PERCEPTIONS OF POSTGRADUATE STUDENTS REGARDING INCLUSION OF CLINICAL AUDIT IN TRAINING PROGRAMME

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ABSTRACT

Objective: To find out the perceptions of postgraduate students regarding inclusion of clinical audit in the training programme.

Study Design: Mixed method sequential study.

Place and Duration of Study: Combined Military Hospital Lahore, from Apr to Nov 2018.

Material and Methods: In the first phase, quantitative research question addressed the perceptions of post-graduate students regarding inclusion of clinical audit in the training programme through a questionnaire. A total of fifty postgraduate students participated in the study. In the second phase, focus group discussions (FGD) were carried out from thirty-five students divided into five equal groups across different disciplines to explore these perceptions in depth.

Results: The quantitative analysis of results revealed that significantly large percentage of students considered clinical audit, audit project and relevant clinical governance domains to be of high relevance to the postgraduate training programmes. The key themes emerging from clinical audit focus group discussions FGD were better clinical care, patient safety, lack of institutional support, lack of understanding about audit on part of the students and faculty and improper implementation mechanisms.

Conclusion: Clinical audit promotes safe, quality and evidence-based care for the patients and minimizes the cases of clinical negligence in clinical practice. Clinical audit needs to be incorporated as an integral component in the postgraduate curricula. The medical educators and curriculum committees need to focus on the benefits of clinical audits, clinical governance, effective learning strategies and relevant support system to help students in achieving the desired goals in clinical audit practice and quality assurance measures.

Keywords: Clinical audit, Focus group discussion, Perception, Mix-method sequential study.

INTRODUCTION

Clinical audit is the process used by health professionals to assess, evaluate and improve the care of patients in a systematic way in order to enhance their health and quality of life[1-3]. It is a key component of clinical governance and provides a method for systematically reflecting on and reviewing practice[1]. It helps to improve patient care, leading to improvement in service delivery and outcome for the users. The audit provides opportunities for training and education of healthcare professionals involved in patient care. It improves multi-disciplinary working in health care systems and assists in monitoring the consistency of performance[1-3]. The rationale of the study is to highlight clinical audit as a valuable part of practice in the developed world. The majority of our postgraduate students have a lack of knowledge and understanding of audit and audit cycle[1,2]. Furthermore, there is only mention of clinical audit, but as such there is no defined strategy or assessment procedures for audits in our postgraduate curricula. Our study attempts to highlight the importance of clinical audit in safe medical practice and its value and need for inclusion in our postgraduate training programmes[4-6].

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MATERIAL AND METHODS

This study was carried out at Combined Military Hospital (CMH) Lahore, from April 2018

to November 2018. The participants were postgraduate students from different disciplines. Permission from institution's ethical review board was obtained prior to the study.

This was a mixed method sequential study and action research. The paradigm of the study was pragmatism. It was conducted in two phases: In the first phase, quantitative research question addressed the perceptions of post-graduate students' regarding inclusion of clinical audit in training programme through a survey questionnaire. In the second phase, focus group discussion (FGD) was carried out to probe in-depth the perceptions of postgraduate students regarding clinical audit[7-9]. Non-probability convenience sampling was used to collect quantitative data while purposeful maximum variation sampling was done for qualitative aspect of the study.

Fifty consenting postgraduate students divided into ten equal groups from different disciplines, training at CMH Lahore were enrolled. They were briefed about the purpose and conduct of audit exercise. A sensitization lecture was delivered. An online booklet was emailed to all the consenting participants for further information and understanding ofthe audit process. The students had the choice of selecting the audit topics. Formative assessment with feedback was provided during the audit process[5-9]. The students filled in the validated questionnaire which was adapted and based on the University of Notre Dame, Australia' audit questionnaire[3,7]. The questionnaire was piloted before its formal use to confirm the construct and face validity. This quantitative method provided numeric description of opinions of a population by studying a sample of that population. Non-probability convenience sampling was used for conducting questionnaire.

In order to conduct FGD, purposive sampling was used. The characteristics of the population of interest that is postgraduate students was specified and identified. FGD was undertaken to gain insight into the attitudes and thinking of participants and it helps in developing ways to improve medical education and professional development. The goal in qualitative research was to select information rich sample[10-13]. The members in FGD were homogeneous to some extent and dimensions, and heterogeneous along others. In order to take into account multiple variables different educational back grounds, performance, maximum variation type of purposive sampling techniques was employed[8-11]. For facilitating discussion, efforts were made to select those postgraduate students who are proficient in communication skills. The students were informed about the purpose and details of the study. Only the consenting post-graduate students across different disciplines were enrolled. The sampling technique was non-probability maximum variation purposive sampling for FCD. A total of thirty-five postgraduate students divided into five equal groups across different disciplines were included.

The data obtained was analytical and involved the comparison of results between the different assigned groups. SPSS version 21 statistical package was used for analysis. The responses of survey questionnaires were collated on a five point Likert scale. These responses were compared with a scheme of questions. The FGD data focused on the generation of specific themes followed by their designation into specific sub-themes and sub-categories. The data analysis for FGD incorporated verbatim transcription of the whole conversation and discussion conducted with the participants. The data coding in the respective and relevant transcripts followed this process. This involved sorting and collating the data translating into categories. Concrete data analysis initially included a descriptive account with explanations of what was actually said and no assumption or hypothesis wasmade. This phase was followed by interpretation including comprehending the themes and subthemes. The responses were analyzed through Nvivo. The conclusions so generated were supported by direct quotes to demonstrate the different ways responses were expressed.

RESULTS

The study showed that the majority of participants were able to identify various audit topics of interest (88%) and understood the concept of setting standards (86%) that constitutes the backbone of clinical audits. An over whelming number of students demonstrated interest in developing skill in life long audit learning (92%) as well as in comprehension of consent requirement for clinical audits (92%). On the other end of the spectrum, less than half of the students (48%) developed concept of skill as a team member and in understanding of conflict of interest pertaining to clinical audits. The concept of writing audit proposals was grasped by 52% of the participants. The students' responses to other domains of the study are mentioned in table-I & II. Overall, 2.3% responses fell under the category of Strongly Disagree, 8.2% Disagree, 15.6% Neutral, 45.9% Agree, 26.6% Strongly Agree and 1.4% unable to comment. In merge category data, Strongly Disagree plus Disagree generated 10.5% responses (mean 5.25 ± 3.80), Neutral 15.6% (mean 7.8 ± 3.33), Agree plus Strongly Agree generated 72.5% responses (mean 36.25 ± 6.50) and Unable to Comment 1.4% responses (mean 0.7 ± 1.71).

Table-I: Individual Counts – Likert Scale (n=50).

S. No	Question The audit project enabled me to:	Strongly disagree	Dis-agree	Neu-tral	Agree	Strongly agree	Unable to comment
1	Identify topics	0	1	5	39	5	0
2	Select audit topic	0	2	10	36	2	0
3	Write aims and objectives for my audit	0	5	9	28	8	0
4	Understand appropriate standards	0	2	5	33	10	0
5	Select appropriate sample size	1	3	9	29	8	0
6	Develop an effective data tool collection	1	1	8	31	9	0
7	Understand consent requirements	0	1	3	20	26	0
8	Write audit proposal	2	9	13	22	4	0
9	Data collection	0	5	9	19	17	0
10	Analyze data	2	4	10	20	14	0
11	Interpret results	0	2	8	19	21	0
12	Write audit report	5	3	6	20	16	0
13	Develop knowledge of audit	0	4	9	18	19	0
14	Engage in audit experience	0	2	8	18	22	0
15	Develop skill in life long audit learning	0	1	3	16	30	0
16	Develop written communication skills	0	12	3	17	18	0
17	Develop my evidence-based approach	1	5	12	18	12	2
18	Develop skills as a team member	2	8	14	20	4	2
19	Develop understanding of conflict of interest	5	5	9	13	11	7
20	Develop understanding of my limitations in knowledge	4	7	3	23	10	3
	Total	23	82	156	459	266	14
	Percentages	2.3%	8.2%	15.6%	45.9%	26.6%	1.4%

The major themes emerging from FGD of clinical audit (table-III) were safe practice, clinical effectiveness, risk management, clinical gover-nance and incomplete understanding and misconceptions regarding clinical audit. Main themes along with some explanations and descriptions based on the student's verbatim responses with minor grammatical corrections without compromising the meaning are presented below.

"I had very little idea and misconceptions about the clinical audit as it is not being practiced in our set-up. I asked the teachers and they said they were not clear about it either. This activity

gave me an insight into knowing and conducting an audit."

"Ifeel clinical audit is an essential activity for improving patient care."

"Ithink clinical audits should be included in all postgraduate and undergraduate curricula."

"I think regular clinical audits can minimize chances of clinical negligence and lead to safe clinical practice. I wish audit was included in our course and we all knew about it."

"Ihad many misconceptions about clinical audit which were cleared through this activity."

"An understanding of clinical audit will allow me to compare my performance against standards. I understand it is an integral part of curricula worldwide. Our education environment seriously lacks this activity."

"Through an understanding of clinical audit, I am now more focused on evidence-based medicine and standards."

"I feelour faculty and the educational system has misconceptions and little idea and knowledge about the clinical audit and this may be a reason why it is not being taught and part of our training programme. It should be part of the faculty development programmes.

"I always considered research and audit to be the same. Through this activity I found out they are totally different.

"I was under the impression that audit and mortality and morbidity meetings and fatal case documentations are the same things. I now know that audits are based on standards and hence different from the above meetings and FCDs.

"I feel mechanisms should be put in place for the proper implementation of the clinical audit."

Table-II: Merge Categories– Likert Scale (n=50).

S. No.	Question The audit project enabled me to:	Strongly disagree & Disagree	Neutral	Agree & Strongly agree	Unable to comment
1	Identify topics	1 (2%)	5 (10%)	44 (88%)	0 (0%)
2	Selecdt audit topic	2 (4%)	10 (20%)	38 (76%)	0 (0%)
3	Write aims and objectives for my audit	5 (10%)	9 (18%)	36 (72%)	0 (0%)
4	Understand appropriate standards	2 (4%)	5 (10%)	43 (86%)	0 (0%)
5	Select appropriate sample size	4 (8%)	9 (18%)	37 (74%)	0 (0%)
6	Develop an effective data tool collection	2 (4%)	8 (16%)	40 (80%)	0 (0%)
7	Understand consent requirements	1 (2%)	3 (6%)	46 (92%)	0 (0%)
8	Write audit proposal	11 (22%)	13 (26%)	26 (52%)	0 (0%)
9	Data collection	5 (10%)	9 (18%)	36 (72%)	0 (0%)
10	Analyze data	6 (12%)	10 (20%)	34 (68%)	0 (0%)
11	Interpret results	2 (4%)	8 (16%)	40 (80%)	0 (0%)
12	Write audit report	8 (16%)	6 (12%)	36 (72%)	0 (0%)
13	Develop knowledge of audit	4 (8%)	9 (18%)	37 (74%)	0 (0%)
14	Engage in audit experience	2 (4%)	8 (16%)	40 (80%)	0 (0%)
15	Develop skill in life long audit learning	1 (2%)	3 (6%)	46 (92%)	0 (0%)
16	Develop written communication skills	12 (24%)	3 (6%)	35 (70%)	0 (0%)
17	Develop my evidence-based approach	6 (12%)	12 (24%)	30 (60%)	2 (4%)
18	Develop skills as a team member	10 (20%)	14 (28%)	24 (48%)	2 (4%)
19	Develop understanding of conflict of interest	10 (20%)	9 (18%)	24 (48%)	7 (14%)
20	Develop understanding of my limitations in knowledge	11 (22%)	3 (6%)	33 (66%)	3 (6%)
	Total Mean ± SD	105 (10.5%) 5.25 ± 3.80	156 (15.6%) 7.8 ± 3.33	725 (72.5%) 36.25 ± 6.50	14 (1.4%) 0.7 ± 1.71

DISCUSSION

Clinical audit is a tool used to identify and rectify deficiencies in clinical practice. It promotes good practice, provides opportunities for education and training, better use of resources and increase in efficiency. It prevents cases of clinical negligence through better risk management strategies and promotes evidence-based medicine. It helps to keep the medical community updated with guidelines and standards[19-24]. Our study revealed that the majority of postgraduate students perceive clinical audit to be a key component of clinical governance and want it to be included in their curricula. This study attempted to highlight the importance of clinical audit in promoting safe, quality and evidence-based care for the patients.

Table-III: Themes and Sub-themes (n=35).

Theme	Sub themes
Lack of understanding of audit	• Difficulty in grasping the concept • Available literature quite difficult • Misconceptions
Role of teachers and faculty	• Teachers not clear about audit • Not part of the training programme • Teachers not interested in teaching audit
Improper implementation	• Lack of resources and funds • Lack of hard work • Inability to manage time • Hesitation in consulting teacher
Better clinical care	• Better clinical care • Risk management • Standard setting • Compares performance against standards
Institutional environment and support	• Lack of administrative support • Faculty not trained in teaching audit • Teachers concerned about the possibility of blame culture • No internal motivation
Integral part of training programme	• Audit should be part of the learning process • Mandatory activity for all the trainees • Results presented in the meetings • Dissemination of audit work
Patients safety	• Leads to safe practice • Formulates guidelines and check lists • Leads to better quality of care
Misconceptions	• Audit and research are same • Fatal case documents are same as audit • Mortality and morbidity meetings and audit are same

There is paucity of literature about clinical audit in our country. Jafary *et al*[1] conducted a study on audit in different speciality domains and delineated its relevance in improving practice. This was however more of a narration rather than the true standard based clinical audit study. Anjum *et al*[2] discussed the importance of audits in practicein a local study.There are no proper local studies in the literature looking at the perceptions of either undergraduate or postgraduate students. This probably reflects a lack of understanding and awareness about this essential quality assurance measure. Baig *et al*[25] published a clinical audit study on their newly established oral and maxillofacial service. This represents an essential step in establishing safe practice. This represented a good starting point but lacked the true standardization required for an audit. Our study attempted to highlight these rather neglected links and issues.

Clinical audit falls under the umbrella of clinical governance and comprises measurement of performance against the preset standards, the continuing process of reflection, an initiative of incremental improvement process and re-audit to show that the desired change has occured[4,5]. Audit, clinical governance and continuing professional development (CPD) are now considered pivotal in quality assurance in different health-care systems world wide[1,4]. Mak *et al*[4] conducted an elaborate study on clinical audit in undergraduate students and concluded that audit is an important activity not only for the doctors but also for the community. They highlighted that audit has multi pronged advantages for students in understanding the complexities of audit spiral process and for providing safe and effective care for the patients. They suggested that the concept of audit could be transferrable in different disciplines and in all health care systems at all levels[4].

In our health care system, the concepts of clinical governance are seriously lacking in our health care system, highlighting an urgent need for prospect health professionals to be internally motivated, responsible, knowledgeable, and skillful in ensuring the safety of their patients, staff and practice. In spite of the above, this essential aspect of clinical care in our country has received little attention. The possible hindrances to inclusion of clinical audit and clinical governance measures in our postgraduate training programmes are not only paucity of resources but lack of advice in audit project plan, design and analysis, expertise, organizational barriers surmounted by lack of will, initiative and understanding. As a result, these quality improvement measures have not been able to be properly embedded in our healthcare system[18-25]. Most of our studies have looked at the different dimensions of clinical specialities and are descriptive narratives rather than standard based which is an essence of clinical audit[5-9]. Little is known and published about these quality improvement measures and clinical governance issues on individual and institutional levels in our set-ups[1-6]. The main facilitating factors for audit like availability of modern medical records systems, effective training, dedicated staff, protected time and structured programmes are lacking. The students have little understanding and application of clinical audits. It needs to be worked out how best to integrate these measures in our systems[20-25]. A literature gap exists with regards to perceptions and responses of postgraduate students and supervisors regarding audits in our healthcare systems[20-25]. The study conducted by Joanne *et al* showed the positive perceptions of health care professionals in the health care system[22]. This study revealed that that the participants considered audit attributes like risk management, incident reports, adverse events, staff training and management to be an integral part of the system[15-18]. Millard*et al*[24] carried out a study in Scotland and revealed positive perceptions of participants towards audit. The participants in this study perceived clinical audit to be an important benchmark of outcome measures[34]. There are some international studies like the one conducted by Mak *et al*[4] that has looked at the perceptions of undergraduate students towards audit for improving care. This is no such study done locally. Furthermore, there are no literature available locally or internationally seeking perceptions of postgraduate students about the clinical audit. Our study probably represents the first of its kind in this essential domain and context.

In essence, clinical audit represents a continuous learning process. Clinical audit translating into quality care should be at the heart of everyday clinical practice in all-healthcare systems. The clinical audit programmes are based on sound educational principles, including situated and participatory learning and reflective practice[4-8]. These programmes and activities have multiple benefits for students in terms of learning the complexities of conducting an effective audit in professional practice, and for health services in terms of facilitating quality improvement[19-23]. Our study is an attempt and effort to identify these perceptions and responses at the postgraduate level at the outset. The endeavor will subsequently be to extend this transferrable audit concept to the undergraduate education and allied health professionals. This will only be possible through a blame free culture and audit conducive learning climate amidst will, insight and efforts of all the stakeholders[18-25].

CONCLUSION

Clinical audit needs to be incorporated as an integral component in the postgraduate curricula. The medical educators and curriculum planning committees need to focus on the benefits of clinical audits, clinical governance and effective learning strategies in the backdrop of relevant support system in this context to helpstudents in achieving the desired goals in audit practice and quality assurance measures.

CONFLICTOFINTEREST

This study has no conflict of interest to declare by any author.

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