Factors affecting performance in clinical practice among undergraduate nursing students in governmental universities in Sudan 2021

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ABSTRACT:

Background Nursing Clinical practice is an important component of nursing education which is acquisition of knowledge, language, nursing skill, problem solving strategy. This study aimed to assess factors that influence clinical practice performance among bachelor's degree-level nursing students in seven governmental universities within Khartoum State, Sudan. **Design**: A quantitative cross-sectional approach was used in the study. The study was conducted at seven governmental universities in 2021 Sudan. A total of 300 nursing students were involved in the study ,selected randomly from all these nurses students.Data was organized and collected using a self-administered questionnaire. The data were analyzed using SPSS Version 25. **Results**: Most of the students (203, 67.7%) agreed that a student's behavior can be a barrier to clinical learning. The most selected reason for poor clinical practice was improper clinical supervision (93, 31.0%), followed by improper clinical supervision . The highly reported barriers include student factors such as lack of self-confidence (98,32.7%) and absenteeism (76, 25.3%). This study found a significant association between type of barrier and gender (p = .097).**Conclusion:** Students based factors which play important role in the performance in clinical area also hospital based factors lack of resources, quality of practical assessment in clinical area, and anxiety these factors obstruct the effective clinical learning.**Recommendation** an orientation to the hospital setting and implementing clinical simulation through high fidelity manikins that will ease the anxiety and offer good clinical practice to nursing students

Keywords: Factors affecting performance in clinical practice, undergraduate nursing students , governmental universities , Sudan

INTRODUCTION

Learning in clinical practice is an important component of nursing education, as nursing is a practice-based profession [1,2]The quality of nursing education largely depends on the clinical experience that nursing students receive in their supporting clinical environment [3,4,]. This clinical practice takes place in a complex dynamic social environment in which patient care and student learning are concurrently administered. A recent nursing education study reported that clinical experiences involve factors such as the application of theory to practice, effective mentoring, and constructive feedback associated with clinical practice aimed at enhancing positive learning and practice adaptation [5]However, poor relationships with clinical staff, a lack of support from nurse educators (NE), and a lack of challenging learning opportunities are some of the negative factors that can affect student nurse learning [6,7]. Challenging learning experiences are context based and hence differ from one clinical learning environment to another; they are common in most developing countries around the world, including Malawi [8,9,10]. Nursing education is a combination of both theoretical and practical learning experiences that enable nursing students to acquire the knowledge, skills, and attitudes for providing nursing care [11].Globally; the clinical training of nursing students is seen as the basis of nursing practice. Nursing students need to be supported and guided so that they can become responsible, accountable, and independent professionals who are able to function within the scope of professional practice [12].Clinical practice provides an opportunity for students to apply theoretical knowledge to actual health care provision [13]. Clinical placements enable nursing students to gain essential skills and provide safe and quality nursing care through real-life practice [14, 15].In the course of clinical practice, students apply their theoretical knowledge in a real environment, develop psychomotor skills, and observe and adapt to their professional roles. The clinical environment should be carefully selected, accepted by nurse tutors, and prearranged to be capable of transforming nursing students into competent nursing practitioners [16]; this is dependent on factors such as curriculum design, cost effectiveness, and relationships with specific health facilities [17]. The environment where nurses learn clinical practice, especially in Sudan and similar settings, is challenged by a multitude of factors that can affect learning diversely. The factors reported to affect student learning in clinical training can be categorized into different levels: individual, nurse tutor, hospital environment, and social-economic factors [18]. A study conducted in Botswana revealed that nursing students failed to apply theory into

practice because they lacked adequate supervision in the clinical area, which resulted in low performance in their clinical practices [4].It has been reported that clinical instructors' attitudes affect the performance of nursing students in the clinical area. Positive attitudes and a supportive environment encourage students' learning. Constructive criticism improves practice in a clinical setting, while negative criticism is an obstacle to effective clinical performance. A limited chance with on-hand hospitals, shortage of nurse tutors and clinical instructors, and too many students in a program can negatively affect the performance of students in clinical practice [19].

The students' behaviors can negatively affect their performance in clinical practice, such as an inability to demonstrate knowledge and skills, attitude problems, unprofessional behavior, poor communication skills with patients and clinical instructors, not asking questions, overconfidence, unmotivated to learn or to work, lack of confidence, and dishonesty [20]. A lack of prior clinical experience, unfamiliar areas, difficult patients, fear of making mistakes, and being evaluated by faculty members have been expressed by students as anxiety-producing situations in their initial clinical experience [21].The initial clinical experience was found to be the most anxiety-producing part of their nursing education. The sources of stress during clinical practice have been observed by many researchers and include a new environment, lack of assessment before supervision, poor clinical orientation, and shortage of nurses [22,23].Stress or anxiety is not only a workplace problem, as different stressors can also affect student learning [24].

There is an increased call for improving the environment in which nursing students learn clinical skills, especially in settings with poor or limited resources. Placements where students learn clinical practice should allow students to acquire nursing skills and clinical reasoning and develop as professional nurses. In areas where simulation learning is limited or not available at all, learning must take place in a real environment. Therefore, this study aimed to determine what factors affect performance in clinical practice among bachelor's nursing students. Specifically, it sought (1) to measure factors that affect nursing student's clinical performance and (2) to assess factors that contribute to improvement in clinical practice. This was done by determining the associations between the measured variables. Finally, the results were placed in context with regard to policy, education and practice.

MATERIALS AND METHODS

The current study used quantitative cross-sectional community based studydone to assess Factors affecting performance in clinical practice among undergraduate nursing students in

governmental universities in Sudan 2021.

Study done in Khartoum state in nursing faculties seven governmental universities in Khartoum state.Sudan (Khartoum university,Omdurman Islamic university, Elneelain University, Bahri University, ElzaeemElazhari University, Health Science Academy, Sudan Technology University.

Study population: Population are undergraduate nursing students in governmental universities in Sudan 2021.

Data was collected from nursing faculties in seven governmental universities in Sudan, selected randomly. A total of 300 bachelor's degree-level nursing program students were part of the sample in this study. The number of students per school ranged from 600 to 720. To be in the sample, the participants had to be undergraduate students in a nursing program, second to fifth level, and had to agree to participate in the study. Those who had received a diploma from a nursing program or who did not wish to participate in the study were excluded. ***Data Collection Tools***: Firstly, we shared the tool with other researchers to give their expert opinion concerning its clarity, relativity, and significance. Secondly, a pilot study was performed by selecting a limited number of nurses students (n = 30) who shared their views on simplifying and shortening the questionnaire.nurses students from all universities settings were chosen for the pilot study. Participant amendments were considered and mended into the survey, thus maintaining continuity with the contemporary literature. After a thorough discussion, the authors finalized the questionnaire and dispensed it to the participants.The researchers developed a self-administeredquestionnaire based on Gemuhay(2019), which was modified to suit our culture. The questionnaire collected information on socio-demographic characteristics and factors influencing clinical practice categorized as student, hospital-based, and social-economic factors.

Data analysis: The questionnaires were numbered and coded. Information was collected on socio-demographic characteristics, factors that influence clinical practice, nurse tutor factors, and their opinions. A descriptive analysis was performed to summarize the participant information. This was presented in tables as frequencies and percentages. Means and chi-square tests were used to examine the associations between the variables. This analysis was performed using SPSS Version 25. A *p*-value of 0.05 or less was considered significant.

Ethical consideration: The purpose of the research was explained to the students, and verbal consent was obtained from each participant. Ethical approval was obtained from the Ethics Committee of Omdurman Islamic University, Omdurman, Sudan.

RESULTS

A total of 300 nursing students from seven universities completed the questionnaire. As shown in Table 1, there were 137 (45.7%) males in the sample and 163 (54.3%) females. Slightly more than half of the sample (174, 58.0%) was above 20 years of age.

Most students were from Khartoum University (63, 21.0%) and Omdurman Islamic University (63, 21.0%). The other universities that were highly represented were Elneelain University (50, 16.7%), Bahri University (49, 16.3%), and ElzaeemElazhari University (31, 10.3%). The smallest number came from the Health Science Academy (25, 8.3%) and Sudan Technology University (19, 6.3%).

Table 1. Socio-demographic data (n = 300)

Variable	Frequency	Percent (%)
Age		
17–20 years	126	42.0
Above 20 years	174	58.0
Gender		
Male	137	45.7
Female	163	54.3
University		
Khartoum University	63	21.0
Omdurman Islamic University	63	21.0
Elneelain University	50	16.7
Bahri University	49	16.3
ElzaeemElazhari University	31	10.3
Health Science Academy	25	8.3
Sudan Technology University	19	6.3
Education Level		
Second year	22	7.3
Third year	152	50.7

Variable	Frequency	Percent (%)
Fourth year	89	29.7
Fifth year	37	12.3
Second year	22	7.3
Training Hospital		
Khartoum Teaching Hospital	67	22.3
ENT	96	32.0
Pediatric Hospital	73	24.3
Omdurman Hospital	16	5.3
Bahri Hospital	24	8.0
Elnaw Hospital	24	8.0

Table 2.Factors that contribute to improvement in clinical practice (n = 300)

Factors contribute to improvement in clinical practice	Frequency	Percent (%)
Effective supervision and assessment	56	18.7
Provision of quality care to patients	67	22.3
Self-engagement in clinical practice	75	25.0
Competency gaining in clinical areas	59	19.7
Demand to score high marks in clinical practice	43	14.3
Barriers to Good Performance in Clinical Practice		
Yes	203	67.7
No	97	32.3
Reasons for Poor Clinical Practice		
Lack of communication between staff and students	73	24.3
Improper clinical supervision	93	31.0
Clinical instructors are not well prepared for the task	75	25.0
Difficulties in orientation or clinical teaching	59	19.7
Student's Behavior Can Be Barrier to Clinical Learning		
Yes	175	58.3
No	125	41.7

Student's Behaviors Affect Clinical Practice		
Lack of self-confidence	98	32.7
Absenteeism from clinical area from time to time	76	25.3
Unsafe practice	58	19.3
Overconfidence	68	22.7

Table (2) above

shows the factors that contribute to improvement in clinical practice. Self-engagement in clinical practice (75, 25.0%) was the most selected factor. Most of the nursing students (203, 67.7%) agreed that a student's behavior can be a barrier to clinical learning. The most selected reason for poor clinical practice was improper clinical supervision (93, 31.0%), followed by improper clinical supervision (93, 31.0%). The highly reported barriers include student factors such as lack of self-confidence (98, 32.7%) and absenteeism (76, 25.3%).

Table 3. Reasons why clinical placement does not provide an opportunity for learning (n = 300)

Response of Participant	Frequency	Percent (%)
Shortage of nurse tutors or someone else as a guide in the clinical area	132	44.0
Inadequate learning resources	94	31.3
Inadequate supervision	74	24.7

As shown in Table 3, nearly half of the respondents (132, 44%) reported that clinical placement did not provide them adequate opportunity for effective clinical learning with a shortage of nurse tutors or someone else as a guide in the clinical area as the main reason.

Table 4. Causes and measures to reduce anxiety by nursing students (n = 300)

Response of Participant	Frequency	Percent (%)
Intrinsic Causes of Anxiety in Clinical Areas		
Fear of making mistakes	117	39.0
Lack of competency	71	23.7
Lack of experience	68	22.7

Fear of clinical environment	44	14.7
Situations that Cause Anxiety in the Clinical Area		
Clinical assessment during examination	88	29.3
Strict supervision	70	23.3
Death of patient	77	25.7
Practicing in intensive care unit	65	21.7
Measures to reduce anxiety		
Appropriate clinical supervision	105	35.0
Assignment and clinical case presentation	70	23.3
Proper placement in clinical area	69	23.0
Effective class room teaching	56	18.7

As shown in Table 4, most participants selected clinical assessment (88, 29.3%) during examinations as a situation that caused anxiety in the clinical area. Fear of making mistakes (117, 39.0%) was the most selected intrinsic cause of anxiety in the clinical areas. Appropriate clinical supervision (105, 35.0%) was the most selected measure to reduce anxiety, followed by assignment and clinical case presentation (70, 23.3%).

Table 5. Correlations between demographic data and barriers of performance in the clinical area

Variable	**Mean**	**SD**	***p*-value**
Age	1.5433	.49438	-.090
Gender	1.5800	.49895	
Barriers of performance in clinical areas	1.3233	.46853	.097

Table 5 shows the Correlations between some of participants' demographic data and barriers of performance in the clinical area. This study found a significant association between type of barrier and gender (p = .097).

DISCUSSION

This study aimed to assess the factors that affect clinical practice among undergraduate nursing students in governmental universities in Sudan. We found that there are several existing factors and barriers to effective performance in clinical practice, which are effective supervision, an adequate number of tutors and clinical instructors, self-engagement in clinical practice and the provision of quality care to patients. The barriers to effective clinical practice included a lack of self-confidence, absenteeism, inadequate supervision, lack of resources, and anxiety. The finding regarding effective supervision as a facilitator of effective clinical practice has also been reported by previous studies [25, 2, 26]reported that effective clinical practice promoted learning and helped students to achieve learning outcomes and competencies.

An ideal number of tutors and clinical instructors for the students would facilitate effective supportive supervision and improve the learning outcomes. However, in some situations, such as poor or limited resource settings, there is often a crisis of human resources for health, both in terms of numbers and motivation. Many barriers to effective clinical practice, such as a lack of self-confidence, absenteeism, inadequate supervision, lack of resources, and anxiety, have been shown in the study of [27]their results indicated absenteeism from duty led to poor performance in clinical practice, whereas our self-report study showed a lack of self-confidence as a contributor. A lack of basic equipment and supplies for nursing care procedures can make students ignore clinical practice. However, the students felt that clinical practice provides better opportunities and favorable settings to apply theory to practice [2].

In our results, we found anxiety over clinical assessment during examination reported by nearly one-third of the students (29.3%) as the factor that most affected them in their clinical performance. This finding was in line with a study conducted in Johannesburg, South Africa, which also found that anxiety contributed to poor clinical practice [28].Another situation that causes anxiety for students is the fear of making mistakes, which was selected by 39.0% of our sample; this was also similar to the findings of the South African study [28].The current study suggests that good supervision and providing assignments to students and presentations of clinical cases are factors that could reduce anxiety and hence lead to good learning outcomes.

In clinical settings, a shortage of staff, lack of learning materials, and overcrowding of patients do not provide opportunities for students to achieve their learning objectives and represent barriers to clinical practice. This finding is similar to a study done in Northern Tanzania [23]The

current study shows that many factors affect performance (positively and negatively) in clinical practice among undergraduate nursing students. These include student-based factors, which play an important role in the performance in clinical area (such as anxiety), and hospital-based factors, such as a lack of resources and quality of practical assessment in the clinical area; these factors can obstruct the effectiveness of clinical learning.

CONCLUSIONS&RECOMMENDATION

Clinical competencies of the instructor and attitudes of staff toward students in the clinical area can have an impact on performance in clinical practice. From the current results, one can suggest that there must be an orientation to the hospital setting and implementing clinical simulation through high fidelity manikins that will ease the anxiety and offer good clinical practice to nursing students.

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Conflict of interest

The authors of this article declare no conflict of interest.

Institutional review board statement:

The study was conducted according to the guidelines of the Declaration of Helsinki. The research was approved by the ethical committee of the Faculty of Nursing at Sudan University.

Informed consent statement: Informed consent was obtained from all study participants involved in the study.

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