Exploring Medical Professionalism amongst Postgraduate Trainees of Bolan Medical Complex Hospital Quetta

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ABSTRACT

Introduction: The traditional educational system has concentrated on cognition acquisition and skills essential for physician practice. However, medical educationists are focusing more on good professional doctors now, having a cognitive foundation to work alongside their social roles as a physician-to-be.

Aims and Objectives: To assess medical professionalism amongst postgraduate trainees at Bolan Medical Complex Hospital, Quetta.

Place and Duration of study: Bolan Medical Complex Hospital, Quetta during February 2024.

Material and Methods: A cross-sectional study was conducted to determine professionalism utilizing a pre-validated questionnaire termed Professionalism Assessment Tool (PAT) from 47 Postgraduates (PGs) of the Neurosurgery, General Medicine, and Psychiatry departments. Data was entered and analyzed using SPSS version 29 was used to calculate frequencies and percentages. The chi-square test was utilized to evaluate the association between professional years and items. A p-value of ≤ 0.05 is considered significant.

Results: All 18 PGs from the psychiatry department, 23/36 (64%) from General Medicine, and all 6 from Neurosurgery filled out the questionnaire. 55.3%(n=25/47) were above 25 years of age, The majority were males (n=31, 66%) and 34% females, 36% (n=17/47) PGs were from 1st year of training. Item no 1 and 5 of Domain I and Domain 3 present the highest percentage score (52.4%) respectively. Highly statistically significant results (p-<0.001) were obtained between professional years of training and items 4, 6, 1, and 3 of Domain 2, 3, and 4.

Conclusion: PGs followed feedback to improve and meet their learning goals. PGs understood their professional responsibilities and felt qualified to finish assignments to the highest standard reliably and courteously. They were aware of the benefits of working in teams, and they took feedback to help reach their learning goals.

Key Words: Professionalism, Postgraduates, General Medicine, Psychiatry, Neurosurgery.

INTRODUCTION

Professionalism though considered an innate personality trait is also an essential medical skill at the postgraduate level , inculcated into the workplace culture and the learning environment[1]. A major element of the clinician is a competent attitude and behavior that can be attained through education of professionalism in medical education[2]. Currently professionalism is gaining affirmation and enormous recognition in medical education[3]. Medical professionalism exhibits a social commitment between doctors, patients, and the society they serve. For being a good professional moral and intellectual traits are needed. Altruistic, trustworthiness, empathy, lifelong learning, teamwork, emotional intelligence and patient care are the main ingredients of these traits[4].

Researchers in Western countries use different tools to assess the professional behavior of medical students[3, 4, 5, 6]. The same is observed in Pakistan, Razaq A, assessed professionalism amongst PGs through mini evaluation exercise (P-MEX),[7] while, Naureen K in her study developed and validated psychomotor analysis of the Professional Assessment Tool (PAT)[8]. Though professionalism at the undergraduate level has been assessed by other researchers[9,10,11,12,13], no study has ever been conducted to assess professional behavior at PG levels such as responsibilities, reliability and accountability, self-assessment, humanism, integrity, empathy and compassion, honesty, and

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ethical behavior, as well as professional engagement with the community.

The rationale of the study: The assessment of PG's professional behavior is a crucial element of development as a physician. Medical educators accept that professionalism is an inner skill and performance as a professional is very important for being a good clinician. Identification of deficiencies in medical professionalism is crucial in career development. This study highlights the core deficiencies in the professional behavior of PGs.

Therefore, by using PAT we checked PG's professional level of three different specialties of Bolan Medical Complex Hospital (BMCH), Quetta. This shall assist in achieving the goal of formally integrating professionalism in the postgraduate curriculum to transmit the attributes, principles, and beliefs of the health profession and introduce new strategies to enhance professionalism amongst postgraduate trainees.

MATERIAL AND METHODS

Ethical approval was taken from Bolan University of Medical and Health Sciences (IRB No. 0029/BUMHS/IRB/23; dated12/12/23, was taken,
Study Design: A descriptive, cross-sectional study.
Study Duration and Setting: Over one month in February 2024 at Bolan Medical Complex Hospital, Quetta.
Inclusion Criteria: Postgraduate trainees of three departments of Bolan Medical Complex Hospital including Psychiatry, General Medicine, and Neurosurgery departments were included.
Exclusion Criteria: PG's of Medicine Unit II, Neurosurgery department of Sandeman Provincial Hospital were excluded from the study as they were far away from BMCH, Brewery Road Quetta.
Sample Size: Forty-seven (47) postgraduate trainees of the Psychiatry, General Medicine, and Neurosurgery departments were recruited.
Sampling Technique: Non-probability convenience sampling technique.
Data Collection Tool: A pre-validated questionnaire Professionalism Assessment Tool (PAT)formulated by Kelly KA[2] was used.
Pilot Study: Tool was validated in the Pakistani population by Khan NF (2024) on 28 medical students (Cronbach's alpha 0.847).
Data Collection Procedure: After taking informed consent a house officer (General medicine) and a demonstrator (Oral Pathology) distributed and collected the questionnaires from all participants
Data Analysis: Participants' demographics (age, gender, professional year, medical experience, other

degrees, and specialty) were collected. There were five domains in PAT consisting of 33 items.
(1) Reliability and Responsibility,
(2) Life-long Learning and Adaptability,
(3) Relationships with Others
(4) Upholding Principles of Integrity and Respect,
(5) Citizenship and Professional Engagement.
Each domain assessed a specific number of related variables using Miller's Performance Level Label (knows, knows how, shows, shows how, and teaches how). The Likert scale was applied from 1 to 5 (1=knows, 2=know how, 3=shows, 4=shows how, 5=teaches how. For data analysis, SPSS version 29 was used. Each domain was calculated and presented in the form of frequency and percentage. The chi-square test was used to evaluate the association between professional years and items. A p-value of ≤0.05 was considered significant.

RESULTS

A total of 47 PGs from 3 different departments including Psychiatry, General Medicine, and Neurosurgery participated in this study (response rate 75%). There were 31 (66%) males and 16 (34%) females, 22/36 from General Medicine, all 6 PGs from Neurosurgery and all 18 PGs from the Psychiatry department filled out the questionnaire. Table-1 presents demographic data whereas Table-2 demonstrates the association between professional years with items. Item I "Fulfil responsibilities in a quality manner (Domain 1 i.e. Reliability, Responsibility, and Accountability"), and item 5 "Establishing and maintaining appropriate boundaries in work and learning situations" (Domain 3 i.e. Relationship with others: represents their work as managers) was scored highest by the PGs (46.80%, n=22/47). Fig-1 demonstrates associations between professional year and items.

Using the formulated and validated Kelly KA questionnaire Table-2 demonstrates PG performance scores in percentage. It shows how: PGs were confident in assisting others fulfil their responsibilities, presented by the shared items or they demonstrated the options that they themselves could fulfill these responsibilities; Shows: Some PGs were able to fulfil responsibilities without the support of their instructors. Half of the PGs were confident about their competencies. They pondered on ways to complete their responsibilities in a quality manner and to achieve academic goals they set priorities, understood the workload, communicated well and both took and accepted feedback.

Sr. No	Gender	N (Percentage %)
1	Males	31 (66)
2	Females	16 (34)
Professional Year		
1	1st year	17 (36.2)
2	2nd year	10 (21.3)
3	3rd year	12 (25.6)
4	4th year	8(17)
Specialty		
1	Psychiatry	18 (38.3)
2	Neurosurgery	6 (13)
3	General medicine	23 (49)
Medical experience		
1	Experienced	38 (81)
2	No previous experience	9 (19.1)
Age of Postgraduate Trainees		
1	Less than 25 years	7 (14.9)
2	More than 25 years	26(55.3)
3	More than 30 years	14 (30)
Mean Age 21.4SD±.658		

Table1: Displays Demographic Data

Sr. No	Domain	Items	Miller Level of Performance	N (%age)
1	1.Reliability Responsibility Accountability	1.1. Fulfill responsibilities in a quality manner	Shows how	23 (49)
3.a	3.Relation ship with others	3.5. Establish and maintain boundaries in the work and learning environment	Shows how	25 (53.2)
3b.		3.8. Work with a team to effect change and resolve conflict	Shows how	24 (51.1)
3c.	3	3.9. Manage emotions in difficult and stressful conditions	Shows	20 (42.6)
3d.		3.2. Being sensitive to the needs of the patient	Shows how	20 (42.6)
3e		3.3. Being sensitive to the needs of peer	Shows how	20 (42.6)
2a	2 lifelong learning and Adaptability	2.2. Initiate and implement learning goals	Shows how	21 (44.7)
2b	2.	2.4. Accept constructive feedback	Shows	17 (36.17)

Table-2: Demonstrates PG Performance Scores in Percentage

Senior PGs demonstrated good professional behavior with increasing years presenting highly statistically significant association with Domain 1; Demonstrates Reliability, Responsibility, Accountability and Domain 3. Other items of Domain 2 (Lifelong Learning and Adaptability) demonstrated significant results when associated with increasing professional year. Relationship with others is also presented in the bar chart (Fig-1)

a) Evaluate The Successfulness of Learning (p-0.001)
b) Accept Constructive Feedback (p-.0010
c) Fulfill Responsibilities in A Reliable Manner (p-.002)
d) Demonstrate Accountability (p-.002)
e) Incorporate Feedback to Change Behavior (p-.002)
f) Adopt Change (p- .003)
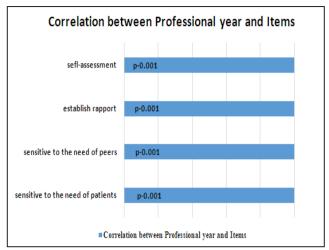g) Recognize Limitations and Seek Help (p-.003)

Fig-1: **The Bar Chart presents the Highly Statistically Significant Correlation between Professional Years and Items**

DISCUSSION

Highly statistically significant results (p-<.001) were observed when professional years were correlated with item no 4 of Domain 2 (Self-assessment to identify strengths and weaknesses), and items no 1, 2, and 3 of Domain 3 ("Establish Rapport, Sensitive to the need of Patients and Sensitive to the need of Peers," respectively) The highest percentage score (n=22, 46.8%) was obtained at item 1 of Domain 1 and item 5 of Domain 3. Secondly (n=20, 42.5%) item 8 and item 9 were second and third positions in this category (n=19, 40.4%) from Domain 3. Other items no 2 and 3 (Domain 3) and items no 4 (Domain2) attained 43% score. Whereas item no. 4 from Domain 2 gained a 40.5% score.

In the current study item 1 of Domain 1 "Fulfill responsibilities in quality manner" and item 5 of Domain 3 "Establishing and maintaining appropriate boundaries in work and learning situations" scored the highest percentage (n=22/47, 46.8%). In a contrary study conducted on pharmacy students, Eukel H[14] in his study recognizes all items of Domain 4 as crucial in the health profession, (84-91%), whereas in our study very low scores (38.1%) were obtained at item 1 of Domain-4[14]. Absence or deficiency of this domain may lead to ineligibility for the licensure certification. On the other hand, PGs of the current study were keen to perform their duties, aware of what the public, patients' families, and patients themselves expected. The healthcare system introduces professional development initiatives including short courses and seminars and others to remain updated with the need for the professionalization of medical education[15].

For PGs proper time management between work demands and learning requires commitment, good performance at work and being successful in their academics[16]. The same was reflected in our research work as PGs were aware of their boundaries and managed time between their work and learning facilitating their academic success (n=22/47, 47%). Teamwork is the crucial and detectable work design of this advanced era[17]. Most of the PGs of the current study (n=20/47, 42.5%) were cognizant that collaborative work enhances creativity, and innovation and assists in resolving unsolved issues and therefore they preferred teamwork. Individuals due to financial strains, academics, job, and family issues may experience interpersonal problems and stress on the other hand, individuals with good mental health are emotionally intelligent (EI), demonstrate constructive behavior process emotional information accurately, and gather social support[18]. Our PGs demonstrated good emotional control in stressful conditions (n=19/47, 40.4%).

In past decades there were deficient trans-disciplinary and evidence-based strategies for patient safety and insufficient risk management schemes in Pakistan. However, institutions as well as PGs have attempted to upgrade healthcare[19]. Participants in the current work were aware of patients' needs and alert to the needs of their peers. (n=18/47), 38.2% score for patient and peer need respectively).

Sequenced educational standards and assessment policies produce standards-based education. Constructive feedback is crucial for students because that stimulates, motivates and engages students in the required direction producing desired results in learning[20].Our research participants were cognizant of constructive feedback and utilized it properly (n=17/47, 36%).

This study was the first in its kind that was conducted to assess professionalism at PGs of three different specialties (General medicine, Psychiatry, Neurosurgery) in the most well reknowned and largest medical teaching institution of Balochistan, Pakistan. Though other researchers have assessed professional level but utilization of different tools makes it difficult to compare the results of the current study with others' work. There may be a bias in answering the questions as well as in data collection. In future, the different domains of physician competency should be developed and evaluated separately. Also, further studies should be carried out to implement this questionnaire (PAT) to a larger cohort of PGs to validate its use and for longitudinal assessment of the professionalism behaviors of PGs.

To attain the benefits of professionalism properly we should follow the following steps to confirm the effective integration of professional education into our curriculum:

Step I: Acquiesce the definition of professionalism that is acceptable to the institution.

Step II: Develop a curriculum frameworkby setting expectations.

Step III: Models for learning/teaching professionalism.

How to teach professionalism: The best way to teach professionalism is reflective work. Reflection before action and reflection on action are the forms of the Kolb's Learning Cycle (The Kolb'smodel points out two divergent methods of learning through acquaintance (concrete experience)' and 'perceptions.' These methods of acquaintance follow 'reflective observation' and 'active experimentation)[21]. Kolb's defines experiential learning theory as where reflectors construct knowledge through their experience and nurture reflective thinking[22].

How to measure professionalism:

1. Measure PG's professionalism by ***collecting data*** on their attendance, tasks completed and being submitted on time, regular and active participation in evaluation and research. After completing each task adequately on time, they should be awarded points/scores/grades based on their observed professional behavior[21].

2. ***Peer assessment process*** based on communication skills, task performance, and personal performance should be employed. In peer assessment colleagues' views on the strengths and weaknesses of their peers improves student professional behaviors.

360-degree professionalism appraisal for PGs during their training. A team assessment of behavior (TAB) consisted of a 3-point scale (pass, borderline, and fail) along with a comment box on four domains including Professional relationship with patients, Verbal communication skills, Teamwork, and Accessibility should be done. Each rater (doctor, co-supervisor, nurse) fills in the TAB and confidentially returns it to the student's clinical supervisor who summarizes a report to decide whether the student requires further training or his/her professionalism development in a particular domain of professionalism is adequate [21].

CONCLUSION

Professional identity formation is crucial for being a physician. PGs of the current study manifested core attributes of medical professionalism and demonstrated professional responsibilities. They built relationships of mutual understanding, presented quality work, and satisfied patients and their relatives. They were cognizant of the effectiveness of teamwork. They improved on constructive feedback and developed learning goals that heightened their academics and polished their skills. However, they demonstrated deficiency in other domains. To further professional skills a few recommendations listed above can be followed.

REFERENCES

1. Berger AS, Elizabeth N, Brooks SG, Ahmed WS, Ginsburg S. Teaching Professionalism in Postgraduate Medical Education: A Systematic Review Academic Medicine 2018. DOI: 10.1097/ACM.0000000000002987

2. Kelley KA, Stanke LD, Rabi SM, Kuba SE, Janke KK. Cross-validation of an instrument for measuring professionalism behaviors. American Journal of Pharmaceutical Education. 2011 November 10;75(9) Article 179.

3. Al-Eraky MM, Donkers J, Wajid G, van Merrienboer JJ. A Delphistudy of medical professionalism in Arabian countries: The Four-Gates model. Medical Teacher. 2014 April 1;36(sup1):8-16.

4. Byram JN. The professionalization of medical students: a longitudinal analysis of professional identity formation and professionalismperceptions in second and third-year medical students. Indiana University-Purdue University Indianapolis; 2017

5. Haque M, Zulkifli Z, Haque SZ, Kamal ZM, Salam A, Bhagat V et, al. Professionalism perspectives among medical students of a novel medical graduate school in Malaysia. Advances in Medical Education and Practice. 2016 July 25:407-422.

6. Al-Eraky MM, Chandratilake M. How medical professionalism isconceptualized in Arabian context: a validation study. Medical Teacher. 2012 April 1;34(sup1):90-95

7. Razzaq A. Measuring Professionalism in Postgraduate Paediatric Residents Using Professionalism Min-Evaluation Exercise (P-MEX). Pak Armed Forces Med J 2019; 69 (4): 784-88.

8. Naureen K, Zuberi RW, Aftab K, Fatima S. Assessment of Professionalism: Development and Psychometric Analysis of Professional Assessment Tool (PAT) in Pakistani context using Delphi technique. PJMS 2023; 39 (2): 330-7.

9. Sobani ZU, Mohyuddin MM, Saeed SA, Farooq F, Qaiser KN, GaniF et, al. Professionalism in medical students at a private medical college in Karachi, Pakistan. Journal of Pakistan Medical Association 2013;63(7):935

10. Latif MZ, Hussain I, Nizami R, Khan MA. Professionalism: professionalism, cultural context, and medical education. The ProfessionalMedical Journal. 2018 August 4;25(08):1134-1137

11. Gul M, Hassan H. The efficacy of multisource feedback tools to assess the clinician's professionalism. Khyber Medical University Journal.2017 July 1;9(3).

12. Butt MF. Approaches to building rapport with patients. ClinicalMedicine. 2021;21(6): 662.

13. Khan NF, Saeed M, Majid R. Assessing Professionalism among First year Medical Studentsthrough Professionalism Assessment Tool (PAT). J UCMD 2024; 3 (1): 34-7.

14. Eukel H, Frenzel J, Skoy E, Faure M. Longitudinal evaluation of student professionalism throughout the professional didactic curriculum of a pharmacy program. Currents in Pharmacy Teaching and Learning 2017; 11:011

15. Sethi A, Schofield S, McAleer S, Ajjawi R. The influence of postgraduate qualifications on the educational identity formation of healthcare professionals. Advances in Healthcare Sciences 2018; 23: 567-85.

16. Creed PA, Hood M, Bialocerkowski A, Machin MA, Brough P, Kim S, et al. Students managing work and study role boundaries: a person-centered approach. Frontier in Psychology 2023; 14. 1-11.

17. Khawam AM, DiDona T, Hernandaz BS. Effectiveness of Teamwork in the Workplace. International Journal of Sciences: Basic and Applied Research 2017; 32 (3): 267-86

18. Shuo Z, Xuyang D, Xin Z, Xeubin C, Jie H. The Relationship between Postgraduates' Emotional Intelligence and Well-Being: The Chain Mediating Effect of Social Support and Psychological Resilience. Frontiers in Psychology 2022; 13: Article 865025.

19. Khan AI, Alam A, Durrani M, Iqbal N, Gul R, Akhtar A et al. Perceptions of Postgraduate students about patient safety as part of the Curriculumat Undergraduate and Postgraduate level. J Med Sci 2022;30(2)147-150.

20. Aslam R, Khan N, Constructive feedback and Students' academic achievement: a theoretical framework. New Horizon 2020; 14 (2): 175-98

21. O'Sullivan H, Mook WV, Fewtrll R, Wass V. Integrating professionalism into the curriculum:AMEE Guide No. 61. Medical Teacher 2012; 34: e64–e77.

22. Kingkaew C, Theeramunkong T, Supnithi T, Chatpreecha P, Morita K, Tanaka K.A, et al. Learning Environment to Promote Awareness of the Experiential Learning Processes with Reflective Writing Support. Educ. Sci. 2023, 13, 64. https://doi.org/10.3390/educsci13010064

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