructed on how to reflect might be the reason why most of them reflected on the lower levels. A way to overcome this would be to prompt for higher levels of reflective writing by having more regular submission of the reflective journals throughout the term, for example weekly, so that constructive feedback can be given throughout in order to develop the reflective writing skills and ultimately the affective domain.

Some educators would argue that because of the high number of students, this might seem like an insurmountable task. But before it is dismissed entirely, one needs to look at innovative ways of doing this, for example online journals that can be read by the instructors and feedback can be given electronically on a weekly or two-weekly basis in order to foster or nurture the reflective writing skills of the students. Introducing reflective writing from the first year and thus progressing further up the levels of reflection and affective domain as students' progress through the four years of study has the potential to enhance emotional intelligence and critical thinking that will be required in practice upon graduation.

In the nursing profession, where all three domains of learning (cognitive, psychomotor and affective) are integral, there is a dire need for further research in this area and of the interrelationship between the three. This will inform our teaching and learning strategies in nursing. Retention and transfer may be enhanced with inclusion of all three dimensions and not just the cognitive and psychomotor domains. The question, however, is how prepared are the educators? Are educators able to reflect on their own affective domain or is it 'too personal' for them? To better equip our future nurses, do we as educators have the necessary skills to help them get there?

Conclusion

This current study added to that by Mbombo and Bimerew (2012) in terms of the affective learning with regard to rendering PMTCT services. From this study it was evident that students reflected at all five levels of the affective domain, even though the majority of the students reflected at the lower two levels of the domain. As educators of a caring profession, we would like our students to respond, value and organise what they learn and even characterise themselves as nursing students or nurses and not just merely receive information. We need to find teaching methods that encourage students and engage them in their own learning so as to promote their

affective and ultimately their cognitive learning. This study shows that the use of reflective journals has the potential to achieve this.

In order to produce wholly competent nurses who represent the very essence of nursing, which is caring, we cannot ignore the affective domain in teaching and moulding these students. The end product will be, as Harrison and Fopma-Loy (2010) state, emotionally intelligent nurses which the community under their care desires.

It was also very clear that as students progressed up the levels of the affective domain, they tended to reflect on a deeper level. Their reflections became more like conversations with themselves (dialogic), while some were moved to question why government is not doing more to improve the PMTCT programme (critical reflection).

Acknowledgements

The authors acknowledge the project leader and principal investigator, Prof. Nomafrench Mbombo, for allowing the opportunity for this publication. This project was funded through a Presidential Emergency Plan for AIDS Relief (PEPFAR) grant.

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