



Nighat Murad¹, Farah Naz¹,
Saima Naz¹, Tayyaba
Rahat^{1,2}, Sumera Naz¹, Faiza
Bashir¹

¹Pakistan Health Research
Council, Head office,
Islamabad, Pakistan

²Pakistan Health Research
Council,
Shahrah-e-Jamhuriat, G-5/2
Islamabad, 44000
Pakistan

Tel: +92 333-5325330
Email:
tayyabarahat@gmail.com

ORIGINAL ARTICLE

Quality Assurance in Assessment System of Medical Colleges in Pakistan: Faculty Perspective "A Qualitative Study"

Background: The present study aimed to describe the procedures implemented by medical colleges in Pakistan to assure quality in their assessment system.

Methods: A qualitative study was conducted from March 2015 to December 2017 in medical colleges of Pakistan using grounded theory design. The medical colleges were selected by using non-probability convenient sampling technique. Out of the total 93 PMDC (Pakistan Medical and Dental Council) recognized medical colleges, 49 were selected from all four provinces of Pakistan as well as Azad Kashmir. After obtaining informed consent, an open-ended questionnaire was filled by faculty members participating in medical college. Data was analyzed using SPSS version 21 (IBM).

Results: The majority of participants appreciated their institution's assessment policy and wished improvement in terms of comparability to national organization's assessment systems. For about 1/3rd of participants, the challenges were developing standardized tools, their grading (e.g. SEQs), and faculty's unwillingness to devote time for quality MCQ. Recommendations by > 1/3rd to overcome barriers included one assessment per year, improvement in teaching methods, standardized assessment, and structured viva exams. In > 1/2 institutions no audit of assessment process was conducted. Around 1/3rd confirmed audit was an irregular unplanned activity; however, no report was published. Around 1/4th of participants highlighted that a formal audit report stemmed in improving teaching and examination methods.

Conclusions: Overall Quality Assurance (QA) procedures in assessment system in Pakistan were poorly implemented. Lack of QA, Monitoring and Evaluation (M&E), feedback mechanism, benchmarks for assessors, and formal auditing was noted. Student's involvement and semester system was recommended.

Keywords: Quality assurance, Assessment, Standardized tools, Benchmarks, Audit

ضمان الجودة في نظام تقييم الكليات الطبية في باكستان: منظور الكلية "دراسة نوعية"

الخلفية والهدف: تهدف هذه الدراسة إلى وصف الأساليب التي تستخدمها كليات الطب في باكستان لضمان جودة نظام التقييم الخاص بها.

الطريقة: دراسة مقطعية رصدية أجريت في الفترة من مارس ٢٠١٥ إلى ديسمبر ٢٠١٧ في ٤٩ كلية طبية باكستانية باستخدام تصميم نظرية خط الأساس. بعد الموافقة المستنيرة، تم ملء استبيان مفتوح. تم تحليل البيانات باستخدام برنامج SPSS الإصدار ٢١ (IBM).

النتائج: أعرب غالبية المشاركين عن تقديرهم لسياسة التقييم الخاصة بمؤسستهم وأعربوا عن رغبتهم في تحسينها مقارنةً بأنظمة التقييم الخاصة بالمنظمة الوطنية. بالنسبة لحوالي ثلث المشاركين الذين طوروا أدوات معيارية، كانت التحديات هي تصنيفهم (على سبيل المثال SEQ) و إجهاد أعضاء هيئة التدريس عن تكريس الوقت لجودة MCQs. تضمنت الاقتراحات المقدمة من أكثر من ثلث الأفراد للتغلب على العقبات: تقييمًا واحدًا سنويًا، تحسين طرق التدريس، التقييم القياسي، والاختبارات الهيكلية (Viva) في أكثر من نصف المؤسسات. لا يوجد تدقيق لعملية التقييم وأكد حوالي الثلث أن التدقيق كان نشاط تخطيطي غير منتظم وأنه لم يتم نشر أي تقرير. أكد حوالي ربع المشاركين على أن تقرير التدقيق الرسمي هو هيئة مهمة في تحسين أساليب التدريب.

الخلاصة: يتم تنفيذ إجراءات عامه لضمان الجودة بشكل سيئ في نظام التقييم في باكستان، وذكر الافتقار إلى رصد وتقييم ضمان الجودة (M&E) وآلية التغذية الراجعة ومعايير المقيمين والتدقيق الرسمي. يوصى بمشاركة الطلاب ونظام الفصل الدراسي.

الكلمات المفتاحية: ضمان الجودة، التقييم، الأدوات المعيارية، المعايير، التدقيق

باكستان کی میڈیکل کالجوں کے پرفارمنس کو جانچنے کے سسٹم میں کوالٹی سے اطمینان حاصل کرنا

بیگ گراؤنڈ: یہ تحقیق پاکستان میں میڈیکل کالجوں کے پرفارمنس کو پرکھنے کے لئے روشیں استعمال کی گئی ہیں ان کا جائزہ لینے کے لئے انجام دی گئی ہے۔

روش: پاکستان میں مارچ دوہزار پندرہ ٢٠١٥ سے دسمبر دوہزار سترہ تک انچاس میڈیکل کالجوں میں بنیادی نظریاتی تیوری کے تحت انجام پائی ہے۔ میڈیکل کالجوں کا انتخاب ترانوں ' پی ایم ڈی سی کی ترانوں کالجوں میں سے کیا گیا اور انچاس کالجوں کو منتخب کیا گیا۔

نتیجے: تحقیق میں شرکت کرنے والوں نے اپنی کالجوں کی جانچ پڑتال کی پالیسی کو سراہا اور موازنے کے لحاظ سے اپنے قومی جانچ پڑتال کے سسٹم کو سراہا اور کہا کہ انہیں امید ہے کہ یہ سسٹم مزید بہتر ہوگا۔

سفرار: پاکستان میں مجموعی حیثیت سے جانچ پڑتال سسٹم ناقص طرح سے نافذ کئے گئے ہیں۔ پاکستان میں QA اور M&E کے فقدان کی وجہ سے مسائل پیش آتے ہیں۔

کلیدی الفاظ: کوالٹی، جانچ پڑتال، معیار وسائل

اطمینان از کیفیت در سیستم ارزیابی کالج های پزشکی پاکستان: چشم انداز دانشکده "یک مطالعه کیفی"

زمینه و هدف: این مطالعه با هدف توصیف روش های استفاده شده توسط کالج های پزشکی در پاکستان برای اطمینان از کیفیت در سیستم ارزیابی آنها انجام شده است.

روش: یک مطالعه مقطعی مشاهده ای که از مارس ٢٠١٥ تا دسامبر ٢٠١٧ در ٤٩ کالج پزشکی پاکستان با استفاده از طرح تئوری مبنایی انجام شد. پس از رضایت آگاهانه، یک پرسشنامه توسط شرکت کنندگان تکمیل شد. داده ها با استفاده از نرم افزار SPSS نسخه ٢١ (IBM) مورد تجزیه و تحلیل قرار گرفت.

یافته ها: اکثریت شرکت کنندگان از سیاست ارزیابی مؤسسه خود قدردانی کردند و از نظر مقایسه با سیستم های ارزیابی سازمان ملی آرزوی بهبود داشتند. برای حدود یک سوم از شرکت کنندگان توسعه دهنده ابزارهای استاندارد، چالش های موجود عبارت بودند از درجه بندی آنها (به عنوان مثال SEQ) و عدم تمایل اعضای هیأت علمی به اختصاص وقت برای MCQ با کیفیت. پیشنهادات ارائه شده توسط بیش از یک سوم افراد برای غلبه بر موانع شامل یک نوبت ارزیابی در سال، بهبود روشهای تدریس، ارزیابی استاندارد و آزمونهای ساختاری Viva بود. در بیش از نیمی از مؤسسات هیچ ممیزی از روند ارزیابی انجام نشده است. حدود یک سوم تأیید کردند که ممیزی یک فعالیت غیر برنامه ریزی نامنظم بوده و هیچ گزارشی منتشر نشده است. حدود یک چهارم از شرکت کنندگان تأکید کردند که یک گزارش رسمی حسابرسی بدنه مهمی در بهبود روش های آموزش و امتحان است.

نتیجه گیری: رویه های کلی تضمین کیفیت (QA) در سیستم ارزیابی در پاکستان ضعیف اجرا شده است. کمبود QA نظارت و ارزیابی (M&E)، مکانیزم بازخورد، معیارهای ارزیابی کنندگان و حسابرسی رسمی ذکر شدند. مشارکت دانشجو و سیستم ترمی توصیه می شود. **واژه های کلیدی:** تضمین کیفیت، ارزیابی، ابزارهای استاندارد شده، معیارها، حسابرسی

INTRODUCTION

Quality Assurance in all aspects of medical education is playing a pivotal role in delivering quality healthcare, without which improvement in the health care delivering system is impossible (1). Quality assurance (QA) includes all policies, procedures and systems involved to place, assure and have capability to improve the quality of medical education and training. "Quality" by itself is difficult to define since it is subjective and dynamic in nature; it can always be measured in comparison of one thing with another. It is a relative term to compare something with already standards (2).

In the quality digest 2001, Quality itself has been defined as fundamentally relational: 'Quality is the ongoing process of building and sustaining relationships by assessing, anticipating, and fulfilling stated and implied needs' (1). The quality issue has emerged as a serious concern and a key element in medical education (2). The emphasis has moved exclusively from a scientific and procedural aspects to include a more realistic, practical and applied approach in the context of the social responsibility and accountability and a commitment to the integration of teaching experiences and teacher development for day to day work (3). The gigantic role of good teaching and receiving skills in society's wealth and affluence has added new magnitudes to the quality in medical education (2).

The institution must have an educational plan that will help establish the high standards deem necessary to bring about an ongoing improvement in the quality of its education (4). These standards are set by accrediting agencies and thus accreditation considered by most as a status which shows the public that an institution has met and is maintaining a high level of standards set by an accrediting agency for accreditation (1). Quality is determined by an institution's adherence to these set of standards (Compliance to norms, accountability, adherence to rules and regulations and adopting codes of practice) (1, 5). Medical institutions that assure quality in their education and training system (e.g. student assessment, curriculum design, quality item writing) can acquire accreditation and afford global competitiveness. Delivering quality education is the only way to ensure the acceptance of institutional graduates everywhere in the world (6, 7). The process of accreditation affects the institution and a range of institutional practices, which includes classroom instruction, assessment process, administration, and professional development.

Determining quality of an institution requires a framework or evaluative guidelines (critical elements of quality assurance) for translating their notion of quality into 'quality assurance decisions' (1, 8). The process will examine and collect data on the academic and administrative aspects of the institution or program. The evidence gathered is evaluated against benchmarks (set for desirable achievements) and the reviewer simply establishes the evidence.

In institutions QA can be managed through strong monitoring systems for course, peers and assessment evaluation.

Quality assurance of assessment is defined as 'a planned and

systematic process of ensuring that the requirements of the assessment system, competency standards, and any other criteria are applied in a consistent manner' (1, 5, 9). Rationale to establish quality in assessment is to improve the confidence of learners by guaranteeing them to be evaluated by a process that is fair and transparent (1). Similarly standardization allows instructors to be more assertive about their conclusions and bring about consistency across their learners (10, 11). By assuring quality in its assessment process an institution can guarantee with confidence that they are imparting superior, appropriate, and relevant education and training to their physicians which is in line with national and international standards (4, 12, 13).

A tactical and vigilant exam system has tremendous role to play not only in increasing knowledge but also in bringing about excellence and culpability in educational system of any institution. Substantial work is vital to assimilate quality in the evaluation system. Numerous elements add to whole quality and they must be considered. Numerous standard documents are available which outlines the steps to evaluate the quality of the assessment system and involves implementing a range of activities before, during, and after the administration of the assessment process (4, 8, 9) In Pakistan there is hardly any report or work available to indicate how medical colleges in Pakistan are taking care of quality assurance in their assessment process. Exploration of this area is therefore crucial to find out the shortages in the area and how to respond to them so as to overcome these deficiencies. The purpose of this qualitative study was to explore the faculty's perspective regarding the current status of quality assurance procedures being implemented in the assessment system in medical colleges of Pakistan.

METHODS

The present study was a mixed methodology study design; the quantitative part was done by observational cross-sectional study, while qualitative part was completed using grounded theory design. The current article mainly explained the qualitative part to understand the concerned stakeholder's personal inceptions regarding quality assurance. The study was carried out from March 2015 to December 2017 in medical colleges of Pakistan by using sequential explanatory mixed method technique (14). Ethical clearance was taken from Ethical Review Committee of DOW University of Health Sciences (DUHS) (Approval number: IRB-662/DUHS/Approval/2016). The medical colleges were selected using a non-probability convenient sampling technique, as some of the medical colleges (especially in Baluchistan and Khyber Pakhtunkhwa) were not accessible due to security concerns; however, certain medical colleges were not responding or willing to participate when approached initially through an email.

Inclusion criteria for selecting medical colleges was having a current status of approval from Pakistan Medical and Dental Council (PMDC) and those which were established for more than five years where at least one batch of medical students have passed out with both pre-clinical and clinical students enrolled at the time of data collection. Medical colleges under litigation and where admissions were stopped, not

having a medical education department and health institutes were excluded from the study. Faculty members (both genders) of selected medical colleges associated with medical education/assessment unit, having worked in the same medical college for more than one year designated as senior lecturer or the ones recommended and granted permission by their respective institution were interviewed. Out of the total ninety three PMDC recognized medical colleges (15), forty nine medical colleges (20 public and 29 private) from all four provinces of Pakistan as well as Azad Kashmir were enrolled in this study. The sample was assumed as appropriate, because in such type of studies a sample size ≥ 30 produces a significant impact (16). A semi-structured questionnaire was designed for data collection. The pilot testing of field guide/questionnaire was done at the Comsats University Islamabad. Data for pilot study was collected from six faculty members of different public and private medical colleges of Pakistan selected by convenient sampling. The medical colleges chosen for pilot testing were not selected again for main data collection. Minor adjustments were made in the field guide on the basis of lesson learned from the pilot study.

The current study encompasses the qualitative analysis of the data collected by open ended questions of the field-guide/questionnaire.

The field-guide mainly included four open ended questions, whereas question number 3 was further divided into three parts. However, to make it reader friendly, the question and their responses in the result section are explained as seven questions rather than four.

For data collection and for in-depth interviews of the randomly selected faculty members, permission was granted from concerned Deans/senior management and informed consent was sought and confidentiality from each participant enrolled in the study was safeguarded.

The responses of qualitative part of the data were entered in MS Office Excel (2011) after translation and transcription of the field guide. Two evaluators initially were given the transcriptions and to create closeness to the data they were allowed time to read and re-read them. This was followed by the coding phase. Both the evaluators individually coded the responses identifying repeated patterns and features (sub-nodes) of the data that they considered were pertinent to the

research field guide and where applicable individual responses of participants were mentioned as direct quotes (due to huge number of responses in the form of individual quotes, some were mentioned and rest similar in nature were not included in the current article, however they can be provided, if any reader is interested).

The next stage involved searching for themes where both the evaluators discussed the codes and the themes emerging from them by mingling codes that were analogous or addressing similar view point in the information collected. Themes emerged from each nodes and sub-nodes by using constant comparison analysis method. At this stage the evaluators once again reviewed the transcripts for further coding and ensured if the same themes were identified and a point of saturation was reached.

RESULTS

A total of 49 participants (one from each medical college) were interviewed for the study from all over Pakistan. Majority of them 21(23%) belonged to Punjab, followed by Khyber Pakhtunkhwa 15 (31%) and Sindh 10 (20%), whereas, 02 (4%) respondents were from Baluchistan while 1 (2%) from Azad Kashmir were also enrolled in the study.

The colleges and their respective representatives were of two major categories; Public 20 (41%) and Private 29 (59%).

The participants of study were assessed on three main field guide questions and were further probed to get four other related questions, resulting in seven main questions (nodes). Since there were no marked differences in most of the results from both Public and Private colleges, therefore similar type of responses were merged to make themes not only to increase the strength of emerged themes but also to make it reader friendly (Table 1). Conversely, those responses which differ at large were tried to explain separately.

Each node (question) with its sub-nodes (responses) is summarized and the themes emerged from each node are shown in flow boxes:

Three positive things being implemented in the institution regarding assessment and examination system:

The participants were asked to mention at least three positive things that they felt are being implemented in their

Questionnaire	
Sr. No.	Question
1	What are the three positive things that you feel are being implemented in your institution regarding assessment and examination system?
2	What changes would you like to see in the examination system in your institution? List no more than 3.
3 (a)	Regarding training on assessment please tell us how many assessors have you trained during the 12 months.
3 (b)	Plz tell us do you evaluate your training and assessment practice? If yes how? (max 2 lines)
3 (c)	Have there been any assessments that you have found particularly challenging? If yes What would you have done differently? (max 2 lines)
4	Does your institution have a process of auditing the assessment process? If yes, give three actions taken in response to the audit report.

respective institution regarding assessment and examination system. The response was variable and diverse highlighting steps were taken in different directions.

Three key steps taken identified by both public and private college participants were in the domains of regular and strict internal assessment they quoted as; *"Institution having strict policy for exams"*, *"Exams are well planned"*, *"Policies of PMDC are strict and implemented in institution"*, *"Attendance is usually above 90%"*, *"Assessment process more clear"*, *"Written assessment policy available"*. Majority claimed that maintaining fairness is well planned. They quoted as; *"In examination we maintain confidentiality"*, *"Ensuring no cheating"*, *"No discrimination among students"*, *"No external pressure on examiners"*, *"No grace marks for any student"*, *"Anonymity ensured while checking"*, *"Transparency in organization and execution of exams"*, *bias is minimized"*. Most of them also claimed for the quality assurance in the assessment and examination system. They quote as; *"Regular, Systematic and Uniformity in assessment"*, *"colander-based exams"*, *"Discipline in exams"*, *"syllabus-based assessment"*, *"Centralized marking for Short easy question (SEQs)"*, *"Examination committee overseas the examination process on regular bases"*, *"regular quality checks by admin"*, *"Content validity is ensured by sharing table of specification with students/teachers"*. However, regular internal assessment was more identified by private colleges.

Some participants appreciated their Assessment tools, quoted as; *"Clearly written tools"*, *"Cognition skills"*, *"Multi method"*, *"Wide range of content-based assessment tools"*, *"Regular update of question bank"*, *"blue printing before assessment"*, *"checking by seniors"*.

On the other hand, some appreciated *"Security to candidates"*, *"specified areas used for exams"*, *"excellent administrative support is available"*, *"facilities provided as and when required"*, *"Strict attendance"*, *"Feedback to students"*, *"faculty development, trainings"*, *"faculty motivated to improve"*, and *"Regular monitoring system"*.

Three changes they would like to see in the examination system and assessment system in their institution:

Participants were asked to enumerate at least three changes they would like to see in their institution. On this node individual responses (sub-nodes) were deeply analyzed to get 3 key themes. It was surprising that majority of participants at one hand appreciated their institutions assessment policy, but at the same time, almost same major chunk wished improvement in all fields such as regarding assessment policy, some of their quotes were; *"Assessment policy comparable to other national organizations is weak"*, there should be; *"written policy of assessment"*, *"Integrated examination system"*, *"assessment process evaluated annually"*, *"examination dates notified in annual calendar"*, *"reinforcement of assessment through medical educationalist"*, *"Assessing according to set policy and standards"*, *"transparency in setting papers and in checking system"*, *"regular and strict M&E"*. On the other hand the majority of public colleges and universities wanted improvement in teaching methodology, fairness in

examination, and feedback mechanism. Some of the quotes were as follows; *"Interactive teaching methods such as problem-based learning (PBL) integration"*. *"Formative feedback mechanism"*, *"promotion of peer assessment and self-assessment feedback"*.

Respondent's view on training for assessments and assessors trained during last 12 months:

The results showed that no assessors were being trained in last 12 months in twenty institutions. There were seven respondents who claimed that *"five or less assessors were being trained in last 12 months"* or *"six to twenty-five assessors were being trained in last 12 months"*. Moreover, there were five respondents who claimed that *"twenty-six to forty-nine assessors were being trained in last 12 months"*. The highest number of assessors, fifty or more, being trained in last twelve months were claimed by representatives of six institutions. Representatives of 03 institutions were not being able to provide details; however, they were of the opinion that few or more are in the process of acquiring training for assessments, but the details are not available.

Evaluation of training and assessment practices:

Majority, around thirty-two respondents stated that *"no formal or definitive methods are available for evaluation of training and assessment practices"*. Six (12.24%) of respondents stated that evaluation of training and assessment practices are done through *"exam results"* and *"through questionnaire"*. Eight (16.32%) of the respondents highlighted that evaluation of training and assessment practices are done *"through a checklist"*, *"feedback form or feedback from teacher and students"* and *"interdepartmental/ inter examination or curriculum committee meeting"*. It was conveyed by one of the respondents that *"evaluation is only possible after training through workshop"*.

Barriers and challenges faced with in assessment:

Respondents from thirteen institutes were *"not aware of any barriers or challenges being faced in assessment process."* However, there were twelve respondents who stated that *"no challenges in assessment have been faced so far"*. One respondent further elaborated that *"method of assessments is standardized so no challenge faced"*.

Eight (16.32%) of the respondents considered OSPE/ OSCE difficult to assess. They quoted reasons as *"comparatively easy for students"*, *"difficulty in assessing skills or attitudes"*, *"developing proper/ standardized OSCE"*, *"difficulty in grading OSCE"*, *"OSCE not feasible to conduct due to logistic reasons"* and *"OSCE stations are poorly developed"*. One respondent quoted *"assessment of supplementary examination challenging"* and *"using e learning methods i.e. quiz star challenging to use"*.

Five (10.2%) of the respondents found that written examination was challenging to develop. One respondent identified that the barriers were *"questions used from previous exams being comparatively easier"*, *"more time required to develop written assessments"*, *"faculty not willing to develop high quality MCQ by devoting adequate*

time"; however, two respondents believed that the barrier was "SEQ difficult to mark".

Two (4.08%) of respondents found attitude difficult to assess, quoting reasons as "standardized patients are not available", "no tools available for attitude assessment and feedback"

Recommendations have been made to overcome barriers in assessments:

Out of the 15 respondents who faced challenging task, 5(33.3%) of them made recommendations to overcome barriers in assessments. Recommendations from one respondent were "one assessment around middle of years considering its much time consuming", "and teaching methods should improve which will reflect improvement in assessment" Recommendations from the other three were "assessment should be standardized", and "structured viva will make assessment more standardized".

Process of auditing the assessment process and measures taken in response to audit report:

Using an open-ended question, the participants were inquired whether the institution have a process of auditing the assessment process. Respondents from twenty-seven institutes stated "no process of auditing the assessment process existed". Moreover, a respondent from a private sector medical college highlighted "no formal audit and department of health professional education only review assessments." However, there were five respondents not aware about "process of auditing the assessment process being existed".

Respondents from sixteen (32.65%) institutions, who affirmed that the process of auditing the assessment process is in place, further highlighted that "report is not published", "audit is not done routinely", and "audit is a separate department so actions are not known" and "no strategic plan for auditing."

Respondents from 10 (20.4%) institutions having a formal process of auditing the assessment process highlighted that audit report would result in "improving clinical teaching", "hiring more clinicians", "changing the timing of examination", "increasing number of invigilators", "students teacher feedback practice established", "modification in examination methods", "inclusion of OSPE and competence based assessment in clinical years", "faculty member urged to provide maximum support and mentorship to students", "identifies areas of improvements" and "professional development of faculty members".

DISCUSSION

Majority of the participants appreciated assessment policy of their institution and wished improvement in it in terms of comparability to national organization's assessment systems. For about one third of participants, the challenges were developing standardized tools, their grading (e.g. SEQs), and faculty's unwillingness to devote time for quality MCQ. Around one third of the participants recommended that to overcome barriers, one assessment per year shall be done, improvement in teaching methods is required, there shall be

standardized assessment, and structured viva exams shall be conducted. In almost half of the institutions no audit of assessment process was conducted. Around one third of the participants confirmed that audit was an irregular and unplanned activity at their institution, and audit report did not get published. Around one fourth of the participants highlighted that a formal audit report stemmed in improving teaching and examination methods.

Most of the present participants declared three major positive things as; a written strict assessment policy, fairness, and quality assurance as the hallmark of their institution's examination system. The findings are in line with a study mentioning that Stringent Assessment policies based on major principles of self-evaluation and peer review are giving better institutional results. (17).

Fairness necessitates absence of bias within the assessment and test that gives equal chance for all candidates, where bias in assessment process compromises quality and hence lowers validity.

This according to literature can be reduced by forming an independent panel of diverse reviewers (18). According to the present study the participants mentioned that bias was being practiced by some institutions where external examiners were also involved in the evaluation process.

Changes recommended by participants in the present study were 1) changes in assessment policy 2) improvement in teaching methods and student's involvement and 3) improvement in monitoring and evaluation and feedback mechanism. These changes are considered essential and integral part of quality assurance by other studies (17) (19). Another study from India stated similar recommendations that regular and periodic feedback by alumni and students on the offered courses, peer evaluation by a structured and objective method, and use of variety of assessment methods will prove helpful in enhancing the quality of medical education (1).

Faculty trainings for quality assessment were considered to be essential part of professional career in the medical colleges in this study. This observation is also in line with other studies. They reported that different methods including feedback, evaluation, and reflection needs to be used to continuously bring about improvement in teacher's training on assessment thereby assuring its quality (20, 21). An imperative influential element of the assessment system is the assessor. Capability of the assessors to conduct the assessment, their leniency/stringency, incentive for assessment and their attitude towards assessment all are contributing factors that can influence students' learning (22). However, in the current study no or only few assessors were trained in the last 12 months which resulted in poor assessment quality of institutions.

Two third of this study respondents were either unaware or faced no barriers or challenges in assessment process. However, other faculty members stated that exams like OSCEs were difficult in terms of development, administration, standardization, and feasibility issues. Similar challenges have also been highlighted by multiple researchers where OSCE was considered expensive requiring

manpower, untrained staff finding it difficult to construct an OSCE station, rating criteria and awarding scores, etc. (20, 21, 23) Some faculty members in this study also considered item writing as a difficult task that required lots of time and most of the faculty members were not ready to spare. SAQs were also found difficult to be marked. These results are supported by similar findings from literature that a good MCQ is not easy to be constructed and is time consuming; however, at the same time it was easy to be marked. SAQs on the other hand could be comparatively easily developed but they needed comprehensive scoring templates to assess student's competence (23-25).

Recommendations made by participants of this study were: 1) single assessment per semester, 2) improvement in teaching methods will improve assessment, 3) standardized assessment mechanism with structured viva will be helpful. Many studies reported that features of the assessment method (including format of assessment, the content of the assessment, and the scoring method), examination duration, purpose of the examination, the frequency of assessments, and the intermission between the examinations can influence the students' learning from assessment (26-28). In the study by Al-Kadri et al, objective assessments led students to use deeper approaches compared with comprehensive assessments (29).

The present participants claimed either absence or a very weak audit mechanism to evaluate the assessment process. However, some claimed its existence but wished the need of greater improvement in teaching, examination and feedback methods, competence-based assessment, and professional development of faculty members. Various studies have mentioned the pivotal importance of audit tools in assessment mechanism, education delivery system and overall teaching and learning system (30-32). Comparing what is actually happening in an educational setup against agreed standards or guidelines, making recommendations and their implementation will bring quality in medical education. Furthermore comparative audits may be of general interest (33-35).

This qualitative study helped us in collecting a huge comprehensive data which led us to explore the subject in a much greater depth and breadth.

Convenient sampling technique was adopted due to security threats and poor law and order situation in some parts of the country, in addition to time and resource issues. Some institutions did not provide consent to be included in the study.

After an in-depth analysis conclusion is drawn in the form of key themes.

- Large proportion of faculty member was unaware regarding assessment policy.
- Lack of quality assurance and M&E mechanism
- Lack of a feedback mechanism.
- Limited student's involvement
- Lack of validity, reliability, and fairness in written exams.
- Annual examination system was perceived as a burden on students.
- Semester system was recommended for improvement.
- Lack of Benchmarks for assessors against a standard mechanism.
- Lack of formal auditing.

Ethical considerations:

Ethical issues including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, redundancy, etc. have been completely observed by the authors. Ethical approval was taken from DOW University of Health Sciences (DUHS) Ethical Review Committee IRB-662/DUHS/Approval/2016 (dated 23rd Feb, 2016).

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