Original Article

Assessment of Medical Professionalism in House Officers using Professionalism Assessment Tool (PAT)

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Author's Contribution

[1,3] *Conception of study*
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Abstract

Background: Professionalism is influenced by cultural, religious, and social differences. It must be assessed according to one's setup. To the best of our knowledge, no method of assessing professionalism specific to Pakistan currently exists. Despite its importance in the healthcare setup of Pakistan, researches assessing medical professionalism in Pakistan are limited.

Objectives: The objectives of this study are to determine the reliability of the Professionalism Assessment Tool (PAT) in house officers and to assess the status of medical professionalism among house officers .

Materials and Method: A cross-sectional study was conducted among House officers working in the allied hospitals of Rawalpindi Medical University from June 2022 to October 2022. After obtaining written informed consent, each participant was evaluated using the Professionalism Assessment Tool. Data was entered and analysed using SPSS version 25.

Results: Total of 300 house officers were included in our study, out of which 62.7%of participants were females and more than half (51.7%) belonged to 25-27 years of age. Reliability was assessed by calculating Cronbach's Alpha. Results depicted that all subscales reached reliability score of 0.7, with Cronbach's Alpha value of overall PAT being 0.941, depicting excellent reliability. 45.7% had satisfactory professional behaviour (PAT Score= 48-71); 48.7% scored above 72, indicating good professional behaviour.

Conclusion: The study found the Professionalism Assessment Tool (PAT) to be a reliable construct for assessing medical professionalism. Further studies can be conducted to track the professionalism of medical students, postgraduate residents and doctors .

Keywords: Professionalism, Medical Ethics, Validation Study.

Introduction

Medical Ethics play a vital role in the ideal conduct of a physician.[1, 2] However, today there exists a crisis of professionalism in medical practice.[3] Medical professionalism has been harbour a global interest in recent years.[4] Professionalism is a multi-dimensional concept, the most widely accepted attributes of which include altruism, integrity, accountability, duty and respect for others[5, 6]. It has been defined by the American Board of Medical Specialties (ABMS) as "a belief system in which group members declare to each other and the public the shared competency standards and ethical values they promise to uphold."[3, 7, 8] In other words, medical professionalism is a set of values, responsibilities, commitments, attributes and attitudes which the public expects from a doctor.[9]

The importance of medical professionalism can be gauged by the fact that it is a skill assessed in most accreditation boards. Accreditation Council of Graduate Medical Education (ACGME) in the US lists professionalism as a core competency.[10] Similarly, the CanMEDS framework for physician competency, developed by The Royal College of Physicians, includes professionalism as one of its seven competencies.[10,11] The role of the physician as a professional encompasses the society's expectations of physicians. These include clinical competence, promotion of the public good, adherence to ethical standards and values such as integrity, honesty, altruism, humility, respect for diversity, and transparency with respect to potential conflicts of interest. Moreover, The General Medical Council (GMC), has published "Good medical practice" as guidance and provides regularly updated ethical codes as a comprehensive overview of a medical practitioner's professional behaviour and obligations.[12]It can be seen therefore, that for a medical practitioner today, medical knowledge alone cannot suffice; an equally, perhaps even more important constituent of a good physician is professionalism.

Professionalism is a subjective term, and its understanding remains somewhat elusive and abstract. The diversity in its perception owes partly to social, cultural and religious considerations. Therefore, there is a need to tailor the assessment of professionalism according to one's setup rather than a single, universally standardized method of assessment.[10]

Several methods have been devised to assess professionalism. The American Board of Internal Medicine (ABIM) uses the Mini-Clinical Evaluation Exercise for Trainees (Mini-CEX), which is an observational assessment of doctor-patient interaction.[13]A similar tool, the P-MEX, is also widely used to assess different directly observable items of medical professionalism. These items or domains include doctor-patient relationship, reflective skills, time management, and inter-professional relationship skills.[5, 14]

Self-reported questionnaires to gauge medical professionalism are also in use. These include the Barry challenges to professionalism questionnaire which is a cognitive test based on six scenarios where participants must select a best response to the given scenario.[15] In the Arabian context, the Learner's Attitude on Medical Professionalism Scale (LAMPS), another self-report measure has

been developed and validated.[16]Additionally, the ABIM Scale to Measure Professional Attitudes and Behaviours in Medical Education (SMPABME) obtains the respondents' opinions about professionalism in their educational environment i.e. the responder comments on the behaviours of others instead of themselves, which can provide information about sensitive areas with regards to professionalism. Another construct, the Wake Forest Physician Trust Scale obtains feedback from patients regarding the professionalism and patient care skills of their healthcare provider.[21] Perhaps the most effective evaluation can be done using the 360 degree assessment, which involves evaluation by different types of evaluators who interact with those being assessed during the course of work or education and ultimately provides different perspectives on the medical practitioner's abilities.[17, 18]

There have been several initiatives to cultivate professionalism in Pakistan. These include certifications in ethics and communication skills through capacity building short courses introduced by The College of Physicians and Surgeons of Pakistan (CPSP). Furthermore, recognizing the need of inculcating medical ethics in future doctors, the University of Health Sciences (UHS) introduced the subject of Behavioral Sciences at the undergraduate level.[4,9] The Pakistan Medical and Dental Council (PMDC) suggests medical colleges to incorporate medical ethics in their undergraduate programs, however, formal assessment of professional behaviour has proven to be difficult.[19]Agha Khan University is one of the pioneers in introducing the Student Continuous Assessment Form (SCAF) as a method to longitudinally track the progress of students with an emphasis on professionalism.[20] A number of studies conducted in Pakistan have assessed professionalism by utilizing the LAMPS tool and the Barry questionnaire.[4,9,21-23]

As previously mentioned, professionalism is a subjective term, influenced by cultural, religious, and social differences. There exists a need for context-specific assessment methods that are culturally appropriate.[3, 24] However, as of yet, no standardized method of assessing professionalism exists in Pakistan. This research aims to assess the status of professionalism in House Officers and to validate the Professionalism Assessment Tool (PAT). Therefore, objectives of this study are to determine the reliability of the Professionalism Assessment Tool (PAT) in house officers and to assess the status of medical professionalism among house officers

Materials and Methods

The descriptive cross-sectional was conducted in house officers working in the affiliated hospitals of Rawalpindi Medical University. Using Nunnally's, the ratio of eight subjects per item was selected, as our preliminary tool has 48 items so 48x 6=288 sample size was estimated for scale validation., however, we used a sample of 300 to enhance the generalizability of the results. Participants were recruited via non-probability convenience sampling. House officers with any psychiatric or medical illness were excluded from the study. After obtaining the participant's informed consent, data was collected by observing the house officer and evaluating their professional behaviour using the Professionalism Assessment Tool (PAT). The Professionalism Assessment Tool is a novel 16-item scale to assess professionalism in healthcare practitioners in the Pakistani context. The items are rated on a 7-point Likert scale, ranging from 0 (Not observed) to 6 (Always). The scale comprises of 4 subscales,

encompassing the domains of *Ethics and Personal Characteristics (EC), Effective Communication and Doctor-Patient Relationship (EP), Respect and Support for others (RS)* and lastly *Collegiality (C).* This is followed by a Global Rating that is independent of the scores of the subscales, ranging from 0 (unacceptable), to 6 (Excellent). The scale is discussed in detail below The Professionalism Assessment Tool is a novel 16-item scale to assess professionalism in healthcare practitioners in the Pakistani context. The items are rated on a 7-point Likert scale, ranging from 0 (Not observed) to 6 (Always). The scale comprises of 4 subscales, encompassing the domains of *Ethics and Personal Characteristics (EC), Effective Communication and Doctor-Patient Relationship (EP), Respect and Support for others (RS)* and lastly *Collegiality (C).* This is followed by a Global Rating that is independent of the scores of the subscales, ranging from 0 (unacceptable), to 6 (Excellent). Data was entered into and analysed by SPSS ver. 25. Descriptive statistics (comprising of mean, standard deviation and frequency) were applied. The reliability of the scale was assessed by calculating Cronbach's Alpha individually for each subscale and for the tool as a whole. The influence of sociodemographic parameters with the different subscales of PAT was measured by applying independent sample t-test.

Results

The sociodemographic data is shown in Table 1. The primary objective of this study was to assess the reliability of the Professionalism Assessment Tool. Reliability was assessed by calculating the Cronbach's Alpha value for each sub scale (Table II and III). Results depict that all sub scales reached 0.7, the standard threshold for acceptable internal consistency, with the Cronbach's Alpha value of PAT being 0.941, depicting excellent reliability. Moreover, the subscales of PAT were found to be moderately, positive and significantly correlated with the global rating, with Pearson's co-efficient ranging from 0.538 to 0.634. The detailed Item analysis of Professionalism Assessment Tool and values of Cronbach's alpha after deleting item is shown in Table III

Table-I: Demographic details of the study population

riable	**:quency**	**rcent**
	Age	
22-24	138	46.0%
25-27	155	51.7%
28-30	6	2.0%
31 and above	1	0.3%
	Gender	
Male	112	37.3%
Female	188	62.7%
	Residence	
Hostelites	172	57.3%
Day scholars	128	42.7%

Marital Status		
Married	46	15.3%
Unmarried	254	84.7%
Department		
Surgery & Allied	124	41.3%
Medicine & Allied	108	36%
Gynaecology & Obstetrics	22	7.3%
Paediatrics	46	15.3%

Table-II Reliability of the subscales

Subscale	Cronbach's alpha	Reliability
Subscale 1	0.904	Excellent
Subscale 2	0.848	Good
Subscale 3	0.764	Acceptable
Subscale 4	0.722	Acceptable

Table-III Professionalism Assessment Tool: Item Analysis

Item	Subscale/ Item Mean (SD)	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Subscale/ Item-Total Correlation	Cronbach's Alpha if Item Deleted
Subscale 1: ***Ethics and Personal Characteristics***	40.02 (8.983)			0.634	
Respects patient's autonomy	4.58 (1.209)	35.44	66.060	0.670	0.894
Maintains patient confidentiality	4.69 (1.219)	35.33	65.487	0.695	0.892
Supports equitable distribution of healthcare resources	4.56 (1.280)	35.46	65.286	0.666	0.894
Demonstrates Honesty	4.56 (1.188)	35.46	66.490	0.661	0.894
Completes task with accountability	4.48 (1.250)	35.54	64.376	0.736	0.889
Participates in activities aimed at attaining excellence in medical education	4.21 (1.516)	35.81	63.751	0.605	0.899
Keep knowledge and skills up to date	4.39 (1.399)	35.63	62.602	0.729	0.889
Admits error and omission	4.26 (1.460)	35.76	63.332	0.656	0.895

Responds positively to constructive criticism	4.30 (1.389)	35.72	63.358	0.697	0.891
Subscale 2: ***Effective Communication and Doctor-Patient Relationship***	13.92 (9.863)			0.616	
Communicates effectively with patients & their families	4.61 (1.176)	9.31	4.782	0.538	0.785
Demonstrates advocacy for patient safety	4.61 (1.187)	9.31	4.795	0.621	0.799
Builds trust with patients (patient –doctor relationship)	4.70 (1.223)	9.22	4.574	0.725	0.779
Subscale 3: ***Respects and Supports others***	9.05 (2.347)			0.538	
Seeks and endorses diverse perspectives of team members to foster creative problem solving	4.53 (1.327)	4.52	1.642	0.619	-
Supports academic excellence in others	4.52 (1.281)	4.53	1.762	0.619	-
Subscale 4: ***Collegiality***	9.33 (2.228)			0.621	
Is responsive to community needs	4.50 (1.367)	4.83	1.303	0.574	.
Shows respect to peers, physicians and other health professionals	4.83 (1.142)	4.50	1.870	0.574	.

Using a cut-off value of 48 to distinguish between subpar and acceptable professionalism, we found that only 5.7% had poor professional behaviour, 45.7% had satisfactory professional behaviour (PAT Score= 48-71) whereas 48.7% had a score above 72, indicating good professional behaviour.

Comparison of professionalism sores according to gender and departments are shown in Figure 1. House officers currently working in Medicine department were found to score higher than their surgical peers in the Respects and Supports Others and Collegiality domains .

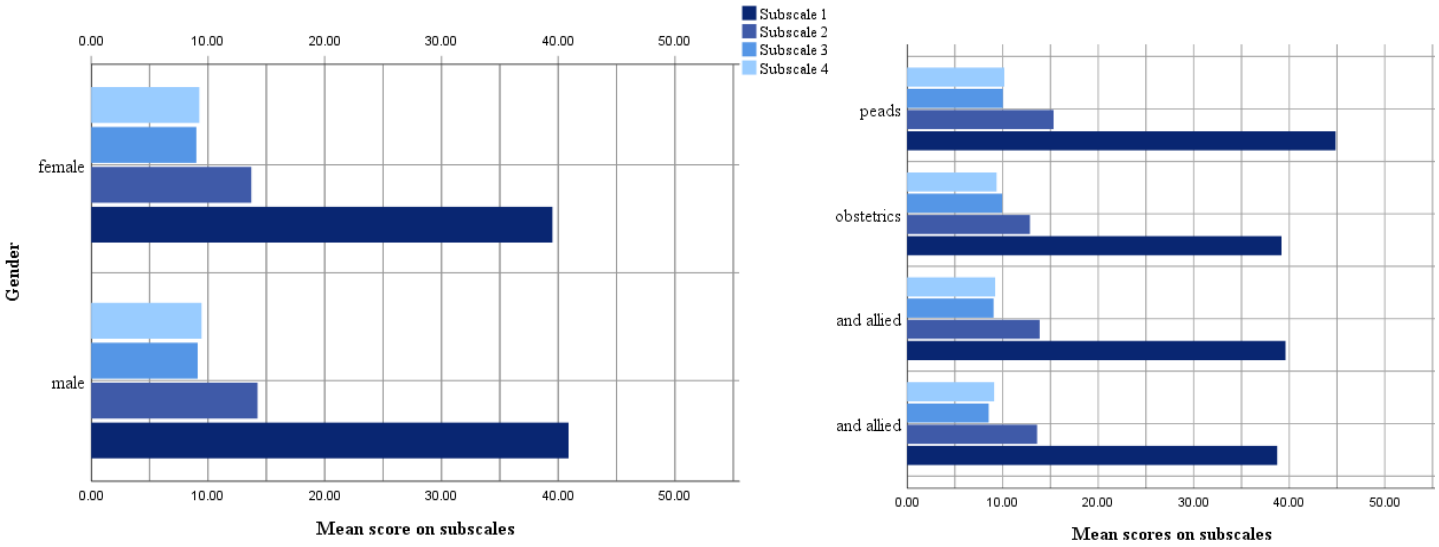

Figure 1: Comparison of mean professionalism scores among (a) genders (b) departments

Discussion

The Physician's Charter on medical professionalism aptly states professionalism to be 'the basis of medicine's contract with society'.[7]Given the varying perception of professionalism under societal influence, the Professionalism Assessment Tool (PAT) is a measure constructed with the intent to assess medical professionalism in Pakistani healthcare setup. The current study found PAT to be a reliable construct, with a Cronbach's Alpha of 0.941. The internal consistency of the subscales ranged from 0.722 to 0.904. The PAT covers several generally accepted domains of professionalism. The three fundamental principles of medical professionalism as stated in the Physician's Charter on medical professionalism are patient welfare, patient autonomy and social justice, which are aspects covered in PAT.[7, 25]

In contrast to prior studies assessing professionalism in Pakistan, our study found house officers to be adequately equipped with this skill.

The first subscale covered ethics and personal characteristics of the healthcare professional. Items included in this subscale are attributes widely recognized in other tools assessing professionalism, such as patient autonomy, honesty, excellence, accountability, equity and confidentiality[,26,27]. The reliability of this subscale is excellent, with a Cronbach's Alpha of 0.904. Table-III shows that removing any item from this subscale would result in a decrease of the Cronbach's Alpha value, therefore it is clear that each item contributes significantly to the scale and should not be removed.

The second subscale assessed effective communication and doctor-patient relationship. Items in this subscale are also widely recognized as domains of professionalism i.e. communication, patient trust, and patient safety. The Cronbach's alpha value for this subscale came out to be 0.848, depicting good internal consistency. As illustrated in Table 3, the Cronbach's Alpha value of subscale 2 markedly drops if any item is deleted, therefore, implying that each item contributes significantly to the scale and should not be

removed. A previous study found surgical residents to rate themselves higher in their ability to communicate treatment options with their patients as compared to non-surgical residents, possibly owing to more concrete treatment options in surgical specialities.[28] However, our study found no observable difference in this aspect among departments.

The third subscale covers respect and support for others. The internal reliability of this subscale was acceptable, with a Cronbach's Alpha of 0.764. The items in this subscale assess the communication of the physician with team members. This is an aspect that has been recognized as a domain of professionalism demanding additional attention.[29]House officers currently working in Medicine department were found to score higher than their surgical peers in this subscale. This is consistent with the findings of a study conducted in Iran, which found that non-surgical residents scored higher in professionalism domains compared to surgical residents. The stressful working environment of operating room may account for this discrepancy.[30]

The fourth subscale covers collegiality, which is an item that has been suggested to be incorporated into tools assessing professionalism, in order to attain a "more comprehensive and culturally pertinent assessment of the medical professionalism", particularly in the Asian context.[31] It includes the physician's respect for peers and reception to community needs. Other tools recognize elements of this subscale as inter-personal relationships, respectful relations with co-workers and others.[14, 24, 32]The reliability of this subscale came out to be 0.722, which is acceptable.

Although direct observation instruments assess real-time behaviour and are more reliable than self-report measures, they face the drawback of the Hawthorne effect i.e. the behaviour of the participant may change under an observer's eye.[33] This could create bias and difficulty in documenting the physician's natural behaviour. An indirect approach would be preferred, where the assessed physician would be unaware of being observed, however this was not possible due to the necessity of informed consent.

Moreover, due to limited time, the participants of the study could not be appraised adequately as certain items of the PAT are difficult to assess in a single setting and require more time to be appropriately evaluated.

Given the arbitrary nature of professional behaviour under the influence of circumstance and observation, we recommend that the PAT be used longitudinally to get a consistent idea of a physician's professionalism. Moreover, a more representative picture can be obtained by involving multiple assessors, including patients, peers, seniors, and other members of the healthcare team i.e. implementing a 360-degree evaluation utilizing PAT.[18]

Conclusion

The Professionalism Assessment Tool (PAT) is a valid and reliable construct for assessing medical professionalism. Further studies to determine its usability in undergraduate settings, preferably as a means to longitudinally track the professionalism of medical students, as well as doctors can be conducted.

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