

Identifying Professional Attributes and Behaviors of Healthcare Educators in Distance Learning Programs

<https://doi.org/10.3991/ijim.v17i14.39783>

Naushaba Sadiq¹, Fozia Fatima¹(✉), Ayesha Rauf¹, Safia Fatima², Rukhsana Ayub¹

¹ Department of Health Professions Education, National University of Medical Sciences, Islamabad, Pakistan

² Armed Forces Institutes of Pathology, CMH Rawalpindi, Rawalpindi, Pakistan
fozia.fatima@numspak.edu.pk

Abstract—The medical community has come under fire for perceived and actual ethical and professional violations. In reaction to this criticism, interest has increased in maintaining, promoting, teaching, evaluating, and investigating medical professionalism. Professionalism is a fundamental skill for doctors and the main purpose of this study was to identify the professional attributes and behaviors of healthcare educators in distance learning programs in Pakistan. A qualitative exploratory study was conducted. The population of this study was intended to consist of healthcare educators from a variety of locations and specialties in health professions education. There were 15 focus group discussions. Professional attributes and behaviors of healthcare educators based on their personal and social characteristics and actions. The prerequisite of an effective teacher was a part of the character of health care educators, and the teacher's personality is seen as a personal quality that leads to their obligations, topic expertise, pedagogical understanding, and dedication to change and continual improvement all regarded as professional conduct of healthcare educators. Working interactions outside of the classroom, including social adaptability and flexibility, are regarded as social qualities and conduct of health care educators. According to this investigation, these factors encourage medical educators to develop their sense of self, their sense of confidence, and their sense of self-efficacy. The professional development of the medical educator is aided by their personal growth.

Keywords—exploratory study, professional attributes and behaviors, health care educator, focus group discussions, thematic analysis

1 Introduction

1.1 Rationale

Professionalism is an essential trait for doctors to have. The professionalism of doctors has drawn more attention recently, as many authorities think that professionalism is declining in them. The creation of more effective strategies for developing professionalism in medical education may be made possible by a knowledge of the elements that contribute to it [1]. Despite much attention being paid to professionalism in medical

education across the country, residents and faculty have received less attention than medical students. Curriculums usually emphasize abstract concepts and are instructional, out of the therapeutic situation. Professionalism is a complex, multidimensional, and context-specific phenomenon [2]. Despite the necessity of correctly identifying professionalism, there isn't a universal agreement on what professionalism means. Recently, it was believed that medical students would integrate and practicing doctors would uphold these principles and obligations. However, in recent years, the medical community has come under fire for perceived and actual ethical and professional violations (such as putting patients' interests over their own) [3]. For millennia, people have seen medicine as a "profession". Oaths and codes of ethics have expressed physicians' professional and ethical principles and responsibilities over millennia and in various cultures and locations [4].

In reaction to this criticism, interest has increased in maintaining, promoting, teaching, evaluating, and investigating medical professionalism. We based our search on this comprehensive notion of professionalism as an ethos, as put forth by which is, in many ways, the most closely associated with humanism. It includes patient empathy, work-life balance, and integrity. The major goals of this investigation are to define the characteristics and conduct of professional teachers in healthcare education and to review such characteristics and actions. But because there are so many different ways to define professionalism, we no longer limit our search to articles that adhere to this idea. Instead, we adopted a wholly sensitive, original method that gave authors the freedom to describe how they conceptualized professionalism if they created a logical, evidence-based approach to teaching it, this movement led to a thorough search and conceptually complex synthesis. Although this study is designed to identify attributes and behaviors of healthcare educators via focus group conversation in distance learning programs.

2 Literature review

The body of research on teaching professionalism has not undergone a systematic review. Such a review is challenging because of the variety of learning theories. The fact that professionalism has been defined in a variety of ways and that there is no agreement on the qualities that constitute medical professionalism exacerbates this challenge. This literature review revolved around the differences between attributes and behaviors, various theoretical definitions of medical professionalism, and teacher professionalism.

2.1 Attribute and behaviors in medical professionalism

Relatively little study has been done on the behaviors themselves, despite the extensive literature on behavioral drivers (i.e., the predictors of behavior, which are not a component of the behavior itself). Fundamental behavioral theories make predictions about behavior based on individual traits, social networks, social circumstances, surroundings, and governmental regulations [5]. None of these approaches, however, offer recommendations on how to encourage behavioral change based on the traits of the

focused behavior itself. Due to the fact that behaviors differ along various dimensions, attempts to alter them must be adapted to the underlying traits, or the qualities of the behavior, as opposed to behavioral drives. There are two main interpretations of the word "attribute" in social psychology. The first concerns behavior explanations (i.e., responses to why questions); the second concerns inferences or ascriptions (e.g., extrapolating character traits from behavior, assigning blame). The process of assigning is what unites the two definitions: in attribution as an explanation, a behavior is attributed to its cause; in attribution, as inference, a quality or attribute is ascribed to the agent based on observed behavior. These occurrences have a link, but they also have unique psychological traits [6]. It is clear from the literature that healthcare educators tried to become knowledgeable about the issue and ensure professionalism in clinical encounters. In addition to caring for patients, health professionals also have other duties, one of which is instructing students at the undergraduate and postgraduate levels. We presume that as it is a professional responsibility, healthcare educators must also act professionally when carrying out their duties [7]. It is known that the structural philosophy of an institute and its implications for character motivations, cooperation, and professional engagement among co-workers is called professionalism. It's a way for all professional endeavors to advance their notoriety and growth toward full acceptance within that canon. It applies to any career and is a natural ability of a person to complete any task professionally [8]. Additionally, it can describe "a socially radical approach or challenge intended to advance the objectives of a professional organization; it articulates the excellence and air of secrecy of individuals' beliefs and movements within a specific group"[9].

2.2 Teaching medical professionalism

The recent surge in focus given to "medical professionalism" exposes a flaw in our educational system and shows that more needs to be done to assure proper instruction and evaluation of this ability. Numerous credible organizations' coordinated efforts are excellent milestones in the right direction. However, many medical schools continue to lag behind [10]. The importance of formal instruction in creating professional behaviors in medical school graduates has been made abundantly obvious in the literature; failure in this area is bound to result in unfavorable consequences. With the introduction of licensing legislation in the middle of the nineteenth century, the profession of modern medicine attained its standing and essentially claimed a monopoly over its practice. This development was widely acknowledged as a result of the need for trustworthy, qualified healers on the part of both patients and society at large; professionalism in this context may be seen as the method of organizing these services. Based on this hypothetical agreement, the society granted professionals autonomy in their practice, a crucial role in regulation, a privileged status, and financial rewards with the understanding that the profession would, in exchange, ensure the competence and moral behavior of its members and address issues that the public finds troubling. According to the literature, professionalism is a skill that calls for formal instruction [11]. Teachers are typically expected to manage their professional development through teaching experience and skill-building training programs. Therefore, the professional development of

teachers can be interpreted as a comprehensive effort to improve the knowledge, learning ability, and educational role of teacher educators in the teaching field. Professional teacher educators may also have experience mentoring, directing, instructing, comparing, and evaluating students. Technical medical skill is not the same as being a professional teacher, and more recent publications have focused on a more nuanced, complicated definition of professionalism that is entirely dependent on behaviors or on ethos [12]. But what exactly are we hoping for when we want these attributes from our doctors? Are we requesting mastery of a specific body of information and abilities that can be taught in a way similar to how clinical medicine is taught? Is there something more that needs to be done if we want doctors to be "good people" who will behave morally when necessary? Medical schools and residency training programs now place a high priority on resident and medical student professionalism. Both medical instructors and patients desire "professional" doctors. After reviewing these concepts, researchers tried to investigate the attributes and behaviors of healthcare educators in distance learning programs in Pakistan.

3 Research methodology

3.1 Research design

A qualitative exploratory study was conducted to identify the professional attributes and behaviors of healthcare educators. The researcher obtained the informed consent of the participants after explaining the research purpose and method. This research was conducted after approval from the ethical committee of the National University of Medical Sciences (Case Files No: 06/ORIC/NUMS dated 08 Mar 2021).

3.2 Participants

The participants of Certificate in Health Professions Education (CHPE Fall-2020) from three contact sessions, representing a variety of specialties and geographically dispersed locations, were included in the study. Participants in this study represented a variety of medical disciplines, including gynecology, ophthalmology, general surgery, pediatrics, urology, orthopedics, pathology, radiography, ENT, anatomy, biochemistry, community medicine, and oral medicine. They were all consultants and doctors. For the focus group discussion, each contact session included 25 individuals. Fifteen focus groups were developed. Each focus group included five individuals which is optimal to start a focused conversation with a collection size of no more than eight.

3.3 Research process

FGDs were conducted by two people, which was generally regarded as best practice. While the other person takes notes, one person leads the conversation. This makes it simpler for the facilitators to watch how various group members engage with one another and record what they say. The next stage was to list the groups and individuals

who participated in the conversations. Participants in the FGD shared a common background (they were all CHPE students), allowing for open discussion of various topics. The next stage was to decide when and where the meetings would take place. There were five days of face-to-face meetings in each contact session, and they took place in Swat, Multan, and Rawalpindi. The researcher presented two key questions to all of the CHPE 2020 participants during contact sessions (See Figure 1).

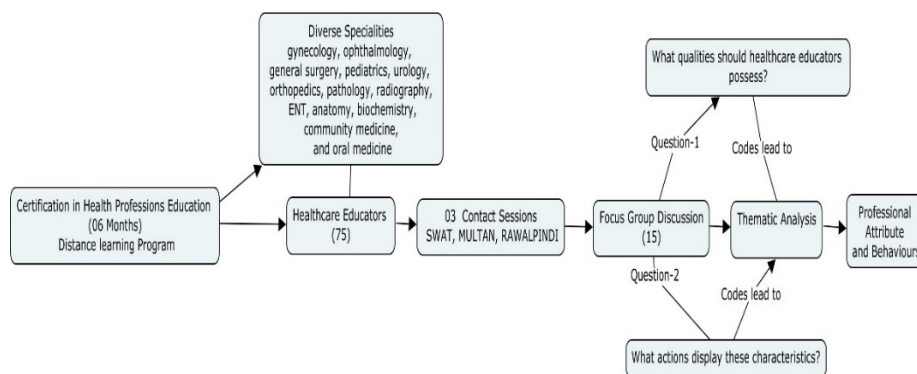


Fig. 1. Conceptual Framework

02 questions were deemed adequate for an FGD because it was crucial to give ample time for an in-depth discussion of the questions. Below are the questions that were used to focus group discussion:

1. What qualities should healthcare educators possess?
2. What actions display these characteristics?

The FGDs were held after all the planning had been completed. Each conversation began with a brief introduction that clarified the session's goals and informed participants that their input would only be utilized for research. The discussion procedures and any ground rules were also outlined in the introduction. The session's written notes and audio recordings were both used for data analysis. The focus group conversation lasted for about 25 to 35 minutes. Analyzing the data was the last stage. It was accomplished in two steps. After each FGD, researchers read through the transcripts of the discussions to look for any recurring themes. Following the completion of all FGDs, the data can be reviewed to discover any recurring patterns and trends. Thematic analysis, coding, and transcription of the recorded records were used to evaluate the quality of the facts. A thematic evaluation was treated as a step-by-step methodology in this work. Major or important issues that emerged from the data were identified (coding) and then explained in greater detail (narrative). The transcripts were used by all of the coders to identify all keys and sub-issues. Each coder worked on it independently to establish the degree of overlap between them (also known as "inter-rater reliability"). The following topics were then brought up collectively to aid in completing the procedure: understanding, pass-referencing, and validating the "coding framework." It's important to note that the original coding structure changed. As a result, qualitative data

analysis involved back-and-forth strategies used [13]. By using several analysts to analyze the results, analyst triangulation was employed to validate the data from focus group discussions. This can serve as a check on selective perception and reveal any interpretative analytical blind spots. Instead of seeking agreement, the objective is to comprehend various perspectives on the evidence. Making observations, taking notes, analyzing, and making sense of the situation are all greatly aided by this. Due to the fact that, unless the two researchers are extremely similar, their perspectives on what they are seeing and hearing will likely be quite different, giving them various theoretical bases from which to interpret and analyze. The researchers balance each other out, which helps them collect more data.

4 Results and thematic analysis

The first coding framework is displayed in Figure 2. These qualities were separated into social, professional, and personal. The majority of participants discussed the social attributes and behaviors that a good medical educator should exhibit at their respective medical institutes, including effective communication, social adaptability and flexibility, leadership, approachability, accessibility, lifelong learning, good management, and the ability to multitask. Participants agreed that a good medical educator must possess the following qualities: self-assurance, good taste in clothing, friendliness, humor, objectivity, honesty, good moral values, motivation, soft-outspokenness, innovativeness, empathy, passion, respect, self-awareness, fitness and activity, and self-assessment. Most of these qualities of medical educators were demonstrated through their actions. A good professional educator in the medical field, according to the majority of participants, must be a hard worker, listener, mentor, digitally literate, disciplined, good examiner, accountable, modified teacher, competent, organized, facilitator, researcher, flexible, punctual, planner, and role model; must maintain confidentiality; must develop critical thinking and organizational skills; must give feedback; must practice evidence-based teaching; and must know the language of tea.

Participants in Multan concurred that healthcare educators demonstrated professional attributes and behaviors by adhering to institutional policies, dressing appropriately, planning academic activities effectively, providing evidence during instruction, updating students on recent advancements, being aware of community needs, patiently listening to students and patients, controlling classroom activities, supervising students in academic and extracurricular activities, and should feel comfortable dealing with patients. They added that a teacher should have knowledge that is grounded in research, enjoy using technology in the classroom, have a clear vision for change and not be afraid of it, communicate well with coworkers, students, and patients using a clear voice, soft-spoken language that is easy to understand, good eye contact, and a positive body language. Healthcare educators should be friendly and have strong clinical and procedural skills, be honest when evaluating students, not discriminate against anyone based on their gender, be well-organized, have excellent time management skills, and be approachable to students. Additionally, they compelled students and teachers to be

honest with one another, and while receiving feedback, they demonstrated responsibility and openness, emotional stability, adaptability, and improvement.

According to Rawalpindi participants, Attributes and behaviors are overlapping terminology used to evaluate healthcare educators' efficacy. Good health educators should have a well-rounded teaching style rather than possessing just one particular quality. Most often, they favor healthy role models and flexible healthcare educators. A competent facilitator should be actively involved in the creation of resources, be a lifelong learner who should be current with his or her field of study, be on the lookout for new information about it, and new communication techniques, and be open to new technology. He or she can adapt to instructional strategies, shifting curricula, and new practices while working in a continually changing environment. Participants in this area also stated that healthcare educators should be passionate about teaching, up-to-date, devoted, and open to new ideas. They should also have solid medical knowledge and clinical abilities. He or she ought to be able to take the initiative and serve as an example for the students. He or she should be capable of treating typical illnesses that occur in the outpatient setting. Participants are required to demonstrate their ability to organize complicated debates, do research, and mentor healthcare educators because these abilities promote critical thinking in them and need them to be flexible with timetables and unexpected behaviors. Healthcare educators should be multitaskers, according to Swat participants. They should be able to plan, coordinate, and manage multiple tasks, as well as know what to teach while keeping in mind the national curriculum, have a thorough understanding of the subject, and be knowledgeable about both local and international regulations. He or she is a morally upright and sympathetic professional who always upholds patient confidentiality. He or she should be able to divide the class into groups and subgroups and lead discussions methodically while upholding proper classroom behavior. He or she ought to have a balanced attitude in both speech and deed. Participants also discussed the professionalism of healthcare educators in terms of social flexibility and family-oriented behavior, saying that they shouldn't hold inflexible ideas on social norms and should have a healthy work-life balance.

Researchers eliminated all characteristics with similar meanings from the codes, and then they categorized all codes into five sub-themes: character, commitment to change and continuous improvement, subject knowledge, pedagogical knowledge and responsibility, and working relationships outside of the classroom. Finally, these five sub-themes were divided into three main themes: the characteristics and actions of the health care educators as individuals, as professionals, and as members of society. These topics were divided by researchers into two basic frameworks, which are as follows:

1. General characteristics and professional conduct of instructors
2. Other Qualities and Conduct of Health Care Educators

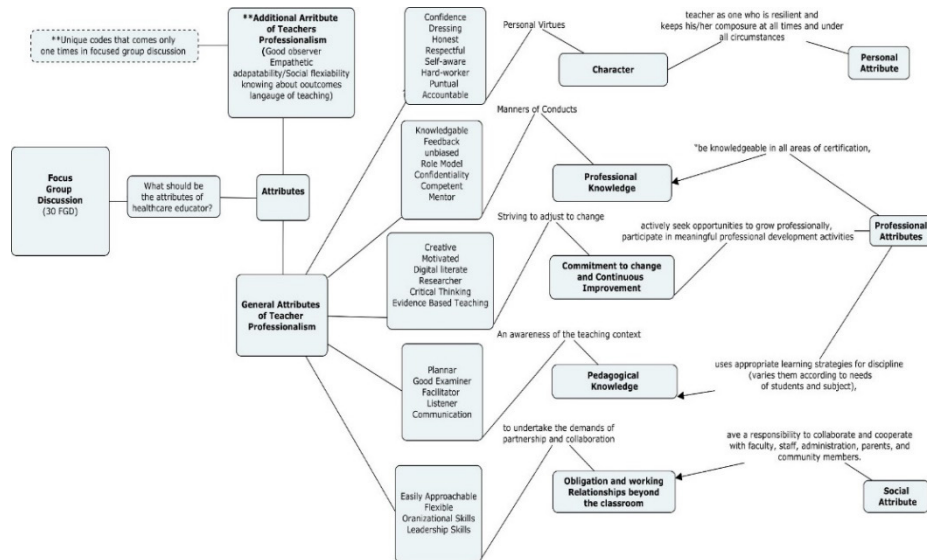


Fig. 2. Attributes of Teacher Professionalism

In Figure 2, all the characteristics that are depicted as necessary for both effective teachers and teachers as individuals were taken into consideration as the personal virtues or character of teachers, with a teacher being characterized as someone who is resilient to maintain composure at all times and under all circumstances. Similarly, to this, professional knowledge, dedication to change and continuous improvement, and pedagogical knowledge were all terms used to refer to characteristics connected to behavior, seeking to adapt to change, and understanding the teaching setting. It means that all of the characteristics that make a teacher professional—knowledge of all certification areas, active pursuit of professional development opportunities, engagement in worthwhile professional endeavors, and use of appropriate learning techniques for various disciplines—were all considered together. Last but not least, all of the qualities that support the need for cooperation and partnership outside of the classroom were referred to as the social qualities of teachers' professionalism.

Additional themes were created to indicate characteristics and behaviors unique to healthcare educators (See Figure 3). The additional characteristics of a health care educator's professionalism were separated into three categories: personal, professional, and social.

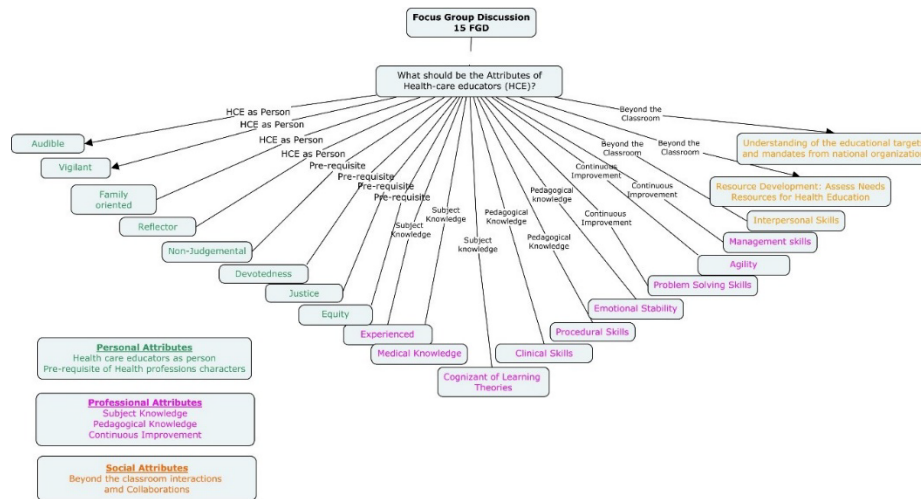


Fig. 3. Attributes of Health Care Educators’ Professionalism

Self-image or distinctive identity is shaped by a combination of personality traits, skills, likes, and dislikes, as well as one’s values and beliefs. Building confidence and passion throughout job development requires being aware of and at ease with professional identity. It was noted that all health professionals must maintain their professional identities to perform medicine safely and effectively. Understanding professional identity at this point of students' development through understanding their personal and social attributes and behaviors is crucial since university programs have a significant impact on how they construct their professional identities.

The two main themes, personal and professional attributes, and behaviors were merged into each-others because personal and professional growth go hand in hand because better individuals become better professionals (See Figure 4). Due to the emphasis on the individual rather than a collective group, social qualities, and behaviors differ from personal attributes and behaviors. Within a social identity group, our personal identity is what sets us apart from others, whereas our social identity is how we classify ourselves and others. Professional socialization promotes the internalization of a profession's values, ideas, and attitudes, as well as innovation, pride, confidence, and a sense of belonging. In order for students to internalize observed professional behaviors, they must be able to witness role models in the workplace. The sense of community among colleagues in the same profession, taking personal responsibility, acting ethically and morally, and progressing as a person and a professional are all influenced by a person's work values, abilities, and knowledge. The final conclusion of the thematic analysis was that both personal and social attributes and behaviors were collectively used to define the professional attributes and behaviors of healthcare educators.



Fig. 4. Personal and Social Attributes lead to Professional Attributes

5 Discussion

In Pakistan, there has been an increase in monitoring of medical professionals' performance. This reflects the public's worry about what they perceive to be some members of the profession's unsuitable traits and behaviors, as well as an apparent lack of accountability. The complicated brain operations known as attributes are thought to affect how people perceive information and what drives them to behave [14]. Professionalism in medicine has recently gained widespread attention. When it comes to how current and future doctors interact with patients and their peers, attitudes are crucial, but they are still ambiguous characteristics that, as of now, elude accurate categorization [15]. In the past two decades, researches had focused on the characteristics of medical professionalism and the most effective methods for teaching and evaluating it but after analyzing the data, we determined that the feedback provided by healthcare educators fell into recognized subcategories of professionalism. However, we consciously classified the comments made by health profession educators into five to six professional predominance regions. It was discovered that the first two professional characteristics of an effective teacher and the qualities of a teacher as a person are together recognized as the character of health care educators, i.e., they are portrayed as their characteristics and actions. The last three categories' commitments to change and continuous improvement, subject knowledge, and pedagogical knowledge were quite similar to the concept of teacher professionalism, such as classroom management and organization, organizing for instructions, and implementing instructions. All of these themes were collectively known as the professional attributes and behaviors of healthcare educators. Similar to this, healthcare instructors' social characteristics and actions include obligation and working relationships outside of the classroom. Teachers from any discipline can be seen differently than other professionals, and the value of excellent teachers in societal interaction cannot be overstated. The findings of this investigation also demonstrate that identifying complexity, communicating clearly, and providing rigorous service are traits or actions that reveal a healthcare educator's expertise. Furthermore, a study came out to be rather comparable to this one since they also said that professionalism was discovered in the analytical, obedient, professional, reflective, and respected character of a man or woman [16]. According to healthcare educators, the most important personal qualities and professional actions are patience,

willpower, courage, and respect for children. Additionally, they claimed that a professional teacher must constantly strive to improve, and they modify their teaching methods entirely in light of studies of the circumstances in which their students are learning. Here it is established that the terms "professional" and "effective" have multiple facets and defy a simple definition since pedagogical expertise extends beyond subject-matter expertise to include an understanding of the coaching context [17]. In other words, teachers must be strong in the "how" of teaching in addition to questioning, controlling the classroom, and delivering the material [18]. This finding was fairly consistent with a research study, which noted that strong problem-solving skills, pedagogical knowledge, and the ability to instruct pupils have been demonstrated as expert qualities and professional behaviors [19]. Running connections outside of the classroom involves social skills and professional conduct on the part of healthcare educators. This outcome was also connected to another research work, which noted professionalism has evolved to prioritize social goals and medical education should place a strong emphasis on helping students to develop their professional identities [20]. For all health professions to practice clinically safely and effectively, professional qualities and behaviors are essential. At this point in a student's development, understanding professional identity is crucial since university programs have a significant impact on how students establish their professional identities. The dynamic process of identity formation is made possible by socialization. As they progress through the distance learning programs, healthcare educators increasingly develop their professional identities as a resident, a doctor, and medical educators [21]. The study's conclusions will assist policymakers and regulatory bodies of medical education in incorporating professional qualities and behaviors into medical curricula by elucidating a concern that professional ethics will eventually be replaced by the conflicting ethics of the market as commercialism infiltrates the medical field. In order to encourage future physicians' willingness to uphold their commitment to professional ethics, academic medicine must take on increased responsibility and accountability. It can achieve this by streamlining the application procedure for medical schools, boosting the official and informal teaching of professionalism, and eliminating unethical behavior from the educational setting.

6 Conclusion

In medical education, teaching and assessing professionalism are still crucial challenges. Regarding professionalism in medical school training, there isn't a standard definition of the term that is applied throughout medical education. Healthcare educators viewed a person's personal and social traits and behaviors as part of their professional attributes and behaviors. Furthermore, duties, problem-solving ability, instructional know-how, and commitment to continuous improvement have all been recognized as professional traits and conduct of healthcare educators. Working outside of the classroom as well as displaying social adaptability and flexibility are regarded as social traits and behaviors of professionalism. Each person's journey from a layperson to a trained professional follows a different course shaped by "who they are" today and "whom they wish to become" in the future. Themes that recur frequently in this study and others

suggest that professional attributes and behaviors in medical education should emphasize self-reflection and awareness, as well as the improvement of knowledge about medical education and teaching techniques. These themes also suggest the importance of community building and networking. According to this investigation, these factors encourage medical educators to develop their sense of self, their sense of confidence, and their sense of self-efficacy. The professional development of the medical educator is aided by their personal growth.

7 Limitations

In this study, focus group dominance by a single person or group of people could be a weakness in this study because, typically, focus groups are affected by one or two dominant individuals. They were done in highly artificial conditions, which may have had an impact on the reactions that were produced. Typically, focus group samples are small and carefully chosen. They prevent generalization to bigger populations as a result. Therefore, a significant weakness of this focus group research is the external validity or generalizability of focus group findings.

8 References

- [1] Ali, S., Zamir, S., Fatima, F., & Fatima, S. (2018). Comparative analysis of communication climate and self-efficacy of teachers at university level. *Journal of Management Sciences*, 11(3), 186-212.
- [2] Babbie, E. (2016). *The practice of social research* (14th ed.). Boston, MA: Cengage Learning.
- [3] Birden, H., Glass, N., Wilson, I., Harrison, M., Usherwood, T., & Nass, D. (2014). Defining professionalism in medical education: a systematic review. *Medical teacher*, 36(1), 47-61. <https://doi.org/10.3109/0142159X.2014.850154>
- [4] Birden, H., Glass, N., Wilson, I., Harrison, M., Usherwood, T., & Nass, D. (2013). Teaching professionalism in medical education: a Best Evidence Medical Education (BEME) systematic review. BEME Guide No. 25. *Medical teacher*, 35(7), e1252-e1266. <https://doi.org/10.3109/0142159X.2013.789132>
- [5] Cohen, J. J. (2006). Professionalism in medical education, an American perspective: from evidence to accountability. *Medical education*, 40(7), 607-617. <https://doi.org/10.1111/j.1365-2929.2006.02512.x>
- [6] Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and the research design: Choosing among five approaches* (4th ed.). Thousand Oaks, CA: SAGE.
- [7] Fatima, F., & Ali, S. (2021). Descriptive Analysis of Teachers' Perception about supportive and defensive communication climate along with their self-efficacy at University level. *Governance and Management Review*, 4(2).
- [8] Fatima, F., Zamir, S., Ali, S., & Fatima, S. (2018). Effect of Demographic Factors over the Achievement Motivation of Students at university level in Islamabad. *Journal of Managerial Sciences*, 11(3), 213-236.
- [9] Evans, L. (2008). Professionalism, professionalism and the development of education professionals. *British journal of educational studies*, 56(1), 20-38. <https://doi.org/10.1111/j.1467-8527.2007.00392.x>

- [10] Goldstein, E. A., Maestas, R. R., Fryer-Edwards, K., Wenrich, M. D., Oelschlager, A. M. A., Baernstein, A., & Kimball, H. R. (2006). Professionalism in medical education: an institutional challenge. *Academic Medicine*, 81(10), 871-876. <https://doi.org/10.1097/01.ACM.0000238199.37217.68>
- [11] Hilton, S., & Southgate, L. (2007). Professionalism in medical education. *Teaching and teacher education*, 23(3), 265-279. <https://doi.org/10.1016/j.tate.2006.12.024>
- [12] Karnieli-Miller, O., Vu, T. R., Holtman, M. C., Clyman, S. G., & Inui, T. S. (2010). Medical students' professionalism narratives: a window on the informal and hidden curriculum. *Academic Medicine*, 85(1), 124-133. <https://doi.org/10.1097/ACM.0b013e3181c42896>
- [13] Lynch, D. C., Surdyk, P. M., & Eiser, A. R. (2004). Assessing professionalism: a review of the literature. *Medical teacher*, 26(4), 366-373. <https://doi.org/10.1080/01421590410001696434>
- [14] Martimianakis, M. A., Maniate, J. M., & Hodges, B. D. (2009). Sociological interpretations of professionalism. *Medical education*, 43(9), 829-837. <https://doi.org/10.1111/j.1365-2923.2009.03408.x>
- [15] Moreno-Murcia, JA., Torregrosa, S.Y., & Pedreno, B.N. (2015). Questionnaire evaluating teaching competencies in the university environment. Evaluation of Teaching competencies in the university. *New Approaches in Educational Research*. 4(1), 54-61. <https://doi.org/10.7821/naer.2015.1.106>
- [16] Passi, V., Doug, M., Peile, E. D., Thistlethwaite, J., & Johnson, N. (2010). Developing medical professionalism in future doctors: a systematic review. *International journal of medical education*, 1, 19. <https://doi.org/10.5116/ijme.4bda.ca2a>
- [17] Rauf, A., Fatima, F., Gilani, R., & Shabnam, N. (2023). Development and validation of a questionnaire about hidden curriculum in medical institutes: A pilot study. *Frontiers in Medicine*, 10. <https://doi.org/10.3389/fmed.2023.996759>
- [18] Tanang, H., & Abu, B. (2014). Teacher Professionalism and Professional Development Practices in South Sulawesi, Indonesia. *Journal of Curriculum and Teaching*. 3(2), 25-42. <https://doi.org/10.5430/jct.v3n2p25>
- [19] Wardoyo, C., Herdiani, A., & Sulikah. (2017). Teacher Professionalism: Analysis of Professionalism Phases. *International Education Studies*. 10(4), 90-100. <https://doi.org/10.5539/ies.v10n4p90>
- [20] West, C. P., & Shanafelt, T. D. (2007). The influence of personal and environmental factors on professionalism in medical education. *BMC medical education*, 7, 1-9. <https://doi.org/10.1186/1472-6920-7-29>
- [21] Van Zanten, M., Boulet, J. R., Norcini, J. J., & McKinley, D. (2005). Using a standardised patient assessment to measure professional attributes. *Medical education*, 39(1), 20-29. <https://doi.org/10.1111/j.1365-2929.2004.02029.x>

9 Authors

Dr. Naushaba Sadiq is currently working as an Associate Professor of Health Professions Education at the National University of Medical Science, PWD Campus, Pakistan.

Dr. Fozia Fatima is working as Assistant Professor at the National University of Medical Science, PWD Campus, Pakistan.

Dr. Ayesha Rauf is currently Assistant Dean of Curriculum, Professor of HPE, and Head of the Department of Health Professions Education at the National University of Medical Science, PWD Campus, Pakistan.

Dr. Safia Fatima is a chemical pathologist at the Armed Forces Institute of Pathology, CMH Rawalpindi, Pakistan.

Dr. Rukhsana Ayub is currently the Assistant Dean of Assessment and Associated Professor in the Department of Health Professions Education at the National University of Medical Science, PWD Campus, Pakistan.

Article submitted 2023-03-22. Resubmitted 2023-05-28. Final acceptance 2023-05-28. Final version published as submitted by the authors.