Section: Pharmacology

Original Research Article

ENHANCING MEDICAL EDUCATION: THE IMPACT OF A REVISED BASIC COURSE WORKSHOP ON FACULTY KNOWLEDGE

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Abstract

Background: This study examines the impact of a Revised Basic Course Workshop on enhancing the knowledge and perceived importance of various educational concepts among medical faculty members. With a focus on addressing key pedagogical strategies, teaching methods, and educational principles, the workshop aims to equip participants with essential skills to enhance teaching practices and foster a culture of continuous improvement in medical education. **Materials and Methods:** The study involved 90 medical faculty members from three institutions who participated in the workshop. Pre- and post-test assessments were conducted to measure participants' knowledge and perceived importance across multiple domains, including group dynamics, competency-based medical education, interactive teaching approaches, and self-directed learning. **Result:** The findings reveal significant improvements in participants' understanding and recognition of key educational concepts following the workshop. Participants demonstrated enhanced knowledge and perceived importance across various domains, highlighting the effectiveness of the workshop in equipping medical educators with essential skills and insights to enhance teaching practices. **Conclusion:** The Revised Basic Course Workshop serves as a valuable platform for promoting excellence in medical education and advancing the quality of healthcare delivery. Through ongoing professional development initiatives, such as workshops and training programs, medical educators can further enhance their pedagogical competencies and contribute to the continuous improvement of medical education.

INTRODUCTION

In the dynamic landscape of medical education, the perpetual evolution of knowledge and technology underscores the critical need for faculty members to stay abreast of the latest pedagogical approaches and medical advancements. As the gatekeepers of medical knowledge dissemination, faculty members play a pivotal role in shaping the competencies and skills of future healthcare professionals. Consequently, their continuous professional development is imperative to ensure the delivery of high-quality education that aligns with the evolving demands of the healthcare sector.[1]

Recognizing the significance of faculty development in medical education, a Revised Basic Course Workshop was meticulously crafted and implemented across three esteemed institutions: Ayaan Institute of Medical Sciences, Dr. V.R.K. Women's Medical College, and Shadan Institute of Medical Sciences. This workshop aimed to empower medical faculty members with updated pedagogical techniques, innovative teaching methodologies, and contemporary medical knowledge to enhance their effectiveness in teaching and mentoring aspiring healthcare professionals.

The importance of such workshops cannot be overstated. Firstly, they serve as platforms for faculty members to refresh their understanding of fundamental medical concepts, ensuring accuracy and relevance in their teaching.[2] Secondly, they facilitate the integration of cutting-edge research findings and technological advancements into the curriculum, thereby fostering a culture of evidence-based practice among both educators and students. Moreover, these workshops provide opportunities for faculty members to exchange ideas, share best practices, and cultivate a collaborative learning environment that enriches the educational experience for all stakeholders.[3]

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The implications of this Revised Basic Course Workshop extend far beyond the individual faculty members. By equipping educators with enhanced teaching skills and up-to-date medical knowledge, the workshop directly contributes to the quality of medical education imparted to students.[4] Furthermore, it indirectly influences the future of healthcare by nurturing competent, compassionate, and well-informed healthcare professionals who are equipped to meet the evolving healthcare needs of society.[5]

In support of the importance of faculty development in medical education, numerous studies have underscored its positive impact on teaching effectiveness, student learning outcomes, and overall educational quality.[6]These findings reinforce the necessity of continuous professional development initiatives, such as the Revised Basic Course Workshop, in sustaining excellence in medical education.

The Revised Basic Course Workshop represents a proactive approach to enhancing medical education by investing in the professional growth of faculty members. Through its emphasis on updated pedagogical practices and contemporary medical knowledge, this workshop not only elevates the teaching capabilities of educators but also fosters a culture of excellence and innovation in medical education.

MATERIALS AND METHODS

The study included a total of 90 medical faculty members from three institutions: Ayaan Institute of Medical Sciences, Dr. V.R.K. Women's Medical College, and Shadan Institute of Medical Sciences. Participants were selected through convenience sampling based on their availability and willingness to participate in the Revised Basic Course Workshop.

The Revised Basic Course Workshop was designed as a comprehensive faculty development program spanning multiple days. The workshop encompassed lectures, interactive sessions, group discussions, and hands-on activities aimed at enhancing participants' knowledge of medical concepts and refining their teaching skills. Topics covered during the workshop included updated medical curriculum guidelines, innovative teaching methodologies, effective assessment strategies, and the integration of technology in medical education.

To assess the impact of the Revised Basic Course Workshop, a pre-test and post-test design was employed. Prior to the workshop, participants completed a pre-test questionnaire to gauge their baseline knowledge and teaching practices. The pre-test questionnaire consisted of multiple-choice questions and open-ended prompts related to medical concepts and teaching methodologies. Following the completion of the workshop, participants were administered a post-test questionnaire identical to the pre-test questionnaire to measure any changes in their knowledge and teaching practices. Quantitative data obtained from the pre-test and post-test questionnaires were analyzed using descriptive statistics, including mean scores and standard deviations, to examine changes in participants' knowledge and teaching practices following the workshop. Paired-sample t-tests were conducted to assess the statistical significance of any observed differences between pre-test and post-test scores.

Qualitative data from open-ended responses in the questionnaires were subjected to thematic analysis to identify recurring themes and patterns related to participants' perceptions of the workshop's effectiveness and its impact on their teaching practices. Prior to participation, all participants provided informed consent, and assurances of confidentiality and anonymity were upheld throughout the study. Ethical approval for the study was obtained from the Institutional Review Board of each participating institution.

RESULTS

The distribution of faculty positions among participants is as follows: Assistant Professors (n = 61, 66.3%), Associate Professors (n = 23, 25.0%), and Professors (n = 6, 6.5%). These numbers indicate the frequency and percentage of participants belonging to each academic rank within the sample.

The distribution of medical specialties among participants reflects a diverse representation within the sample. Among the various specialties, Obstetrics &Gynecology, Microbiology, and Anaesthesia are the most represented, each comprising approximately 9.8%, 6.5%, and 6.5% of the sample, respectively. Other specialties such as Pharmacology, Biochemistry, and Pediatrics also demonstrate notable participation rates, each contributing 6.5%, 5.4%, and 6.5% to the sample, respectively. Conversely, some specialties show lower levels of representation, such as General Surgery, Pathology, and Dermatology, each constituting approximately 3.3% of the sample. Additionally, it is worth noting that certain specialties, such as Pulmonary Medicine, Radiology, and ENT, demonstrate relatively lower levels of participation, each representing approximately 2.2% of the sample. Overall, the distribution of medical specialties among participants highlights a diverse range of academic backgrounds and interests within the sample, underscoring the multidisciplinary nature of the study population.

The analysis revealed several significant findings regarding the pre- and post-test assessments of knowledge and importance ratings across various domains. Firstly, concerning Group Dynamics, participants demonstrated a noteworthy

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improvement in their understanding, as evidenced by a substantial increase in mean scores from 1.87 (pre-test) to 3.52 (post-test), with a significant p-value of less than 0.001. Similarly, participants reported an increased recognition of the importance of Group Dynamics, with mean scores rising from 3.46 (pre-test) to 3.99 (post-test), also yielding a significant p-value of less than 0.001.

Furthermore, regarding Competency-Based Medical Education (CBME), participants exhibited a significant enhancement in their knowledge levels, with mean scores escalating from 3.29 (pre-test) to 4.01 (post-test), supported by a significant p-value of less than 0.001. Similarly, participants displayed a notable increase in knowledge regarding International Medical Graduates (IMG), with mean scores rising from 2.00 (pre-test) to 3.76 (post-test), again accompanied by a significant p-value of less than 0.001.

It is evident that participants experienced substantial improvements in their understanding and recognition of various educational concepts. Notably, there were significant increases in both knowledge and perceived importance ratings across all domains assessed. Specifically, participants demonstrated significant enhancements in their knowledge of Learning Domains, Writing Objectives from Competencies, and Assessment, as evidenced by the significant p-values of less than 0.001. Similarly, participants' perceptions of the importance of these educational components also showed significant increases post-intervention, highlighting the effectiveness of the educational program in enhancing participants' understanding and recognition of key educational principles.

The analysis of the data reveals several significant findings in participants' understanding and perceived importance of various teaching methods. Notably, participants exhibited a significant improvement in their knowledge and perceived importance of choosing appropriate teaching methods, interactive and innovative teaching approaches, writing lesson plans, and assessment planning and quality assurance.

In terms of knowledge, participants demonstrated substantial increases from pre-test to post-test assessments across all domains, as indicated by significant p-values of less than 0.001. Moreover, participants' perceived importance of these teaching methods also showed significant enhancements post-intervention, underscoring the effectiveness of the educational program in elevating participants' understanding and recognition of key pedagogical strategies.

The data highlights significant findings in participants' knowledge and perceived importance of the AETCOM Module and various clinical skills. Participants demonstrated substantial improvements in their understanding of the AETCOM Module, as evidenced by significant increases in mean scores from pre-test to post-test assessments, with p-values of less than 0.001. Moreover, participants' perceived importance of the AETCOM Module also showed significant enhancements post-intervention, indicating the effectiveness of the educational program in elevating participants' recognition of the module's significance.

Similarly, participants exhibited significant improvements in their knowledge of matching assessment to competency and effective clinical and practical skills, as well as their perceived importance of these skills. Notably, while there were significant increases in knowledge across all domains assessed, the perceived importance of Assessment of clinical and practical skills showed a significant increase post-intervention, albeit with a slightly higher p-value of 0.02.

The presented data outlines significant findings regarding participants' knowledge and perceived importance of various aspects related to self-directed learning (SDL) and educational networking. Participants exhibited considerable improvements in their understanding of Improving SDL through technology, Feedback mechanisms, and Educational networking for growth, as indicated by significant increases in mean scores from pre-test to post-test assessments, with p-values of less than 0.001.

Moreover, participants' perceived importance of these aspects also showed significant enhancements post-intervention, underscoring the effectiveness of the educational program in elevating participants' recognition of the significance of SDL and educational networking in medical education.

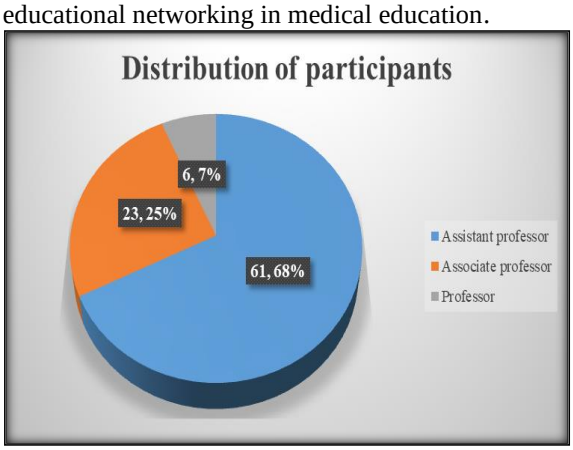

Figure 1: Distribution of Participants

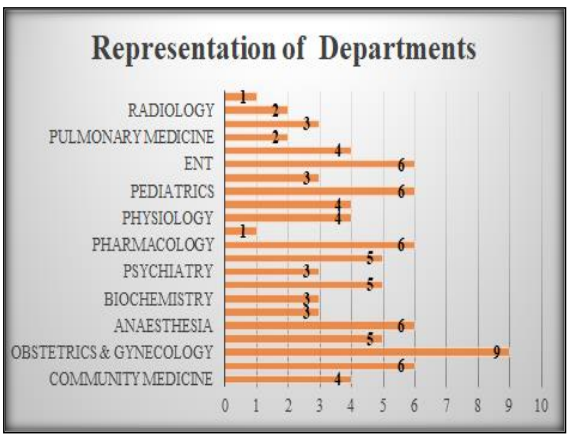

Figure 2: Departments Participated

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Table 1: Pre- and Post-Test Results for Knowledge and Importance Ratings

	N	Mean	Median	SD	SE	P value
"Pre test knowledge about Group Dynamics"	90	1.87	2	0.733	0.0769	<0.001
"Post test knowledge about Group Dynamics"	90	3.52	3	1.047	0.1098	
"Pre test importance of Group Dynamics"	90	3.46	3	0.821	0.086	<0.001
"Post test importance of Group Dynamics"	90	3.99	4	0.707	0.0741	
"Pre test knowledge of CBME"	90	3.29	3	0.764	0.0801	<0.001
"Post test knowledge of CBME"	90	4.01	4	0.723	0.0757	
"Pre test knowledge of IMG"	90	2	2	0.789	0.0827	<0.001
"Post test knowledge of IMG"	90	3.76	3	0.981	0.1029	

Table 2: Pre- and Post-Test Results for Knowledge and Importance Ratings in Educational Domains

	N	Mean	Median	SD	SE	P value
"Pre test knowledge of Learning domains"	90	2.09	2	0.877	0.092	<0.001
"Post test knowledge of Learning domains"	90	3.59	3	0.919	0.0963	
"Pre test importance of learning domains"	90	3.64	4	0.768	0.0805	0.005
"Post test importance of learning domains"	90	3.95	4	0.736	0.0771	
"Pre test knowledge of writing objective from competencies"	90	2.13	2	1.013	0.1062	<0.001
"Post test knowledge of writing objective from competencies"	90	3.75	4	1.028	0.1078	
"Pre test importance of writing objective from competencies"	90	3.6	4	0.744	0.0779	<0.001
"Post test importance of writing objective from competencies"	90	4.04	4	0.744	0.078	
"Pre test knowledge about assessment"	90	2.07	2	0.917	0.0961	<0.001
"Post test knowledge about assessment"	90	3.7	3	0.972	0.1019	
"Pre test importance of Assessment planning and quality assurance	90	3.63	4	0.755	0.0791	<0.001
"Post test importance about assessment"	90	4.1	4	0.731	0.0766	

Table 3: Pre- and Post-Test Results for Knowledge and Importance Ratings in Teaching Methods and Pedagogical Strategies

	N	Mean	Median	SD	SE	P value
"Pre test knowledge about Choosing a teaching method	90	2.25	2	0.961	0.1008	<0.001
"Post test importance of Choosing a teaching method	90	4.12	4	0.697	0.073	
"Pre test importance of Choosing a teaching method for object	90	3.69	4	0.799	0.0837	<0.001
"Post test importance of Choosing a teaching method	90	4.12	4	0.697	0.073	
"Pre test knowledge about Interactive and Innovative teaching	90	2.43	2	0.99	0.1038	<0.001
"Post test knowledge about Interactive and Innovative teaching	90	3.76	4	0.947	0.0993	
"Pre test importance of Interactive and Innovative teaching	90	3.64	4	0.753	0.0789	0.303
"Post test knowledge about Interactive and Innovative teaching	90	3.76	4	0.947	0.0993	
"Pre test knowledge about Writing a lesson plan"	90	2.12	2	0.867	0.0909	<0.001
"Post test knowledge about Writing a lesson plan"	90	3.82	4	1.028	0.1078	
"Pre test importance about Writing a lesson plan"	90	3.64	4	0.723	0.0758	<0.001
"Post test importance about Writing a lesson plan"	90	4.03	4	0.722	0.0757	
"Pre test knowledge about Assessment planning	90	2.23	2	0.932	0.0977	<0.001
"Post test knowledge about Assessment planning and quality as	90	3.62	3	1.052	0.1102	
"Pre test importance of Assessment planning	90	3.63	4	0.755	0.0791	<0.001
"Post test importance of Assessment planning	90	4.04	4	0.744	0.078	

Table 4:Pre- and Post-Test Results for Knowledge and Importance Ratings in AETCOM Module and Clinical Skills Enhancement Program

	N	Mean	Median	SD	SE	P value
"Pre test knowledge about AETCOM Module"	90	1.95	2	0.923	0.0968	<0.001
"Post test knowledge about AETCOM Module"	90	3.69	3	1.008	0.1056	
"Pre test importance of AETCOM Module"	90	3.54	3	0.704	0.0738	<0.001
"Post test importance of AETCOM Module"	90	4.08	4	0.749	0.0785	
"Pre test knowledge about Matching assessment to competency"	90	2.02	2	0.943	0.0988	<0.001
"Post test knowledge about Matching assessment to competency"	90	3.73	3	1.023	0.1072	
"Pre test importance about Matching assessment to competency"	90	3.59	4	0.745	0.0781	<0.001
"Post test importance about Matching assessment to competency	90	4.09	4	0.755	0.0791	
"Pre test knowledge about Effective clinical and practical skill	90	2.33	2	0.883	0.0925	<0.001
"Post test knowledge about Effective clinical and practical skill	90	3.6	3	1.021	0.107	
"Pre test importance of Effective clinical and practical skil	90	3.74	4	0.772	0.081	<0.001
"Post test importance of Effective clinical and practical skill	90	4	4	0.745	0.0781	
"Pre test knowledge about Assessment of clinical and practica	90	2.37	2	0.927	0.0971	<0.001
"Post test knowledge about Assessment of clinical and practic	90	3.64	3	0.937	0.0982	
"Pre test importance of Assessment of clinical and practical skill	90	3.79	4	0.85	0.0891	0.02
"Post test importance of Assessment of clinical and practical skill	90	4.08	4	0.687	0.072	

Table 5: Pre- and Post-Test Results for Knowledge and Importance Ratings in Self-Directed Learning (SDL) and Educational Networking

	N	Mean	Median	SD	SE	P value
"Pre test knowledge about Improving SDL through technology"	90	2.12	2	0.905	0.0948	<0.001

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"Post test knowledge about Improving SDL through technology"	90	3.71	3	0.992	0.104	
"Pre test importance of Improving SDL through technology"	90	3.64	4	0.707	0.0742	<0.001
"Post test importance of Improving SDL through technology"	90	4.09	4	0.694	0.0727	
"Pre test knowledge about Feedback"	90	2.31	2	0.865	0.0907	<0.001
"Post test knowledge about Feedback"	90	3.52	3	0.947	0.0993	
"Pre test Importance of Feedback"	90	3.79	4	0.753	0.0789	0.08
"Post test Importance of Feedback"	90	3.98	4	0.73	0.0765	
"Pre test knowledge about Educational networking for growth"	90	2.03	2	1.016	0.1065	<0.001
"Post test knowledge about Educational networking for growth"	90	3.58	3	0.99	0.1037	
"Pre test importance of Educational networking for growth"	90	3.55	4	0.806	0.0845	<0.001
"Post test importance of Educational networking for growth"	90	0.706	4	4.03	0.074	

DISCUSSION

The findings of this study underscore the effectiveness of the Revised Basic Course Workshop in enhancing the knowledge and perceived importance of various educational concepts among medical faculty members. The pre- and post-test assessments revealed significant improvements in participants' understanding and recognition of key pedagogical strategies, teaching methods, and educational principles across multiple domains. One of the significant findings was the notable increase in participants' knowledge about Group Dynamics. The workshop appears to have effectively equipped participants with essential skills and insights into fostering effective group dynamics within educational settings. This is consistent with previous research highlighting the importance of group dynamics in promoting collaborative learning and enhancing educational outcomes.[7]

Similarly, participants demonstrated substantial improvements in their understanding of Competency-Based Medical Education (CBME) and International Medical Graduates (IMG). This suggests that the workshop effectively addressed the complexities associated with these educational approaches and equipped participants with the necessary knowledge to implement them effectively in their teaching practices.[8]

Moreover, the workshop facilitated significant enhancements in participants' knowledge and perceived importance of various teaching methods, such as interactive and innovative teaching approaches, writing lesson plans, and assessment planning and quality assurance. These findings are consistent with existing literature emphasizing the importance of employing diverse and innovative teaching methods to engage learners effectively and promote active learning.[9]

Additionally, the workshop contributed to improvements in participants' understanding of self-directed learning (SDL) and educational networking. By enhancing participants' knowledge and perceived importance of these aspects, the workshop has likely equipped them with valuable skills to foster lifelong learning and professional development.[10]

It is important to acknowledge some limitations of this study. Firstly, the study sample comprised medical faculty members from only three institutions, which may limit the generalizability of the findings. Future research could involve a larger and more diverse sample to enhance the external validity of the findings. Additionally, the study design was pre-post without a control group, which limits the ability to establish causality. Future studies could incorporate a randomized controlled trial design to evaluate the effectiveness of the workshop more rigorously.

In conclusion, the Revised Basic Course Workshop has demonstrated promising outcomes in enhancing medical faculty members' knowledge and perceived importance of various educational concepts. By addressing key pedagogical strategies, teaching methods, and educational principles, the workshop has the potential to contribute to the continuous improvement of medical education and ultimately enhance the quality of healthcare delivery.

CONCLUSION

In summary, the Revised Basic Course Workshop significantly improved medical faculty members' understanding and recognition of key educational concepts, including group dynamics, competency-based medical education, interactive teaching methods, and self-directed learning. The workshop effectively equipped participants with essential skills and insights to enhance teaching practices and foster a culture of continuous improvement in medical education. Moving forward, these findings underscore the importance of ongoing professional development initiatives to empower medical educators and advance the quality of healthcare delivery through evidence-based teaching strategies and pedagogical innovation.

Limitations: While efforts were made to ensure the representativeness of the sample, the use of convenience sampling may limit the generalizability of the study findings. Additionally, self-report measures used in the study may be subject to response bias.

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