Full Length Research Paper

Nursing Students' Perception on the Effectiveness of Physical Assessment Instruction

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Abstract

The perception of 73 BS Nursing students of Omar Al-Mukhtar University (Libya) on the effectiveness of physical assessment clinical instruction was evaluated following a nine-day training on cephalocaudal examination using a self-assessment tool that was constructed by the authors (Cronbach's alpha = 0.852) based on Keller's ARCS Model of Instruction. This descriptive study was undertaken to sdetermine perception variability among different year levels, student ranks and areas of specialization. The study revealed that the nursing students perceived that the clinical instruction they received was highly effective as a whole and with regards to the four components of model of instruction: Attention, Relevance, Confidence, and Satisfaction. While the two year levels considered in the study viewed the instruction as highly effective, they had significantly different perceptions on the quality of instruction that they received. Similarly, students from the four areas of specialization significantly differed in their perceived effectiveness of instruction. However, the difference in the perceived effectiveness was not significantly different between student ranks.

Keywords: qualities of clinical instructor, physical assessment, nursing process, clinical instruction and nursing education

Abbreviations

PA - Physical Assessment, IEN - Intensive and Emergency Nursing, MNN - Midwifery and Neonatal Nursing, PHN - Public Health Nursing, OTAN - Operating Theater and Anesthesia Nursing.

INTRODUCTION

The world of nursing and healthcare is rapidly changing (Sand-Jecklin, 2007). There are however certain nursing activities that remain important. Among them is health assessment of patients. Physical Assessment is a crucial step in the Nursing Process which is in turn essential in clinical practice.

Health assessment of patients falls under the purview of both physicians and nurses. While some nurses practice in extended roles, others maintain a more traditional role in the acute care setting (Constantine et al., 2012). Assessment uses both subjective and objective data. Subjective assessment factors are those that are reported by the patient. Objective assessment data includes that which is observable and measurable (Jarvis, 2008).

A systematic physical assessment remains one of the most vital components of patient care. A thorough physical assessment can be completed within a time frame that is practical and should never be dismissed due to time constraints (Zambas, 2010).

The College of Nursing of Omar Al-Mukhtar University (Libya) conducted a nine-day training on cephalocaudal assessment of adult patients for its third and fourth year students. The ultimate aim of the training was to enable student nurses to perform physical assessment as an integral part of the nursing process to an acceptable degree of autonomy.

Current nursing practice requires the ability to interpret

and analyze relationships between multiple pieces of information and to solve complex problems in an ever-changing environment (Rowles and Brigham, 1998). Students do not often develop these abilities independently, but rather, need instructor guidance in learning how to process information and learn in a manner other than memorization of facts. In addition, student autonomy to perform critical skills is developed through appropriate leadership styles (Keenan et al.,1988).

Clinical instructor characteristics, behaviors and skills are important and need to be the focus of clinical education in order to promote helpful, while minimizing hindering, behaviors. Effective clinical instructors enhance the learning process (Levy et al., 2009).

The effective nurse educator, whether operating in the clinical setting or classroom, must demonstrate astute interpersonal skills, clinical competency, professionalism, and an understanding of the principles of adult learning (Desired Characteristics of Effective Nurse Educators - "My Ideal Nursing Instructor"). According to Parch (2010), there are eight traits that make great nursing instructors: appropriate education, teaching skills, ability to work with others, expertise, assessment skills, love of nursing, communication skills, and skills beyond the clinical setting.

In a study of perceptions on their clinical experience and preparation for practice, Hickey (2010) reported that nursing graduates viewed clinical instructional experiences as an important opportunity for students to become prepared for entry into practice. It was emphasized in this study that faculty must be aware of effective teaching practices and be supported in the role of preparing nursing students for practice. A preceptor type of experience was noted to be the most effective clinical experience in preparing students for the reality of independent practice.

This study was anchored on John Keller's ARCS Model of Motivational Design, an instructional design approach that focuses on the motivational aspects of learning environment (Cullata, 2013). The model states categories representing the four components of motivation: arousing interest, creating relevance, developing an expectancy of success, and producing satisfaction through intrinsic/extrinsic rewards (Keller, 1983). It was of interest to the researchers to determine whether the faculty of the College of Nursing provided quality instruction on Physical Assessment from the standpoint of students.

METHODS

This research utilized a descriptive non-experimental design. Convenience sampling was conducted among the third and fourth year students of the College of Nursing who participated in the 9-day training course on Adult Physical Assessment. A researcher-prepared questionnaire was used after being subjected to content validation and reliability testing (Cronbach's α = 0.852). The two-part questionnaire was bilingual (English and Arabic) to ensure that the respondents understood each question item. Participants were required to provide information on their year level and areas of specialization since nursing students in this university are divided into 4 areas of specialization beginning on their junior year. The students' ranks were based on their Grade Point Average (GPA) obtained from the records of the College Registrar. The second part of the questionnaire consisted of 32 questions based on John Keller's ARCS Model of Motivational Design where the respondent students assessed the instruction they received using a four-point Likert Scale on questions pertaining to attention, relevance, confidence and satisfaction. Collected data were tallied and subsequently subjected to statistical treatment using the *Statistical Package for Social Sciences Version 16.0 (SPSS)* employing t-test for independent means for the demographic variable of year level and one-way analysis of variance (ANOVA) for rank and areas of specialization.

RESULTS

Profile of the Respondents. The respondents of this research were 73 nursing students of Omar Al-Mukhtar University College of Nursing students. Forty four (60 %) of the respondents are 3rd year students while 29 (40 %) belong to 4th year level. Majority (42.5 percent) of the respondents were ranked as Passed based on their GPA in the previous academic year. The remainder were distributed as Good, Very Good and Excellent with corresponding percentages of 31.5%, 20.5 %, and 5.5 %, respectively. The students represented the four possible areas of specialization for nursing students of Omar Al-Mukhtar University College of nursing as follows: 24 (32.9 %) Operating Theater and Anesthesia Nursing (OTAN); 21 (28.8%) Intensive and Emergency Nursing Department; 16 (21.9 %) Public Health Nursing; and, 12 (16.4%) Midwifery and Neonatal Nursing Departments.

Perception on Physical Assessment Instruction Effectiveness. In general, the over-all perception of the respondents on the effectiveness of Physical assessment instruction was high (mean score of 3.43). The nursing students perceived the physical assessment instruction in terms of Satisfaction as very highly effective with mean of 3.61. On the other hand, physical assessment instruction in terms of Attention, Relevance, Confidence was perceived as highly effective with mean of 3.26, 3.42, and 3.47, respectively (Table 1).

Differences in Perceived PA Instruction Effectiveness Year Level. As seen in Table 2, there were significant

Table 1. Level of Perception of Nursing Students on Physical Assessment Instruction Effectiveness

Components of the Arcs Model	Mean	Standard Deviation	Interpretation
Attention	3.26	0.46	High
Relevance	3.42	0.57	High
Confidence	3.47	0.59	High
Satisfaction	3.61	0.46	Very high
Over-all	3.43	0.43	High

Interpretation for mean scores: Very low - 1.00 -1.50; Low - 1.51 - 2.50; High - 2.51 -3.50; Very High - 3.51 - 4.00

Table 2. Differences in Perceived PA Instruction Effectiveness by Year Level

Components of Arcs Model	Year Level	Mean	Standard Deviation	T- value	p
Attention	3rd year	3.42	0.34	3.975	0.000
	4th year	3.02	0.51		
Relevance	3rd year	3.58	0.45	3.102	0.003
	4th year	3.18	0.64		
Confidence	3rd year	3.58	0.55	1.946	0.056
	4th year	3.31	0.62		
Satisfaction	3rd year	3.66	0.39	1.279	0.205
	4th year	3.52	0.55		
Over-all Perception on Effectiveness of Instruction	3rd year	3.55	0.32	3.173	0.002
	4th year	3.24	0.50		

Table 3. Differences in Perceived PA Instruction Effectiveness by Rank and Area of Specialization

Profile	Rank	Mean	Standard Deviation	F-value	p
Rank	Pass	3.38	0.48	1.246	0.300
	Good	3.36	0.44		
	Very Good	3.61	0.26		
	Excellent	3.47	0.32		
Area of Specialization	IEN	3.45	0.38	3.142	0.031
	MNN	3.55	0.28		
	PHN	3.16	0.52		
	OTAN	3.52	0.41		

Departments in the Omar Al-Mukhtar University College of Nursing: Intensive and Emergency Nursing (IEN); Midwifery and Neonatal Nursing (MNN); Public Health Nursing (PHN); Operating Theater and Anesthesia Nursing (OTAN)

differences between the 3rd Year and 4th year students' perception of clinical instruction effectiveness in terms of Attention (t-value: 3.975; p = 0.000), and Relevance (t-value: 3.102; p = 0.003). On the other hand, there were no significant differences in the perception of these two year-level groups in terms of Confidence (t-value: 1.946; p = 0.056) and Satisfaction (t-value: 1.279; p = 0.205). Over-all, 3rd and 4th year nursing students significantly differed in their perception of the effectiveness of the physical assessment instruction given to them (t-value: 3.173. p=0.002).

Rank. As seen in Table 3, there were no significant differences in the perception of the nursing students on the effectiveness of Physical Assessment instruction based on their rank (F-value: 1.246; p = 0.300). Of the four components of the ARCS Model, students of different ranks differed in their perception of instruction effectiveness only in terms of Attention (F-value: 3.391; p = 0.023).

Further test (Post hoc) shows that students ranked as Passed and Very Good differed significantly (F value: 2.907; p = 0.041) in their perception on the effectiveness of Physical Assessment instruction in terms of Attention specifically statement number 8 which states "The teacher made the lesson interesting by giving examples based on his/her actual experience." Significant differences were likewise seen between students ranked as Very Good and Passed (t value: 3.391; p = 0.023) as well as between students ranked as Very Good and

Good (t value: 3.391; p = 0.023) in the overall perception on the effectiveness of PA instruction in terms of Attention.

Area of Specialization. Students from the four areas of specialization differed significantly in their perception on the effectiveness of PA instruction (F-value: 3.142; p = 0.031). Students from the four areas of specialization differed significantly in their perception of instruction effectiveness in terms of Attention (F-value: 3.93; p = 0.012) and Satisfaction (F-value: 3.272; p = 0.026). However, there were no significant differences on students' perception in terms of Relevance (F-value: 2.291; p = 0.086) and Confidence (F-value: 0.737; p = 0.534).

Further test (Post hoc) shows that there was a significant difference between the OTAN and PHN students' perceived effectiveness of PA instruction in terms of Attention (F-value: 3.93; p = 0.012). Likewise, post hoc test showed that in terms of relevance, there was a significance difference among the students from all departments (t-value: 2.785; p = 0.047) particularly statement number 11 which states "The teacher explained to us that we will do physical assessment when we go on duty in the hospital or clinic."

Furthermore, under satisfaction, specifically for statement number 24 stating "I felt more comfortable doing physical assessment when my teacher let me practice.", the post hoc test showed that there is significant difference between MNN and PHN students (t-value: 3.711; p = 0.015). The test likewise revealed that there was a significant difference between OTAN and PHN students (t-value: 3.624; p = 0.017) with their responses for statement number 25 which states "I felt happy when my teacher showed me my good marks after I did physical assessment."

The post hoc test also disclosed that the overall result under satisfaction, there is a significant difference between OTAN and PHN students (t-value: 3.272; p = 0.026).

DISCUSSION

Tanda and Denham (2009) reported few changes have occurred in undergraduate clinical nursing education despite changes that have taken place in health care systems. In a review of clinical instruction and student outcomes reported that It was elaborated that high patient acuity and great needs for skilled technical nursing care make demands for clinical competence among newly graduated nurses.

This high demand for clinical competence has prompted the authors to investigate the over-all effectiveness of the clinical instruction that they have been providing to the nursing students of Omar Al-Mukhtar University.

This study showed that the nursing students viewed the instruction they received regarding physical assessment as highly effective in terms of John Keller's ARCS Model of Instruction. Among the four components of this model (attention, relevance, confidence and satisfaction), the participants of the study perceived the clinical instruction was very highly effective in terms of Satisfaction.

Although the clinical instruction was regarded as highly effective in terms of Attention, this component of the ARCS Model had the lowest mean among the four. Edgecombe et al (2013) reported that communication and culture are among the factors commonly cited as affecting international students.

The role of clinical faculty who model desired clinical skills is essential. According to Tilley et al (2007) competency-based education is essential for bridging the gap between education and practice.

In a study in Jordan about the perceptions of nursing students of effective clinical teachers, Nahas et al (1999) established that overall, the nursing students rated the professional competence of the clinical teacher as the most important characteristic. It was also found that some students valued clinical instructors' relationship with students as important for learning while senior students perceived the personal qualities of instructors as the most important.

Clinical nursing faculty possess four categories of important qualities: professional competence, interpersonal relationship, personality characteristics, and teaching ability. Clinical faculty should be intentionally aware of how their teaching behaviors are perceived by students and influence student anxiety during clinical experiences (Cook, 2005). The study by Tang et al (2005) suggested that teachers' attitudes toward students, rather than their professional abilities, are the crucial difference between effective and ineffective teachers.

Bergman and Gaitskill (1990) found that both faculty and students value skills involving the student-faculty relationship over skills centering on the professional or personal attributes of the instructor. They established that students are more concerned with communication-related attributes.

On a study assessing the opinion of nursing students on important teacher's behaviors, Viverais and Kutschke (2001) reported that participants rated the four categories in descending order of importance: evaluation, professional competence, interpersonal relationships, and teaching ability. The top items gave the profile of a teacher who is approachable, fair, open, honest, and who creates mutual respect.

Similarly, in a study by Benor and Leviyof (1997) the profile of an effective clinical teacher which emerged places the highest weight on the nursing competencies of the teacher. However, the same study downplays both interpersonal relationships and personality traits.

The study of Hsu (2006) on clinical teachers' behaviors during clinical practicum included teaching aims (task-oriented and learner-centered), teacher competence (teacher knowledge, instructional strategies, planning learning experience, teaching priorities, feedback and caring) and teaching commitment (professional identity and giving of self) as most important.

According to Kelly (2007) teacher knowledge appeared critical in four areas: as it pertains to the clinical setting, the curriculum, the learner and teaching/learning theory.

Teaching methods, personality, and presentation of course materials were the three primary characteristics of an effective instructor, according to the students' responses, with personality being most important. Conversely, in related nursing studies of effective teachers, personality characteristics were ranked lower (Berg and Lindseth, 2004).

The authors believe that the students' perception on the clinical competence and interpersonal relationships of the nursing faculty in addition to their teaching ability collectively contribute to their perception on the effectiveness of instruction that they received. All these factors are important in motivating students as they influence how the clinical instructor draws and sustain student attention, explain the relevance of skills taught, encourage confidence and promotes satisfaction.

CONCLUSION

The nursing students of Omar Al-Mukhtar University collectively perceived that the physical assessment instruction that they received was highly effective in terms of the four components of Keller's ARCS Model of Instruction design. Although no significant variability was found between students belonging to different ranks, students of different levels and those belonging in the four areas of specialization have significantly different perceptions of the degree of instruction effectiveness.

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