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ORIGINAL ARTICLE

Assessment of junior doctors attitude toward professionalism.

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ABSTRACT… Objective: To assess the attitudes of junior doctors toward key domains of medical professionalism in a tertiary care setting in Pakistan. **Study Design:** Quantitative, Cross-sectional study. **Setting:** Department of Community Medicine, Gomal Medical College, Dera Ismail Khan. **Period:** April to October 2025. **Methods:** A validated, self-administered questionnaire called the Learners Attitude of Medical Professionalism Scale (LAMPS) was used to gather data from 542 junior doctors (house officers and postgraduate trainees) using a non-probability convenience sampling technique. Five professional domains were evaluated by the instrument: duty/accountability, excellence/autonomy, honor/integrity, altruism, and respect for others. SPSS 27 trial version software was used for statistical analysis. Independent t-tests and descriptive statistics were used to assess the data. **Results:** The highest mean scores were observed for Duty/Accountability (3.734 ± 0.43) and Excellence/Autonomy (3.63 ± 0.51), while the lowest score was for Respect for Others (3.134 ± 0.42). Significant associations were found between gender and Duty/Accountability (p = 0.014) as well as Altruism (p = 0.014), and between marital status and Excellence/Autonomy (p = 0.015). Honor/Integrity showed moderate scores (3.19 ± 0.25) with no significant demographic associations. **Conclusion:** Junior doctors show strong procedural competency and knowledge-based excellence but marked deficits in the domains of integrity and respect. These findings highlight the need for integrated educational reforms and systemic changes to foster a culture of transparency and collaboration, which are essential for patient safety and a sustainable healthcare workforce.

Key words: Assessment, Attitudes, Junior Doctors, Medical Education, Medical Professionalism.

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INTRODUCTION

Professionalism is a vital component of high-quality healthcare delivery and a core competency in medical practice. Integrity, responsibility, respect for patients and coworkers, ethical behavior, and receptivity to societal demands are among the fundamental attitudes, values, and behaviors included in this.[1] Increasing emphasis on professionalism within medical education reflects recognition that technical competence alone is insufficient to ensure safe, compassionate, and patient-centered care.[2,3] Junior doctors constitute the frontline workforce of the healthcare system and are at a critical transitional stage between undergraduate education and independent clinical practice. During this period, professional values are consolidated and translated into clinical behavior.[1] Assessing and evaluating professionalism at this stage is therefore essential to determine how effectively medical training prepares doctors to meet the ethical, interpersonal, and social demands of clinical practice. Evidence indicates that lapses in professionalism, such as poor communication, inadequate accountability, moral conflicts, burnout-related disengagement, and reduced empathy, can emerge early in a doctors career and may persist if not addressed.[1,4-6] Patient safety, care quality, teamwork, and public confidence in the medical field can all be negatively impacted by these mistakes, especially in high-stress healthcare settings with demanding schedules, little oversight, and structural limitations.[4,5] Despite its significance, there remains a dearth of empirical evidence on junior doctors attitudes to professionalism in many low and middle-income settings, and the available assessments are often arbitrary. The creation of focused educational initiatives and legislative measures to improve professionalism in healthcare systems is hampered by this evidence gap. To address this gap, the present study aimed to assess junior doctors attitudes toward professionalism using the validated Professionalism Assessment Scale, labeled the

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Learners Attitude of Medical Professionalism Scale (LAMPS).[7-10] By using a standardized assessment tool, reliability was guaranteed, subjectivity was reduced, and results could be meaningfully interpreted in light of previous research. The study evaluated key domains of professionalism, including duty and accountability, altruism, honor and integrity, excellence, and respect for others.

METHODS

This cross-sectional, quantitative study was conducted at the Department of Community Medicine, Gomal Medical College, Dera Ismail Khan, Khyber Pakhtunkhwa (KPK), Pakistan. Junior doctors, including house officers and postgraduate trainees, who were actively providing direct patient care at associated tertiary-care hospitals in KPK during the data-collection period, made up the study population.

Participants were chosen based on their availability and desire to participate using a non-probability convenience sampling technique. The study included junior physicians who provided informed consent; those who declined consent or were on prolonged leave during the data collection period were excluded. With a 95% confidence level and a 5% margin of error, the sample size was determined using standard cross-sectional study calculation methods. A standardized, self-administered questionnaire with two sections was used to gather data. Age, gender, marital status, and the presence of a family health worker (an immediate family member working in a clinical or public health role) were among the demographic data collected in the first segment.

The Learners Attitude of Medical Professionalism Scale (LAMPS), a validated professionalism assessment tool, was used in the second section to assess attitudes across five basic domains of medical professionalism: duty and accountability, excellence and autonomy, honor and integrity, altruism, and respect for others.[9] The LAMPS instrument has been previously validated in medical education research and has demonstrated acceptable internal consistency, with a Cronbach's alpha of 0.79.[9] A pilot study was conducted with 35 young doctors who met the inclusion criteria to assess face validity, questionnaire item clarity, average completion time and the feasibility of the data collection process. Strong internal consistency was indicated by the pilot study's Cronbach's alpha of 0.75. The final analysis did not incorporate pilot data. Participants were contacted throughout their clinical rotations following ethical approval. Before participation, informed consent was acquired. A hybrid approach was used to gather data to boost response rates. Paper-based surveys with consent forms attached were distributed in person; the online version of the questionnaire was administered via a secure Google Form. IBM SPSS Statistics 27.0 was used to enter and analyze the data. A five-point Likert scale, ranging from strongly disagree (1) to strongly agree (5), was used to record responses to the professionalism scale. Before analysis, items with negative wording were reverse-scored. Professional and demographic characteristics were compiled using descriptive statistics and presented as percentages and frequencies. Mean ± standard deviation was used to express continuous variables, such as domain scores and overall professionalism scores. An independent-samples t-test was used for inferential statistical analysis to examine correlations between professionalism scores and demographic and professional characteristics. A statistically significant p-value was defined as < 0.05.

This study received ethical approval from Gomal Medical College's Institutional Review Board (240/GJMS/JC). Participation was completely voluntary, and all participants were informed of the study purpose and their right to discontinue participation at any time. Data confidentiality was maintained, and all information was used only for the research.

RESULTS

542 of the 618 junior doctors who were contacted submitted the questionnaire, resulting in an 87.7% response rate. There were 242 (45%) females and 298 (55%) males, with an average age of 27.43 ± 1.66 years. The majority of participants were single (83%, n=450), lived in cities (59%, n=319), and lacked a family medical professional (55.8%, n=302). Of the sample, 46% (n=252) were house officers, and the remaining 54% (n=290) were postgraduate trainees. The average length of clinical experience was 1.9 ± 1.1 years. The demographic

characteristics of the participants (n=542) are summarized in Table-I.

Table-II displays the Learners Attitude of Medical Professionalism Scale (LAMPS) item-specific attitudes toward professionalism.

Table I

Demographic characteristics of the participants (n = 542)

Variable	Category	N%
Gender	Male	298 (55%)
	Female	242 (45%)
Residence	Urban	319 (59%)
	Rural	223 (41%)
Marital Status	Married	92 (17%)
	Unmarried	450 (83%)
Family healthcare worker	Yes	240 (44.2%)
	No	302 (55.8%)

Duty/Accountability (3.73 ± 0.43) and Excellence/Autonomy (3.62 ± 0.51) had the highest mean scores among the five domains, followed by Altruism (3.62 ± 0.43). The Honor/Integrity domain obtained a moderate mean score of 3.19 ± 0.25. The Respect for Others domain had the lowest mean score (3.1346 ± 0.42), as seen in Table-III.

Independent-samples t-tests were used to examine statistical relationships between professionalism domain scores and demographic characteristics (Tables-IV–VIII).

Three domains showed significant differences: Altruism by gender (p =.014), Excellence/Autonomy by marital status (p =.015), and Duty/Accountability by gender (p =.014). On the other hand, neither Honor/Integrity nor Respect for Others showed any significant correlations with any demographic feature, including gender, place of residence, marital status, or family healthcare worker.

Table II

Mean Scores of Individual Statements of the LAMPS

	Mean ± SD
Duty/Accountability	
➢ Admits wrong diagnosis before a patient	2.67 ± 1.138
➢ Leaves before handing over patients to the next colleague on duty	4.13 ± .619
➢ Actively participates in orientation for new residents	3.70 ± .952
➢ Encourages patients to contribute to decision-making	3.72 ± .987
➢ Discusses patients' cases with colleagues in a crowded elevator	4.01 ± .678
➢ Calls insurance company to follow up on a valid patient claim	3.19 ± .986
➢ Declines an invitation to an infection control committee meeting	3.97 ± .608
Excellence/Autonomy	
➢ Reflects on clinical cases to discover his/her unmet learning needs	3.49 ± .918
➢ Attends patient's questions to explain their illness in a busy clinic	3.50 ± .997
➢ Searches for the best evidence available in-patient care	3.85 ± .884
➢ Collaborates with colleagues to draft new hospital guidelines	3.71 ± .974
➢ Invests part of his/her income in attending medical conferences	3.29 ± 1.041
➢ Makes a deal with a pharma company to sponsor his/her conference	3.89 ± .667
Honor/Integrity	
➢ Gives wrong information to a patient to protect a colleague	3.95 ± .668
➢ Issues a false sick leave for a kid of a friend to study home	4.01 ± .636
➢ Changes actual data in his/her research based on supervisor's advice	2.02 ± .613
➢ Hides information about fatal diagnosis to avoid patient disturbance	3.97 ± .618
➢ Introduces medical students as doctors to patients	1.99 ± .587
Altruism	
➢ Declines the sport club's response to an emergency call	4.10 ±1.053
➢ Frequently skips clinical teaching to prepare for a conference	3.75 ±.555
➢ Cancels a family appointment for an urgent patient's need	3.82 ±.916
➢ Does not witness against the employer hospital in favor of a patient before the court	3.85 ±.663
➢ Turns down a home visit to a disabled patient due to the busy clinic	3.86 ±.527
Respect for others	
➢ Respects the roles of all members of the healthcare team in the department	3.84 ±1.015
➢ Considers patient's background when explaining their clinical illness	3.55 ± 1.093
➢ Keeps patients waiting in his/her clinic without apology	1.97 ±.665
➢ Gives priority to some patients based on social status or nationality	1.86 ±.691
➢ Criticizes a prescription written by a colleague in front of patients	2.96 ±1.281

Furthermore, there was no discernible correlation between any professionalism domain and living in an urban or rural area or having a family healthcare provider.

TABLE-III

Domain-wise mean scores of the LAMPS

Domains	No of Items	Mean ± SD
Duty/Accountability	7	3.7348 ± .42603
Excellence/Autonomy	6	3.6319 ± .50761
Honor/Integrity	5	3.1877 ± .24952
Altruism	5	3.6248 ± 0.434
Respect for others	5	3.1346 ± .42097

Table-IV

Association of LAMPS Domain Duty/Accountability score with demographics

Domain	Variable	Category	Mean SD	P-Value
Duty/ Accountability	Gender	Male Female	3.665± .439 3.575 ±.404	.014
	Residence	Urban Rural	3.618 ±.429 3.633 ±.421	.681
	Marital Status	Married Unmarried	3.703 ±.403 3.609 ±.429	.054
	Family Healthcare Worker	Yes No	3.630 ±.435 3.620 ± .419	.777

Table-V

Association of LAMPS Domain Excellence/Autonomy score with demographics

Domain	Variable	Category	Mean SD	P-Value
Excellence/ Autonomy	Gender	Male Female	3.653 ± .515 3.583 ± .496	.107
	Residence	Urban Rural	3.614 ± .465 3.633 ± .565	.683
	Marital Status	Married Unmarried	3.739 ± .479 3.598 ± .510	.015
	Family Healthcare Worker	Yes No	3.645 ± .185 3.603 ± .524	.337

Table-VI

Association of LAMPS Domain Honor/Integrity score with demographics

Domain	Variable	Category	Mean SD	P-Value
Honor/Integrity	Gender	Male Female	3.187 ± .258 3.187 ± .238	.981
	Residence	Urban Rural	3.189 ± .243 3.184 ± .259	.806
	Marital Status	Married Unmarried	3.217 ± .259 3.181 ± .247	.211
	Family Healthcare Worker	Yes No	3.178 ± .250 3.195 ± .249	.443

Table VII

Association of LAMPS Domain Altruism score with demographics

Domain	Variable	Category	Mean SD	P-Value
Altruism	Gender	Male Female	3.665 ± .434 3.575 ± .404	.014
	Residence	Urban Rural	3.518 ± .429 3.533 ± .421	.681
	Marital Status	Married Unmarried	3.703± .403 3.619 ±.429	.054
	Family Healthcare Worker	Yes No	3.640 ±.435 3.520 ±.419	.777

Table VIII

Association of LAMPS Domain Respect for others score with demographics

Domain	Variable	Category	Mean SD	P-Value
Respect for others	Gender	Male Female	3.137 ±.409 3.130 ± .434	.854
	Residence	Urban Rural	3.057 ± .403 3.100 ± .444	.116
	Marital Status	Married Unmarried	3.037 ± .443 3.034 ± .416	.945
	Family Healthcare Worker	Yes No	3.138 ± .448 3.131 ± .398	.864

DISCUSSION

The perspectives of junior doctors toward medical professionalism were investigated in this study using a standardized scale. Additionally, it clarifies the professional domains in tertiary care settings, emphasizing their strength and weaknesses. Overall, the findings demonstrate that important interpersonal and ethical components require focused attention, even though the core responsibility-based and procedural aspects of professionalism are well-established. The areas of Duty/Accountability and Excellence/Autonomy had the highest mean scores, suggesting that young doctors have a strong sense of accountability for patient care, job fulfillment, and professional growth. Previous research has shown similar results, with accountability and excellence continually emerging as the most important professionalism domains.[11-13] Demonstrating the focus on quantifiable skills during medical education at the undergraduate and graduate levels. These findings reveal that structured clinical settings successfully support knowledge-based performance and procedural duties. On the other hand, the Honor/Integrity domain showed relatively low scores. This conclusion contrasts with many studies that found integrity-related behaviors to be among the most important aspects of professionalism.[13,14] This study's lower results may be due to challenges in hierarchical clinical systems, where junior doctors may be reluctant to admit errors or ethical issues. In such situations, integrity, a basic professional virtue, may be jeopardized, which can also hamper transparency. The most concerning finding was that the Respect for Others category had the lowest mean score. In contrast, respect for patients and healthcare colleagues is frequently cited as a highly regarded professional quality in international literature.[15,16] The 'Respect for Others' domain had an especially low score, which is the study most concerning finding. Although excessive workload and rigid hierarchies are also significant, the systemic undervaluation of soft skills in clinical training paradigms in our environment, where technical competence is frequently valued over communication, empathy, and interprofessional collaboration, may be a contributing factor.[17] High workloads, stress at work, and inflexible professional hierarchies can all have a negative impact on interpersonal relationships and interprofessional collaboration, which can lead to lower scores in this domain.[15] Teamwork, the satisfaction of patients, and overall treatment quality are all significantly

impacted by deficiencies in this area. Gender-based analysis revealed that female participants performed significantly better in the Duty/Accountability and Altruism areas. These findings are consistent with past studies that discovered female physicians to have more empathic and patient-centered approaches.[15,16] Married participants also scored higher on Excellence/Autonomy, which may indicate greater stability, maturity, or professional commitment.[18] The lack of a significant correlation between professionalism scores and personal background characteristics, such as residence and having a family healthcare worker, indicates that institutional culture and the clinical training environment may have a greater impact on forming professional attitudes than these demographic traits. There are a few limits to be aware of. It is impossible to assess how opinions have evolved over training years because the cross-sectional methodology simply documents attitudes at a specific point in time. The results' applicability is limited by non-probability convenience sampling. Furthermore, relying only on self-reported data may introduce social desirability bias, and actual professional activity was not objectively assessed. Despite these shortcomings, the findings emphasize the need for targeted institutional and educational interventions. Integrity, moral judgment, and respect for others are essential elements of long-term professionalism training that enhance the curriculum. Faculty role modeling and supportive clinical settings are equally important for reinforcing professional principles and transforming attitudes into consistent professional action.

CONCLUSION

Junior doctors show strong procedural competency and knowledge-based excellence but marked deficits in the domains of integrity and respect. These findings highlight the need for integrated educational reforms and systemic changes to foster a culture of transparency and collaboration, which are essential for patient safety and a sustainable healthcare workforce.

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CONFLICT OF INTEREST

The authors declare no conflict of interest.

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AUTHORSHIP AND CONTRIBUTION DECLARATION	
1	**Adnan Khan:** Conceptualize, initial draft.
2	**Waris Khan:** Data analysis.
3	**Israr Ul Haq:** Data entry.
4	**Nasir Hussain:** Data collection.
5	**Ubaid Ullah:** Revisions.
6	**Nargis Noman:** Data interpretation.