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A Review on Comprehensive Development of Conceptual Framework for Scoring Tool of Professionalism Assessment Among Medical Undergraduates in Malaysia

[1]Nik Him N.A.S[*], [1]AF Jusoh, [1]NM Nik Arif, [1]Nordin Simbak, [1]Norhasiza Y, [2]Rashidi Ahmad, [3]Rafidah Hod , [4]Zafar Ahmed, [5] Hassan S

[1]Faculty Of Medicine, University Sultan Zainal Abidin, 20400 Kuala Terengganu, Malaysia
[2]Emergency Medicine Department, University Of Malaya 50603 Kuala Lumpur Malaysia
[3]Medical Education Unit, University Putra Malaysia 43400 Serdang Selangor Malaysia
[4]University Malaysia Sarawak 94300 Kota Samarahan, Sarawak, Malaysia
[5]International Medical University, Kuala Lumpur, Malaysia
*Corresponding author: *Nik Him N.A.S*

Abstract : *Assessment of professionalism is a global issue in undergraduate medical training. The issues is about addresing its practice and valid assessment and not merely doctor-patient relationship. An attempt translate general professional behaviours as competencies to specific observable behaviours in clinical practice is the new concepts to develope the new scoring tools in this proposal for a comprehensive research framework. The aim is to measure professional behaviour from widely practiced, qualitative to a quantitative assessment of undergratuate medical student. As an outcome, the framework will explore the the current practice of observable professionalism and behaviour highlighting its strenghts,weakness and gaps in understanding the comprehensive approach of professionalism assessment.*

Keywords *– professionalism, medical undergraduates, work-based assessment and scoring tools*

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I. Introduction

Medical schools have successfully provided student with clinical based medical knowledge using their extensive curriculum. However, affective and soft skills are not well addressed in clinical assessment at many settings. Therefore, a new scoring tool that able to comprehensively assessed professionalism from multisource at work-based mandate an urgent need to be developed. No doubt it will inculcate and further enhanced professionalism among medical undergraduate.

Problem statement

1. The concept of professionalism remains very vague for most of medical students.
2. The reasons for professional obligations are not fully understood and the relationship between teaching and assessment is not quite logical.
3. Although many promising approaches are under evaluation, no single measure or set of measurements has yet proven sufficiently reliable and valid to meet the desired psychometric criteria.

Hypothesis

Null hypothesis: A multi-source evaluation tool for professional behavior at workplace is not useful as collated data for summative assessment undergraduate medical students.

Hypothesis: A multi-source measurement tool at workplace as collated data is useful for evaluation of professional behavior in summative assessment of undergraduate medical students.

Research question

How to assess the professional behaviors at workplace on a scoring tool, which is valid for collated data as continuous assessment and readily available for qualitative decision of medical students in summative assessment?

Sample of questions for development of workplace-based multi-source professional assessment (WBPA)

1. What are the competencies that can be assessed as observable general behaviors?
2. What are the specific assessable "behaviors" that best represent those general behaviors?
3. Who are the appropriate evaluators in our circumstances?
4. Who will be the best assessor to evaluate and paired with particular behaviors?
5. What will be the ultimate evaluator-behavior inventory?
6. How the scores will be made readily available for triangulation of summative assessment?
7. What will be the validity of multi-source assessment model designed?
8. What will be the problems of implementation and how those problems will be solved?

II. DEVELOPING THE CONCEPTUAL FRAMEWORK

Definition

The term professionalism is used to describe those skills, attitudes and behaviours which we have come to expect from individuals during the practice of their profession and includes concepts such as maintenance of competence, ethical behaviours, integrity, honesty, altruism, service to others, adherence to professional codes, justice, respect for others, self-regulation, etc.

There are three fundamental principles of professionalism [1] in medical practice.

1. The primacy of patient welfare. This principle focuses on altruism, trust, and patient interest that must not be compromised by "market forces, societal pressures, and administrative exigencies".
2. Patient autonomy. This principle incorporates honesty with patients and the need to educate and empower them to make appropriate medical decisions.
3. Social justice. This principle addresses physicians' societal contract and distributive justice, that is, considering the available resources and the needs of all patients while taking care of an individual patient

Importance of professionalism in medical profession [1]

a. Both patients and society at large need the services of reliable competent healers;
b. professionalism in this context could be considered as the means of organizing these services.
c. the society granted professionals autonomy in practice,
d. important role in regulation,
e. a privileged status and financial rewards on the understanding that the profession in return will assure the competence and ethical conduct of its members and address issues of concern to society.
f. if individual physicians or the profession in general fail to meet society's legitimate expectations, this social contract will be altered, with a consequent change in medicine's professional status.
g. presenting professionalism in this context provides a sound base for professional obligations, along with clear reasons for meeting them.
h. students must learn this at an early stage of their education and understand the consequences of failure to meet these obligations.

Assessment of professionalism

Professionalism need to be assessed in order to improve the students' performance in the realm and it should start with the development and implementation of valid measures of the desired attributes of professionalism. [2] [12] [13] [14] [15] [16]

a. Assessing professionalism is meant to determine if trainees have learned this core competency and what kind of deficiency they need to address
b. Educators must explicitly incorporate the expected behaviors into their formative and summative evaluations. Successful feedback would help in improving learners' performance and their final evaluation as well.
c. Professionalism is clearly multidimensional in nature; this means a combination of assessment tools is required. [17] [18] [19]

In a literature review by Wilkinson et al [3] [4] nine clusters of assessment tools were identified:

(1) Observed clinical encounters and simulations
(2) Collated views of co-workers
(3) Records of incidents of unprofessionalism,
(4) Critical incident reports
(5) Paper-based
(6) Tests, patients' opinions
(7) Global views of supervisor
(8) Self-administered rating scales.

Workplace-based professional assessments (WBPA)

In the Miller's framework for assessing clinical competence, workplace-based methods of assessment target the highest level of the pyramid and collect information about doctors' performance in their everyday practice [6] [7] [8] [9] [10] [11]:.

Commonly used WBPA tools [21] [22] [23]:

a. Direct Observation of Procedural Skills (DOPS),
b. Mini-Clinical Evaluation Exercise (mini-CEX)
c. Case-based discussion (CbD)

Table 1: Examples of quality standard [5] (Malaysian Quality Framework (MQF) recommended domains of learning outcome interpreted as general competencies for multi-source WBPA)

No	The roles assigned in MQF by Malaysian Quality Assurance (MQA) standard	Interpreted as general competencies for observable behaviors.
1.	Knowledge as knows and knows how level of competency	• Acquires quality experience with relevant knowledge as knows and knows how to apply that knowledge in clinical practice, which is observed as behavior towards organizational efficiency in knowledge domain to suspect relevant differential diagnosis and to decide on appropriate investigations during the routine patient's workup.
2.	Practical skills as shows how and does level of competency	• Possess the required clinical skills demonstrated by interrelated communication in content, process and perceptual skills observed in patient interview and examination as behavior towards organizational efficiency in skills domain.
3.	Social skills and responsibilities	• Demonstrates good practice of interpersonal relationship with peer, staff (nurses, paramedics and clerks), faculty and patients as per global requirement as well as socio-° cultural need of practicing environment.
4.	Professionalism, Values and Attitude	**Values:** • Shows the cognitive component of humanism that relates to student's adherence to a set of belief, choices and priorities upheld by society and practiced by community. • Practice reflects valuing of patient beliefs with change in behavior towards patient–centered care and not merely the physician-need dependent practice.
		Attitude: • Shows the affective component of humanism demonstrated as behavior of student's compassion, care and empathies for patient that alleviate his sufferings and brings comfort to him.
		Professionalism: • Shows the humanism beyond knowledge and skills as behavior committed to excellence, humanistic skills, professional aspirations, and ethics in medical practice.
5.	Communication, Leadership and Teamwork	**Communication skills:** • Shows good level of process skills in communication as well as keeping one's focus on significant aspects of soft skills in terms of content and perceptual instinct. • This is not only relevant to communication in health care but is also inextricably linked to each other that cannot be considered in isolation.
		Leadership and teamwork: • Believes in teamwork and plays leading role in combining individual abilities with group abilities in a way that extends their capacities and enhances their performance to provide health- care within the organization that he serves.
6.	Problem solving and scientific skills	• Takes the initiatives in dealing with patient's problem as basis for clinical reasoning, which is first attempted at own level and later engages senior colleagues and physicians in use of problem- solving skills towards investigations and therapeutics to provide best patient care.
7.	Information management and lifelong learning skills	**Information management:** • Believes in continual updating of knowledge and skills reflected in practice of discussing and sharing of evidence--based information sought from the field of informatics, internet and world- wide web as advances in medical science and technology
		Life- long learning: • Practices purposeful continuing professional development (CPD) aiming to improve own practice in view of fast changing knowledge and technical skills with advances in the field of medicine.
8.	Managerial and entrepreneurial skills	• Reflects his abilities to survive the new economic challenges of medical practice by showing his business savvy and leadership qualities in association with other health- care professionals. A doctor must know how to play a managerial role in organization and team building, cost containment and outcome based achievement of health care.

Table 2: Strengths and limitations of WPBA

Strengths	Limitations
Highly valid. Can assess 'does' (what the doctor actually does in practice) and contribute to an understanding of whether the trainee can apply the skills and knowledge they have to a particular situation.	Not yet robust in terms of reliability. Other assessments of 'show how' and 'know how' are needed to provide reassurance in terms of reliability. WPBA does not assess knowledge directly.
Trainee-led.	Can be opportunistic, not needs driven, unless there is proper understanding between trainer and trainee. It must be acceptable for trainers to be also able to trigger WPBA.
Maps achievement in a competency framework.	Aspiration to excellence can be lost.
Identifies those who might need particular educational support early in training.	If educational supervision is not working appropriately, trainees are more likely to try to delay or avoid assessments, or ignore feedback.
Creates a nurturing culture.	Not properly understood in a competitive environment.
Provides feedback.	Requires both time and training, which must be allowed for within the educational programme and properly resourced.
Samples widely in the workplace across the curriculum.	Unless there is excellence in educational supervision and unless it is taken seriously by both trainee and assessor. WPBA is learner dependent and vulnerable.
Utilises a range of judges/ assessors.	Negative judgments can be 'deferred' to others and avoided. Expert assessors are more accurate than junior members of the team.

Research Design:
Observational (descriptive) cohort study

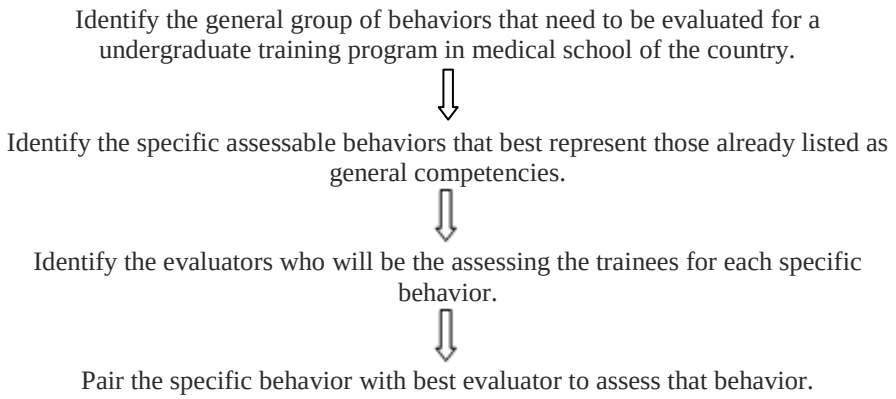
Sample Population:
The students will be randomly assigned from clinical posting undergraduate students during their clinical posting to Emergency Medicine, Internal Medicine, Obstetrics & Gynecology, Pediatric and General Surgery

Sample Size:
Sample size calculation will guided by literature search for multi-source feedback

Statistics
Scoring tool development will be conducted in 2 phases. In each phase data will be analyzed separately in which phase I will involve validation of the instrument and phase II will involve evaluation of students' professionalism. [19] [20]

In phase I, face validity and content validity can be determined by expert's judgment. Concurrent validity will be determined against clinical attributes of professionalism using a valid tool from workplace-based assessment (Mini CEX/ DOPS) and the result of the instrument obtain as score on assessment of professionalism. The statistical test employed will be Pearson correlation and multiple linear regression tests as the correlation coefficient and predictive values of current instrument (multi-source feedback evaluation) and the workplace-based assessment. In phase II, the evaluation will involve medical undergraduates. The suggested statistical test employed in phase II evaluation includes descriptive statistics (mean and standard deviation), Pearson correlation and One-way ANOVA. SPSS is used for data analysis.

Suggested flow chart for the framework



⇩

Identify different competencies to assess each behavior, and also list their relative weight.

⇩

Create the assessment instruments by selecting the format of the answers scale.

⇩

Calculate the validity and reliability of the designed instrument and the data with as little noise (distractions, interference and bias) as possible.

⇩

Strictly follow the principles of administering the observational assessment and regularly monitor the outcome objectives of the multi-source feedback evaluation.

⇩

Anticipate and try to overcome the problems of implementation of multi-source evaluation in the workplace.

⇩

Plan the pilot project and validate the instrument after preparing its local language version of the CBI for evaluators like nurses, paramedics and clerks if involved.

III. CONCLUSION

This conceptual framework is useful as it introduce the practice and principles of multi-source WBPA of professionalism in clinical practice of medicine. A medical undergraduate teaching is considered a failure even if it producing a medical practioner but undermined behaviours in patient cares. Thus, this framework is an impetus for a guidance to develop a scoring tool for professional assessment tailored to the locals need considering the policy, clinical guidelines, and culture, religion and environment factors.

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REFERENCES

[1] Medical professionalism in the new millennium: a physician charter. Annals of internal medicine. 2002; 136(3):243-6.
[2] Arnold L. Assessing professional behavior: yesterday, today, and tomorrow. Academic medicine: journal of the Association of American Medical Colleges. 2002; 77(6):502-15.
[3] Wilkinson TJ, Wade WB, Knock LD. A blueprint to assess professionalism: results of a systematic review. Academic medicine: journal of the Association of American Medical Colleges. 2009;84(5):551-8.
[4] Cohen JJ. Foreword. In: Stern DT, ed. Measuring Medical Professionalism. v–viii; New York: Oxford University Press 2006.
[5] MQF eight domains of learning outcome as point of reference and joint understanding of higher education qualification in Malaysia. Malaysian Qualification Framework documented by Malaysian Qualification Agency. 2008.
[6] Roff S., McAller S., Skinner A. Development and validation of an instrument to measure the postgraduate clinical learning and eaching educational environment for hospital-based junior doctors in UK. Medical Teacher, Vol 27, No. 4, 326-331; 2005.
[7] Hassan S. Faculty development: Mini-Cex as workplace-based assessment. Education in Medicine Journal, 2011; 3 [1]: e20-31. http://dx.doi.org/10.5959/eimj.3.1.2011.or210. Faculty development: DOPS as workplace-based assessment. Education in Medicine Journal, 2011; 3 [1]: e32-43. http://dx.doi.org/10.5959/eimj.3.1.2011
[8] Yudkosky R., Downing S., Editors. Assessment in health profession education. New york: Routledge. 2009
[9] Schwarz A. Editor. Assessment in graduate medical education: A Primer for Pediatric Program Directors. American Board of Pediatrics; Available at: www.abp.org.2011.
[10] Kogan JR., Holmboe ES., Hauer KE. Tools for direct observation and assessment of clinical skills of medical trainees, a systemic review. JAMA 2009;302 (12): 1316-1326.
[11] Liesbeth kj., Theo JB., Paul AK., Cees Van der Vleuten. Evaluating assessment quality in competence-based education: Aqualitative comparison of two frameworks. Education Research Review 2 (2007) 114-129; 2007
[12] Diane Delva M., John Kerby., Karen Schultz., Marshal Godwin. Assessing the relationship of learning approaches to workplace climate in clerkship and residency. Academic Medicine, Vol. 79, No 11/November 1120-1126; 2004

[13] Jan WS., Dominique S. Unraveling peer assessment: Methodological, functional and conceptual developments. Guest editorial.Learning and Instruction 20 (2010) 265-269; 2010.
[14] Mitchell M., Srinivisan M., Daniel CW., Franks P., Keenan C., Henderson m., Wilkes M. Factors affecting resident performance: Development of theoretical model and a focused literature review. Academic Medicine, Vol. 80 No. 4 / April 2005.
[15] Walther NK., Arno MM., Simone L., Jan HZ., Lambert WS., Cees Van der Vleuten. Web-assisted assessment of professional behavior in problem-based learning: More feedback, yet no qualitative improvement? Available at w.vanmook@mumc.nl; 2011.
[16] Roff S., McAller S., Skinner A. Development and validation of an instrument to measure the postgraduate clinical learning and teaching educational environment for hospital-based junior doctors in UK. Medical Teacher, Vol 27, No. 4, 326-331; 2005.
[17] Joan S., McNaughton E., Mercer S., Murphy D., Patricia S., David AB. Providing feedback: Exploring a model (emotion, content,outcome) for facilitating multisource feedback. Medical Teacher; 33: 744-749; 2011.
[18] Habiba S., Shizalia S., Arun B., Christopher HE., Mahmud S. The role of feedback in improving the effectiveness of workplace based assessment: A systemic review. BMC Medical Education; 12:25; Available at: http://www.biomedcentral.com/info/authors/; 2012
[19] Mitchell D. C. Multiple measures and high stakes decisions: A framework for combining measures. Educational Measurement Issues and Practice, 2003; 22, 2.
[20] Neil Jackson, Alex Jamieson and Anwar Khan. Assessment in medical education and training. Oxford: Radcliffe Publishing,2007.
[21] John JN, Linda LB, Daniel D, Gregory SF. The Mini-CEX: a method for assessing clinical skills. Ann Intern Med. 2003; 138:476-481
[22] Norcini JJ, Blank LL, Arnold GK, Kimball HR. The Mini-CEX (clinical evaluation exercise): a preliminary investigation. Ann InternMed. 1995; 123:795-799
[23] Norcini JJ, Blank LL, Arnold GK, Kimball HR. Examiner differences in the Mini-CEX. Adv Health SciEduc. 1997; 1:27-33.http://dx.doi.org/10.1023/A: 100973472365

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