



Research Article

# Analysis of “Assessment Tools” and Development of a New Tool for Professionalism Assessment among Phase I Undergraduate Students: A Cross-Sectional Study at a Tertiary Care Teaching Hospital of Chhattisgarh

**Dr. Ratna Agrawal<sup>1</sup>, Dr. Swanand Pathak<sup>2</sup>, Dr. Prashant Nanwani<sup>3</sup>, Dr. Saurabh Kumar Sahu<sup>4\*</sup>, Dr. Preetam Raj Kurrey<sup>5</sup>, Dr. Vinamrata Shukla<sup>6</sup>**

<sup>1</sup>Assistant Professor, Department of Pharmacology, Chandulal Chandrakar Memorial Government Medical College, Durg, Chhattisgarh, India. , Email: ratna.arang@gmail.com, Contact number: 91-87702-33623

<sup>2</sup>Professor, Department of Pharmacology, Jawaharlal Nehru Medical College, Sawangi, Wardha, Maharashtra, India. Email: swanandspathak@gmail.com, Contact number: 91-94205-29850

<sup>3</sup>Assistant Professor, Department of Otorhinolaryngology, Chandulal Chandrakar Memorial Government Medical College, Durg, Chhattisgarh, India. Email: prashantnanwani@yahoo.in , Contact number: 91-62648-47575

<sup>4\*</sup>Assistant Professor, Department of Community Medicine, Chandulal Chandrakar Memorial Government Medical College, Durg, Chhattisgarh, India., Email: sahu.saurabh000@gmail.com, Contact number: 91-76004-42406

<sup>5</sup>Assistant Professor, Department of Ophthalmology, Chandulal Chandrakar Memorial Government Medical College, Durg, Chhattisgarh, India. , Email: preetamraj@gmail.com , Contact number: 91-98279-33021

<sup>6</sup>Assistant Professor, Department of Ophthalmology, Chandulal Chandrakar Memorial Government Medical College, Durg, Chhattisgarh, India. Email: vinamratashukla08@gmail.com Contact number: 91-83058-40234

## ABSTRACT

**Background and Objective:** Graduate Medical Education Regulation (GMER) 2024 has enumerated professionalism as one of the important roles to be achieved by Indian Medical Graduates. And for achieving this, professionalism must be taught and assessed by appropriate means. But unfortunately, as it comes under the affective domain, proper assessment of it is difficult by traditional methods. Although some tools are available for assessing professionalism but they are not feasible according to Indian context. So, the objective of the study is to analyze different existing professionalism assessment tools and to develop a new tool for measuring the level of professionalism among phase I undergraduate students.

**Methods:** This cross sectional study was conducted from September 2023 to February 2024 on 30 students including 30 faculties after obtaining informed consent and approval from Institutional Ethics Committee. Out of many existing professionalism assessment tools, three tools were selected and analyzed and a new scale was developed which was then tested on 30 undergraduate students for reliability testing.

**Results:** The newly developed 15 item professionalism assessment scale showed an alpha coefficient of 0.942 upon testing on 30 first year undergraduate students. The new scale can be rated on Likert scale ranging from 0 to 3, is concise, easy to administer and to assign score.

**Conclusions:** The newly developed 15 items professionalism assessment scale may play pivotal role in professionalism assessment and may be proven as an important roadmap in achieving the goal of IMG.

**Keywords :** Assessment tools, Professionalism, Professionalism assessment scale, Undergraduate students

\*Author for correspondence: E mail: sahu.saurabh000@gmail.com

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## INTRODUCTION

Professionalism is one of the important roles to be achieved by Indian Medical Graduates (IMG), is been included under new Competency Based Medical Education (CBME) since 2019 under AETCOM module. But, what is taught is only for very negligible duration and is not even assessed in any formative or summative examinations. Even the AETCOM module mentioned that assessment of professionalism is not required. But as said, what is not assessed is not been read or learnt by the students, then how come the students will be able to achieve the goal of becoming competent IMGs?<sup>1</sup> Further as we know that assessment drives learning and if conducted by reliable methods lead to change in behavior of students.<sup>1</sup> So, for fulfilling the goal of IMG, professionalism must be assessed by proper means.

According to the American Board of Medical Specialties (ABMS), “Professionalism is a belief system in which group members (‘professionals’) declare (‘profess’) to each other and to the public, the shared competency standards and ethical values they uphold in their work and what patients can expect from these professionals.”<sup>2, 3</sup> The American Board of Internal Medicine (ABIM) recognizes 6 broad elements of professionalism (altruism, accountability, excellence, duty, honor and integrity and respect for others).<sup>3, 4</sup>

All this mentioned elements of professionalism come under affective domain, the proper assessment of it by traditional method is difficult, although some scales are there for assessment of professionalism like (1) Behavioral Professionalism Assessment Form - Experiential (BPAAE); (2) Professional Behavior Rating Scale (PBRAS); (3) Professionalism Assessment Tool (PAT) etc.<sup>5-7</sup> But all these tools/scales have been designed outside India; their feasibility in Indian context is not proven. So the present study aimed to analyze and compare the existing tools/scales of professionalism assessment and framing of a new assessment tool which will be feasible in Indian context.

**Aim:** To analyze different existing professionalism assessment tools and to develop a new tool for measuring the level of professionalism among phase I undergraduate students.

## METHODS

This cross sectional study was conducted on 30 first year MBBS students and including 30 faculties (assistant professor and above), (those who were willing to participate and provided consent) of a tertiary care teaching hospital of Chhattisgarh. The

period of study was from September 2023 to February 2024 after obtaining approval from Institutional Ethics Committee (EC/NEW/INST/2023/3617/RP/03).

As Professionalism comes under affective domain, many tools with multiple items are available for different specialties, but none was found feasible for Indian setting as well as for MBBS undergraduate curriculum. So, out of existing tools, three professionalism assessment questionnaires/tools/scales (Professionalism assessment tool, Behavioral professionalism assessment form – experiential and Professional Behavior Rating Scale) were selected and distributed among faculties. The faculties were asked to read the scales/tools/questionnaire carefully and critically analyze the same for the need of items in Indian context. One week duration was provided to the faculties to complete the task. At the end of one week the responses were collected from them with feedback. Again after 15 days, the same faculties were given same 3 questionnaires and procedure was repeated for test-retest reliability. After one week again the response from all the faculties were collected with feedback. Based on their feedback, redundancies from all the three tools/scales were removed and a new questionnaire was framed incorporating the faculties’ suggestions. Then this newly developed questionnaire was tested on 30 randomly selected undergraduate students and the score was analyzed using SPSS version 22.0 by calculating Cronbach’s alpha for reliability testing.

## OBSERVATION AND RESULTS

Three professionalism assessment questionnaires/tools/scales (PAT, BPAAE, PBRAS) were given to 30 faculties for critically analyzing it and redundancy removal; keeping in mind the 6 broad elements of professionalism (altruism, accountability, excellence, duty, honour and integrity and respect for others). After getting the responses from faculties and removing all the repetitions and redundancies, a new scale with 15 items has been developed (Table 1). The new scale (Professionalism Assessment Scale) having 15 items which was rated on a Likert scale from 0 to 3. 0 stands for below expectations, 1 is for average, 2 for meets expectations and 3 are for exceeds expectations. The new scale was applied and tested on 30 randomly selected first year undergraduate students for reliability testing using Cronbach alpha by SPSS version 22.0. The reliability analysis calculated Cronbach alpha value of 0.942 of 15 item scale which is considered as with high internal validity.

**Table 1: Newly Developed Professionalism Assessment Scale**

Sl.no.	Items	Ratings
1	Wears appropriate clothes, adheres to dress code, maintains personal health and hygiene acceptable to practice setting	0 1 2 3
2	Punctual, attends classes regularly on time, uses time efficiently, allocates and utilizes appropriate amount of time to fulfill responsibilities	0 1 2 3
3	Communicates clearly, uses appropriate vocabulary	0 1 2 3
4	Communicates using appropriate body language i.e. with appropriate gestures that enhance formal and informal communication	0 1 2 3
5	Respectful, demonstrate regard for patients, seniors, colleagues and property	0 1 2 3
6	Produces quality work, complete the tasks and assignments timely and meets objectives	0 1 2 3
7	Behaves in an ethical manner; acts in accord with the profession and/or practice code of ethics	0 1 2 3
8	Is an active learner, seeks knowledge; asks questions; searches for information, takes responsibility for own learning	0 1 2 3
9	Empathic, understands other's perspectives	0 1 2 3
10	Demonstrates confidence, acts and communicates with modesty and humility	0 1 2 3
11	Communicates assertively i.e. actively and appropriately engages in discussion, not afraid to provide his/her view point	0 1 2 3
12	Accepts constructive criticism; responds openly and positively to feedback	0 1 2 3
13	Prioritizes responsibilities effectively; is well organized and can perform multiple tasks and assignments on time	0 1 2 3
14	Demonstrates accountability; hold oneself liable for tasks/duties/responsibilities that s/he is responsible, does not blame others for mistakes or mishaps	0 1 2 3
15	Maintains confidentiality with all (peers, patients, documents)	0 1 2 3

# Rate the students on above points in 0, 1, 2, 3:

\*0 = Below expectations

\*1 = Average

\*2 = Meets expectations

\*3 = Above expectations

## DISCUSSION

The present study aimed to analyze the existing professionalism assessment tools and to develop a new scale to assess professionalism among undergraduate students which should be feasible in Indian setting. Similar studies have also been conducted by Manzoor A et al, Jahan F et al, Rasul S et al and Chisholm MA et al where they have evaluated the attitude of faculties, residents and students towards professionalism and tried to develop and validate different professionalism assessment scales/tools.<sup>8-11</sup>

As medical professionalism has been defined differently depending upon cultural and socio-contextual diversities, there is no single standardized definition of it, so different methods have been developed to measure it among medical professionals. Al-Eraky et al developed and validated an 18 item self assessment tool named Learner's Attitude of Medical Professionalism Scale (LAMPS) based on 6 attributes of professionalism mentioned by ABIM.<sup>12</sup> Some of the items

included in LAMPS by Al-Eraky et al are not relevant for medical students in Indian context although the scale is having with good reliability and validity.<sup>12</sup>

Chisholm MA et al evaluated a 18 item scale on pharmacy students with alpha coefficient of 0.82.<sup>11</sup> Some of the items from this 18 item, self administered professionalism assessment scale do not reflect professional behaviors of medical students and are not suitable in MBBS context, although the items included in the scale are appropriate for pharmacy students.

BPAE is also a 25 points objective instrument to assess professionalism among pharmacy students, but some of its items are difficult to understand with and some of them does not fit according to Indian scenario.<sup>5</sup> PAT was derived from professional assessment form developed by American Association of Medical Colleagues (AAMC) to assess the level of professionalism among medical students. The scale scoring is done on 60 to 100 to 60 scales. According to this, the ideal professional behavior is rated if score was 100; while deviation from 100 on each side of scale is considered as either poor or as exceeds expectations.<sup>6</sup> The scale (PAT) is good but it has not included all the attributes of professionalism. PBRS is another professionalism assessment scale with 49 items included in with is quite lengthy with repetitions of some of the items.<sup>7</sup>

