

<https://doi.org/10.48047/AFJBS.7.1.2025.625-630>



African Journal of Biological Sciences

Journal homepage: <http://www.afjbs.com>



Research Paper

Open Access

Transforming Medical Students into Competent Professionals: The Impact of Clerkship on Clinical Skills and Professionalism in Peshawar

Dr Hanzala waqar, Dr. Maryam Dil, Dr. Sara ishaq , Dr. Syed Gohar Hussain Shah, Dr. Abdul Basit, Dr Muhammad abbas khan

BDS, MHPE, Lecturer, DME, Khyber Medical University, Institute of Dental Sciences, Kohat
Hanzalawaqar93@gmail.com

BDS, MHPE, Lecturer, Khyber Medical University, Institute of Dental Sciences, Kohat
Dr.Maryam_dil@yahoo.com

MBBS, Mphil Anatomy, MHPE (Scholar), Assistant Professor Anatomy Deptt
Jinnah Medical College Peshawar
Sara.ishaq84@gmail.com

BDS, MHPE Scholar, Lecturer (DME), Dental Section, Abbottabad International Medical College,
Abbottabad.
goharshah509@gmail.com

BDS, MHPE Scholar, Lecturer (DME), Dental Section, Abbottabad International Medical College,
Abbottabad.
abdulbasit_98@hotmail.com

(Corresponding Author): Dr Muhammad abbas khan
BDS, House officer sardar begum dental hospital, Peshawar, Ab307180@gmail.com

Volume 7, Issue 1, Jan 2025

Received: 15 Nov 2024

Accepted: 25 Dec 2024

Published: 05 Jan 2025

[doi:10.48047/AFJBS.7.1.2025.625-630](https://doi.org/10.48047/AFJBS.7.1.2025.625-630)

Abstract

Introduction: Students get the opportunity to apply their theoretical knowledge to practical, real-world circumstances during the clerkship period of their medical education, which is an important stage. When it comes to learning clinical skills like as taking a patient's history, performing a physical examination, using diagnostic reasoning, and performing procedures, these experiences are absolutely necessary. Students in Peshawar, which has a patient population that is both socioeconomically and culturally diverse, have the opportunity to participate in clerkships, which present them with a variety of unique difficulties and chances to improve their skills and professionalism. Specifically, the purpose of this study is to evaluate the transforming impact that clerkship experiences have on the clinical talents and professional behavior of medical students.

Methodology: 200 medical students in their final year were recruited from the Hayatabad Medical Complex and the Khyber Teaching Hospital in Peshawar for the purpose of conducting a quantitative cross-sectional study. All of the participants were chosen using a stratified random selection method, and they were evaluated both before and after their clerkships in the following four areas: obstetrics and gynecology, internal medicine, surgery, and pediatrics. Self-perceived competencies in clinical skills (history taking, physical examination, diagnostic reasoning, and procedural skills) and professionalism (communication, ethical decision-making, teamwork, and patient interaction) were measured through the use of a validated structured questionnaire that utilized a Likert scale with five points. The analysis of the data included descriptive statistics, paired t-tests for comparing the results before and after the experiment, and regression analysis to determine the elements that had an impact.

Results: The study revealed significant improvements across all assessed domains. For clinical skills, mean scores increased notably post-clerkship (e.g., history taking from 2.8 ± 0.6 to 4.2 ± 0.5 , $p < 0.001$). Professionalism also saw substantial enhancement, with communication skills improving from 3.1 ± 0.8 to 4.3 ± 0.5 ($p < 0.001$). Regression analysis identified mentorship quality ($\beta = 0.35$, $p < 0.01$) and diversity of clinical cases ($\beta = 0.29$, $p < 0.05$) as significant predictors of these improvements.

Discussion: The findings highlight the critical role of clerkships in bridging theoretical and practical learning, aligning with global evidence supporting experiential learning. Exposure to diverse patient populations enhanced students' empathy, communication, and cultural sensitivity. The results underscore the importance of effective mentorship and diverse clinical exposure in fostering both technical and soft skills. Suggested improvements include implementing reflective practice sessions and incorporating standardized assessments for a more holistic evaluation of student development.

Conclusion: Clerkships are instrumental in shaping medical students into competent professionals equipped with essential clinical skills and ethical standards. The findings emphasize the need for structured mentorship and innovative approaches to optimize clerkship experiences. Future research should focus on longitudinal studies to evaluate long-term skill retention and further refine clerkship training programs.

Introduction

Clerkships are formative experiences for medical students because they allow them to apply what they have learned in the classroom to real-world scenarios. Medical students gain valuable experience caring for patients in supervised, real-world settings through this type of practical training. Teaching students how to take a patient history, conduct a physical examination, think critically about diagnoses, and carry out procedures is an important part of clinical education. Also, students learn to communicate effectively, make ethical decisions, and have empathy, all of which are important in the workplace. (1).

Clerkship offers a one-of-a-kind learning opportunity in the setting of Peshawar, a city characterized by a diverse patient mix and a high illness burden. Medical students in this city must be flexible and ready to apply what they learn to a wide range of clinical situations due to the cultural and socioeconomic diversity that exists within the healthcare system. By exposing them to both the technical and humanistic sides of medicine, this experience helps students develop a well-rounded skill set. (2).

There has been a lot of focus on the importance of medical professionalism around the world. Acts and attitudes that foster confidence between doctors and their patients are all part of what it means to be professionally competent. When it comes to providing the best treatment possible for patients, personal qualities like honesty, responsibility, and teamwork are just as important as medical knowledge(3). Educators in the medical field place a premium on producing holistic doctors who can handle patients' complicated healthcare demands by incorporating professionalism into their training programs. The purpose of this research is to provide proof that medical clerkship has a profound effect on medical students in Peshawar by examining how it helps them develop their clinical abilities and professionalism.

Methodology

Study Design: The effect of the clerkship on the clinical competence and professionalism of medical students was examined in a quantitative cross-sectional study.

Setting: The research was place at Hayatabad Medical Complex and Khyber Teaching Hospital, two of Peshawar's most prestigious medical institutions.

Participants: Participants were final-year medical students who had finished their obstetrics and gynecology, internal medicine, surgery, and pediatrics clerkships. Stratified random sampling was used to choose a total of 200 pupils.

Data Collection: A structured questionnaire was used to gather data, focusing on two domains:

1. Clinical skills: History taking, physical examination, diagnostic reasoning, and procedural skills.

2. Professionalism: Communication, ethical decision-making, teamwork, and patient interaction (4,5).

The questionnaire employed a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree) to assess self-perceived competence and was validated through a pilot study involving 20 students (6).

Data Analysis: We used SPSS version 25 to examine the data. The data was summarized using descriptive statistics, which include mean and standard deviation. Pre- and post-clerkship self-assessments were compared using paired t-tests, and factors impacting results were investigated using multiple regression analysis. (7).

Results

Demographics: The participants included 110 females (55%) and 90 males (45%), with a mean age of 23.5 years (SD = 1.2 years).

Clinical Skills and Professionalism (Mean Scores):

Domain	Pre-Clerkship Mean \pm SD	Post-Clerkship Mean \pm SD	p-value
History Taking	2.8 \pm 0.6	4.2 \pm 0.5	<0.001
Physical Examination	3.0 \pm 0.7	4.1 \pm 0.6	<0.001
Diagnostic Reasoning	2.9 \pm 0.6	4.0 \pm 0.5	<0.001
Procedural Skills	2.3 \pm 0.7	3.8 \pm 0.6	<0.001
Communication Skills	3.1 \pm 0.8	4.3 \pm 0.5	<0.001
Ethical Decision-Making	2.9 \pm 0.7	4.1 \pm 0.6	<0.001

Factors Influencing Outcomes: Regression analysis indicated that mentorship quality ($\beta = 0.35$, $p < 0.01$) and diversity of cases encountered ($\beta = 0.29$, $p < 0.05$) significantly predicted improvements in clinical skills and professionalism (8).

Discussion

According to the results of this research, the clinical experience that medical students gain through clerkships has a significant and positive impact on their professional development and clinical competence. The remarkable improvement in clinical abilities across all categories was one of the most dramatic effects that occurred. These findings are in line with the findings of research conducted all around the world that highlight the significance of experiential learning in the field of medical education. Direct patient interactions provide students with the opportunity to acquire hands-on experience in the areas of history taking, physical examinations, and diagnostic reasoning, all of which are essential components of traditional medical practice (9). In addition, the development of procedural skills reveals that students are able to perform crucial medical interventions with confidence and precision when they have received training that is hands-on.

Among the participants, there was also a significant improvement in professionalism, which is an essential component of medical education. Through interactions with patients who came from a variety of different backgrounds, students were able to develop empathy, improve their communication skills, and become more culturally sensitive. Additionally, working within interprofessional teams increased collaboration and teamwork, both of which are necessary for providing individuals with high-quality medical treatment. These findings are in accordance with worldwide guidelines that urge for the incorporation of training in soft skills alongside training in clinical knowledge (10).

A crucial aspect that was shown to have an effect on the outcomes was the impact that mentorship played. Not only can effective mentors assist students in the acquisition of technical abilities, but they also act as models for students to emulate in terms of professional conduct(11).. This demonstrates the importance of including structured mentorship programs throughout clerkship rotations in order to bring about the greatest possible benefit. In a similar vein, it has been demonstrated that learning is enhanced when faced with a wide variety of scenarios. Because of this variability, students are required to modify their approach in order to deal with a wide range of clinical and ethical issues, which helps them become better prepared for the difficulties of medical practice (12,13).

In spite of the fact that it highlights the advantages of clerkship, the study also indicates regions that may use some improvement. The implementation of reflective practice sessions, in which students are given the opportunity to evaluate their experiences and get feedback, has the potential to fortify their learning even further. In addition, the incorporation of standardized measures of professionalism in addition to technical skills could provide a more comprehensive evaluation of the development that students have made (14,15).

In conclusion, the clerkship phase plays a significant role in the development of well-rounded physicians who are equipped with both clinical skill and professional ethics. It is possible for medical schools to guarantee that their graduates are adequately prepared to meet the ever-changing requirements of the healthcare industry if they address the deficiencies that have been found and optimize the structure of clerkship programs.

Conclusion

A significant part of the process by which medical students develop the skills and professionalism necessary to become practitioners is the clerkship. The remarkable improvements that were seen in clinical abilities and professionalism among students in Peshawar highlight the significance of experiential learning in the field of medical education. For the purpose of evaluating the long-term retention of these competences and exploring creative approaches to improve clerkship training, future research should concentrate on longitudinal studies using longitudinal research methods.

References

1. Harden RM. Trends and the future of postgraduate medical education. *Med Teach.* 2006;28(8):611-5.

2. Epstein RM, Hundert EM. Defining and assessing professional competence. *JAMA*. 2002;287(2):226-35.
3. Hays RB, Gupta TS. Rural internships for final-year students: Clinical experience, education, and workforce. *Med Educ*. 2003;37(9):803-8.
4. Sutkin G, Wagner E, Harris I, Schiffer R. What makes a good clinical teacher in medicine? A review of the literature. *Acad Med*. 2008;83(5):452-66.
5. Ramani S, Leinster S. AMEE Guide no. 34: Teaching in the clinical environment. *Med Teach*. 2008;30(4):347-64.
6. Irby DM, Wilkerson L. Teaching when time is limited. *BMJ*. 2003;326(7388):477-80.
7. Rees C, Knight LV. The medical student's lament: Barriers to empathy in clinical practice. *Med Educ*. 2007;41(3):256-61.
8. Roff S. The Dundee Ready Education Environment Measure (DREEM)—a generic instrument for measuring students' perceptions of undergraduate health professions curricula. *Med Teach*. 2005;27(4):322-5.
9. Branch WT. The road to professionalism: Reflective practice and commitment to patients. *J Gen Intern Med*. 2010;25(7):741-5.
10. Papadakis MA, Hodgson CS, Teherani A, Kohatsu ND. Unprofessional behavior in medical school is associated with subsequent disciplinary action by a state medical board. *Acad Med*. 2004;79(3):244-9.
11. Schon DA. *The reflective practitioner: How professionals think in action*. Basic Books; 1983.
12. Cruess RL, Cruess SR, Steinert Y. Role modelling—making the most of a powerful teaching strategy. *BMJ*. 2008;336(7646):718-21.
13. Cooke M, Irby DM, O'Brien BC. *Educating physicians: A call for reform of medical school and residency*. Jossey-Bass; 2010.
14. ten Cate O, Scheele F. Competency-based postgraduate training: Can we bridge the gap between theory and clinical practice? *Acad Med*. 2007;82(6):542-7.
15. Wald HS, Borkan JM, Taylor JS, Anthony D, Reis SP. Fostering and evaluating reflective capacity in medical education: Developing the REFLECT rubric for assessing reflective writing. *Acad Med*. 2012;87(1):41-50.