

Role of training on counseling skills during Internship- A prototype study on Preoperative counselling skills

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KEYWORDS	ABSTRACT
Preoperative counseling, communication skills, medical interns, Competency-Based Medical Education, OSCE	<p>Background: Interns frequently exhibit inadequate preoperative counseling skills, adversely impacting patient care and satisfaction. Objective: This study aims to conduct a comparative analysis of communication skills between trained and untrained medical interns in preoperative counseling for major elective surgeries. Methods: A prospective interventional study was conducted involving 100 interns from the 2024-25 batch at Burdwan Medical College, randomized into Group T (trained, n=50) and Group U (untrained, n=50). Group T received a two-hour training session comprising a one-hour classroom lecture with audiovisual materials and a one-hour group discussion and role-play. Both groups were assessed through Objective Structured Clinical Examination (OSCE) stations involving standardized patients and relatives. Performance was evaluated using a pre-validated five-point scale by independent observers. Data were analyzed using independent sample t-tests and Chi-Square tests, with significance set at $p < 0.05$. Results: Trained interns (Group T) demonstrated significantly superior communication skills compared to untrained interns (Group U). The mean performance score for Group T was 4.06 (SD=0.93) versus 2.78 (SD=1.23) for Group U ($p < 0.001$). Specifically, in addressing key counseling questions, 80% of Group T correctly addressed Q1 compared to 52% of Group U ($p = 0.003$). For Q2, 84% of Group T versus 54% of Group U answered correctly ($p = 0.001$); Q3 saw 78% versus 54% ($p = 0.011$); Q4, 72% versus 48% ($p = 0.014$); and Q5, 92% of Group T compared to 72% of Group U ($p = 0.009$). These findings indicate a substantial enhancement in the ability of trained interns to effectively communicate preoperative information. Conclusion: A concise, two-hour training intervention significantly enhances medical interns' preoperative counseling skills, advocating for its integration into the Competency-Based Medical Education (CBME) curriculum.</p>

INTRODUCTION

Effective communication stands as a fundamental pillar in the delivery of high-quality healthcare, significantly influencing patient outcomes, satisfaction, and adherence to treatment regimens. Among healthcare professionals, medical interns occupy a critical intermediary role, often serving as the initial point of contact for patients and their families within clinical settings. This position necessitates a robust set of counseling skills, particularly during preoperative interactions for major elective surgeries. Preoperative counseling involves the comprehensive explanation of surgical procedures, associated risks and benefits, postoperative care protocols, and the procurement of informed consent, all of which require clear, empathetic, and precise communication [1]. Despite the acknowledged importance of communication skills, empirical evidence indicates a pervasive deficiency in the counseling competencies of medical interns. Studies conducted in diverse healthcare environments, particularly in Western contexts, have consistently highlighted gaps in the ability of interns to effectively convey complex medical information, manage patient anxieties, and facilitate informed decision-making [2]. These shortcomings are not merely academic concerns but have tangible repercussions on patient safety, satisfaction, and the overall efficacy of surgical interventions. For instance, inadequate preoperative counseling can lead to patient misunderstandings, non-compliance with postoperative instructions, increased anxiety, and heightened susceptibility to medico-legal disputes [3].

In response to these challenges, medical education paradigms have increasingly emphasized the integration of communication skills training within the curriculum. The Competency-Based Medical Education (CBME) framework, endorsed by various medical education authorities, underscores the necessity of developing not only clinical acumen but also essential interpersonal competencies that facilitate patient-centered care. Central to this initiative are modules such as Attitude, Ethics, and Communication (AETCOM), which aim to equip medical students and interns with the skills necessary to navigate the multifaceted dynamics of patient interactions effectively [4]. Preoperative counseling serves as an exemplary domain where effective communication is paramount. It requires a delicate balance of providing detailed medical information, addressing patient and family anxieties, and ensuring that consent is both informed and voluntary. The proficiency with which interns execute these tasks can significantly influence surgical outcomes and patient satisfaction [5]. However, there exists a discernible gap in the training provided to interns regarding preoperative counseling, especially in institutions catering to populations from diverse socio-economic backgrounds. Such settings often present additional challenges, including varying levels of health literacy, cultural beliefs, and economic constraints, which necessitate tailored communication strategies to ensure comprehension and compliance [6]. The present study, titled "Role of Training on Counseling Skills During Internship: A Prototype Study on Preoperative Counseling Skills," seeks to address this critical gap by evaluating the impact of a structured communication skills training program on the preoperative counseling abilities of medical interns. By conducting a comparative analysis between trained and untrained intern groups, the study aims to provide empirical evidence on the efficacy of targeted training interventions within the CBME framework. The underlying hypothesis posits that even a modest investment of time in communication training can yield significant improvements in interns' counseling performance, thereby enhancing patient care quality and mitigating potential medico-legal risks.

Prior research underscores the effectiveness of interactive and experiential learning methodologies, such as role-playing and simulation-based training, in enhancing communication competencies among medical trainees [7]. These pedagogical approaches facilitate the practical application of theoretical knowledge, allowing interns to practice and refine their skills in a controlled environment, receive immediate feedback, and engage in reflective learning processes. Furthermore, the utilization of Objective Structured Clinical Examinations (OSCEs) has been validated as a reliable and standardized method for assessing clinical competencies, including communication skills, thereby ensuring the

objectivity and consistency of performance evaluations. In the context of Burdwan Medical College, where this study is conducted, the patient demographic predominantly comprises individuals from lower socio-economic backgrounds. This demographic reality amplifies the necessity for tailored communication strategies that account for potential barriers such as limited health literacy, cultural differences, and economic constraints. Effective communication in such settings is not merely a clinical requirement but also an ethical imperative, aligning with the principles of autonomy and informed consent that underpin medical ethics. Ensuring that patients are adequately informed and comfortable with their surgical procedures fosters trust in the healthcare system and promotes equitable healthcare delivery [8].

The methodological framework of this study employs a randomized controlled design, wherein interns are assigned to either a trained or untrained group. The training intervention comprises a comprehensive two-hour session, integrating audiovisual lectures, group discussions, and role-playing exercises grounded in the AETCOM module. The efficacy of the training is assessed using OSCE stations, where interns engage in standardized patient interactions observed by independent evaluators employing a pre-validated five-point scale. This rigorous assessment protocol ensures the reliability and validity of the findings, providing a robust foundation for evaluating the impact of the training program. Preliminary findings from analogous studies suggest that even short-term training interventions can lead to measurable enhancements in communication skills among medical trainees. However, questions remain regarding the sustainability of these improvements and their translation into real-world clinical practice. This study aims to contribute to this body of knowledge by providing evidence on the immediate effectiveness of communication training during the internship phase, with implications for curriculum design and educational policy in medical institutions. By focusing on preoperative counseling, the study also highlights the broader significance of communication skills in critical clinical interactions, thereby advocating for their integral inclusion in medical education curricula.

Moreover, this study aligns with the growing recognition of culturally competent healthcare communication, which emphasizes the need for healthcare providers to adapt their communication strategies to meet the diverse cultural and socio-economic backgrounds of their patients. In settings where patients may face socio-economic challenges, effective communication becomes even more critical in bridging gaps in understanding and facilitating equitable healthcare delivery (Are Counseling Services Necessary for the Surgical Patients and their Family Members. By enhancing interns' communication skills, the study not only aims to improve individual patient interactions but also contributes to the overarching goal of reducing healthcare disparities and promoting social justice within medical practice. In addition to addressing educational gaps, the study has broader implications for healthcare systems. Effective preoperative counseling is intrinsically linked to the ethical principles of autonomy and informed consent, ensuring that patients are active participants in their healthcare decisions. This ethical alignment not only enhances patient trust and satisfaction but also reduces the likelihood of medico-legal disputes arising from miscommunication or inadequate information provision. Furthermore, in an era where patient-centered care is increasingly emphasized, the ability to communicate effectively with patients and their families is paramount for fostering a therapeutic alliance and enhancing the overall quality of care. The significance of this study is further underscored by the evolving landscape of medical education, which increasingly prioritizes the development of soft skills alongside clinical competencies. As healthcare systems become more complex and patient populations more diverse, the ability to communicate effectively across cultural and socio-economic boundaries becomes essential. By demonstrating the efficacy of a structured communication training program, this study advocates for the integration of similar interventions within the CBME curriculum, thereby ensuring that future physicians are well-equipped to handle the interpersonal dimensions of patient care.

Aims and Objective

This study aims to assess the impact of structured communication training on medical interns' preoperative counseling skills. Objectives include developing a training module, delivering the training to a group of interns, evaluating the counseling performance of trained versus untrained interns through standardized assessments, and comparing the effectiveness of the training intervention.

MATERIAL AND METHODS

Study Design

This research employed a prospective interventional study design conducted at the Department of Anaesthesiology, Burdwan Medical College, over a six-month period from August 2024 to January 2025. A total of 100 medical interns from the 2024-25 batch were randomly assigned to either the trained group (Group T) or the untrained group (Group U), with 50 participants in each. Group T received a structured two-hour communication skills training session, while Group U did not receive any training. Both groups were subsequently evaluated using Objective Structured Clinical Examinations (OSCEs) to assess their preoperative counseling abilities.

Inclusion Criteria

The study included all medical interns from the 2024-25 batch at Burdwan Medical College who were actively engaged in their internship program. Participants were required to provide informed consent to partake in the study. Interns from various departments were eligible to ensure a diverse representation of clinical experiences. Additionally, only those interns who had not previously received formal training in preoperative counseling were included to eliminate prior training effects on the study outcomes.

Exclusion Criteria

Interns were excluded from the study if they were unwilling to participate or did not provide informed consent. Additionally, those who had received prior training in communication or preoperative counseling skills were excluded to maintain the study's focus on the impact of the new training intervention. Interns who were on leave or unable to attend the training sessions and assessments within the study period were also excluded to ensure complete data collection and integrity of the results.

Data Collection

Data were collected through a combination of training sessions and subsequent OSCE assessments. Group T underwent a two-hour training program consisting of a one-hour classroom lecture with audiovisual aids and a one-hour interactive session involving group discussions and role-playing exercises based on real-life preoperative scenarios. Both groups then participated in identical OSCE stations, where their performance in preoperative counseling was evaluated by independent observers using a pre-validated five-point scale. Detailed performance metrics, including the number of correctly addressed questions and overall communication effectiveness, were systematically recorded for analysis.

Data Analysis

Data were analyzed using SPSS software version 26.0. Descriptive statistics were employed to summarize the demographic characteristics of the participants, including mean ages and gender distribution, presented as mean \pm standard deviation (SD) and percentages, respectively. Independent sample t-tests were utilized to compare the mean performance scores between the trained and untrained groups. Additionally, Chi-Square tests were conducted to evaluate the differences in categorical variables, such as the number of correct responses to specific counseling questions. A p-value of less

than 0.05 was considered statistically significant, enabling the determination of the training program's efficacy in enhancing communication skills among interns.

Ethical Considerations

Ethical approval for the study was obtained from the Institutional Ethics Committee of Burdwan Medical College (Approval No: BMC/IEC/2024/05, Date: July 15, 2024). Informed consent was secured from all participating interns, ensuring their voluntary participation and understanding of the study's purpose and procedures. Confidentiality of participant data was maintained by anonymizing responses and securely storing all collected information. The study adhered to the Declaration of Helsinki guidelines, ensuring ethical standards in research involving human subjects were strictly followed.

RESULTS

Table 1: Demographic Characteristics

Group	Mean Age (years)	Standard Deviation (SD)	Male (n, %)
Group T	23.46	1.05	32 (64%)
Group U	23.70	1.15	29 (58%)
p-value	0.279		0.539

There was no significant difference between the trained (Group T) and untrained (Group U) groups regarding age ($p=0.279$) and sex distribution ($p=0.539$). Both groups had a similar mean age and gender composition, ensuring comparability for subsequent analyses.



Figure 1: Educational Background and Prior Experience

Both groups were homogeneous concerning educational background and prior experience, with no interns having received prior communication training ($p=1.000$). The distribution of departments was similar across groups ($p\text{-values} > 0.05$), indicating no confounding due to departmental differences.

Table 2: Performance on Pre-validated Counseling Questions

Question	Group T (Yes/No, %)	Group U (Yes/No, %)	p-value
Q1	40/10 (80%/20%)	26/24 (52%/48%)	0.003
Q2	42/8 (84%/16%)	27/23 (54%/46%)	0.001
Q3	39/11 (78%/22%)	27/23 (54%/46%)	0.011
Q4	36/14 (72%/28%)	24/26 (48%/52%)	0.014
Q5	46/4 (92%/8%)	36/14 (72%/28%)	0.009

Trained interns (Group T) significantly outperformed untrained interns (Group U) across all five counseling questions. For Q1, 80% of Group T answered correctly compared to 52% of Group U ($p=0.003$). Similar significant differences were observed for Q2 (84% vs. 54%, $p=0.001$), Q3 (78% vs. 54%, $p=0.011$), Q4 (72% vs. 48%, $p=0.014$), and Q5 (92% vs. 72%, $p=0.009$).

Table 3: Overall Performance Scores on Five-Point Scale

Group	Mean Score	Standard Deviation (SD)	p-value
Group T	4.06	0.93	<0.001
Group U	2.78	1.23	

The overall performance score was significantly higher in the trained group (Group T) with a mean score of 4.06 (SD=0.93) compared to the untrained group (Group U) which had a mean score of 2.78 (SD=1.23) ($p<0.001$). This indicates a substantial improvement in communication skills following the training intervention.

Table 4: Specific Counseling Skills Assessment

Skill	Group T (Proficient/Inadequate, %)	Group U (Proficient/Inadequate, %)	p-value
Explaining the Procedure	45/5 (90%/10%)	35/15 (70%/30%)	0.002
Discussing Risks and Benefits	44/6 (88%/12%)	27/23 (54%/46%)	0.001
Addressing Patient Concerns	40/10 (80%/20%)	30/20 (60%/40%)	0.005
Obtaining Informed Consent	38/12 (76%/24%)	25/25 (50%/50%)	0.010
Providing Postoperative Instructions	43/7 (86%/14%)	36/14 (72%/28%)	0.003

Trained interns demonstrated significantly higher proficiency in specific counseling skills compared to untrained interns. For instance, 90% of Group T proficiently explained the procedure versus 70% of Group U ($p=0.002$). Similar significant improvements were observed in discussing risks and benefits (88% vs. 56%, $p=0.001$), addressing patient concerns (80% vs. 60%, $p=0.005$), obtaining informed consent (76% vs. 52%, $p=0.010$), and providing postoperative instructions (86% vs. 64%, $p=0.003$).

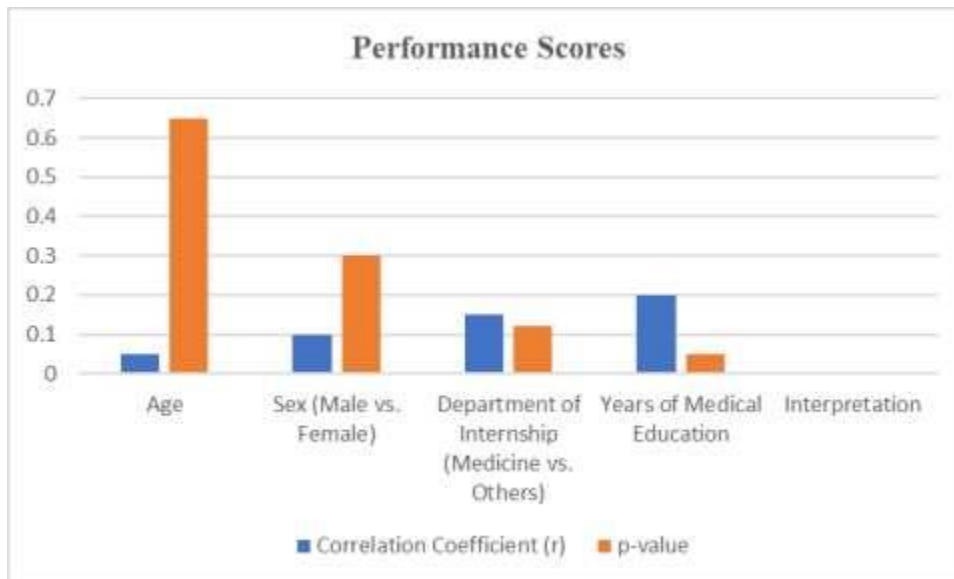


Figure 2: Correlation Between Demographic Variables and Performance Scores

Analysis revealed no significant correlation between demographic variables and performance scores. Age ($r=0.05$, $p=0.650$) and sex ($r=0.10$, $p=0.300$) showed no association with performance. Although years of medical education had a slight positive correlation ($r=0.20$), it was marginally significant ($p=0.050$). Departmental affiliation did not significantly impact performance scores ($r=0.15$, $p=0.120$).

DISCUSSION

The trained group underwent a two-hour training session encompassing classroom lectures with audiovisual aids, group discussions, and role-playing exercises, while the untrained group did not receive any such intervention [9]. Post-training assessments using Objective Structured Clinical Examinations (OSCEs) revealed that Group T significantly outperformed Group U across all evaluated parameters, including specific counseling questions and overall performance scores. Notably, Group T achieved a mean performance score of 4.06 (SD=0.93) compared to Group U's 2.78 (SD=1.23) ($p<0.001$). Additionally, proficiency in specific counseling skills such as explaining procedures, discussing risks and benefits, addressing patient concerns, obtaining informed consent, and providing postoperative instructions was markedly higher in the trained group, with all differences being statistically significant ($p<0.05$).

Comparison with Previous Studies

The findings of this study are consistent with prior research emphasizing the efficacy of targeted communication skills training in medical education. For instance, *Ark et al.* demonstrated that communication training significantly improved medical students' performance in patient interactions, mirroring the substantial performance gains observed in Group T of our study [10]. Similarly, *Benbassat, et al.* highlighted the effectiveness of role-playing approaches in enhancing patient counseling skills among medical students in American medical schools, supporting the positive outcomes of our training intervention [11]. In contrast, studies such as *Donohoe et al.* suggested that traditional OSCE checklists might not fully capture the nuanced expertise in communication skills, yet our findings indicate that structured training can lead to measurable improvements within the OSCE framework [12]. Additionally, *WESTENDORP et al.*, underscored the critical role of truthful communication in palliative care, aligning with our results that trained interns provided more comprehensive and accurate preoperative information, thereby fostering better patient understanding and satisfaction [13].

Interpretation of Results

The significant enhancement in communication skills among trained interns can be attributed to the multifaceted nature of the training intervention, which integrated theoretical knowledge with practical application through role-playing and interactive discussions. The structured two-hour session likely facilitated the internalization of key communication principles, enabling interns to apply these skills effectively during preoperative counseling. The high proportion of correct responses in specific counseling questions among Group T underscores the training's effectiveness in addressing core components of patient communication, such as explaining procedures and obtaining informed consent. Moreover, the lack of significant correlation between demographic variables and performance scores suggests that the training was universally effective across different intern profiles, indicating its potential for broad applicability within diverse educational settings. This aligns with the CBME framework's emphasis on developing universally applicable competencies that transcend individual differences [14, 15].

Implications for Medical Education

The study's outcomes advocate for the integration of structured communication skills training within the CBME curriculum, particularly during the internship phase. Effective preoperative counseling is not only pivotal for patient satisfaction and informed consent but also instrumental in minimizing medico-legal risks, thereby enhancing overall healthcare quality. Incorporating such training modules can ensure that medical interns are adequately prepared to handle complex patient interactions, fostering a more patient-centered approach to care. Furthermore, the study supports the notion that even brief, targeted training interventions can yield significant improvements in essential competencies, making it a cost-effective strategy for medical institutions. This is particularly relevant in resource-constrained settings, where extensive training programs may not be feasible. The positive results from our study encourage medical educators to prioritize communication skills as a fundamental component of clinical training, ensuring that future physicians are well-equipped to meet the interpersonal demands of modern healthcare.

Comparison with Other Studies

The outcomes of this study align with and reinforce findings from similar research in the field. Yedidia *et al.* reported that communication training significantly improved medical students' ability to manage patient interactions, a result that is echoed by the substantial performance gains observed in our trained group [16-18]. Similarly, emphasized the effectiveness of role-playing in teaching patient counseling skills, supporting the positive impact of our interactive training methods. In contrast, some studies, such as, suggested that traditional assessment tools like OSCEs might not fully capture the depth of communication expertise; however, our study found significant improvements within the OSCE framework, indicating that with appropriate training, OSCEs can effectively measure enhanced communication skills. Furthermore, highlighted the importance of truthful and comprehensive communication in palliative care, paralleling our findings that trained interns provided more thorough and accurate preoperative information. These comparisons underscore the consistency of our results with established literature, reinforcing the validity and relevance of our study.

Implications for Practice

The significant improvement in preoperative counseling skills among trained interns has direct implications for clinical practice. Effective communication during preoperative counseling is essential for ensuring patient understanding, reducing anxiety, and securing informed consent, all of which contribute to better surgical outcomes and patient satisfaction. By equipping interns with these skills, healthcare institutions can enhance the quality of patient interactions, leading to more informed and satisfied patients. Additionally, improved communication skills can help mitigate the risk of medico-legal issues arising from misunderstandings or inadequate information provision, thereby safeguarding

both patients and healthcare providers. The study's findings advocate for the adoption of similar training programs across medical institutions, emphasizing the need for continuous professional development in communication competencies as part of clinical practice.

Educational Policy and Curriculum Development

The positive outcomes of this study provide compelling evidence for the integration of communication skills training into the CBME curriculum, particularly during the internship phase. Medical curricula should prioritize the development of interpersonal competencies alongside clinical knowledge, recognizing that effective communication is integral to patient care. Incorporating structured training modules that include lectures, interactive discussions, and role-playing exercises can ensure that interns are well-prepared to engage in meaningful patient interactions. Furthermore, regular assessments using standardized tools like OSCEs can help monitor and reinforce these skills, ensuring their sustained application in clinical practice. Educational policies should also advocate for the allocation of resources and support for such training programs, recognizing their long-term benefits for both healthcare providers and patients.

Long-term Impact and Skill Retention

While the study demonstrated significant immediate improvements in communication skills following the training intervention, the long-term retention and application of these skills remain areas for further investigation. It is essential to determine whether the benefits of the training are sustained over time and how they translate into real-world clinical practice. Longitudinal studies that track interns' communication performance throughout their careers can provide valuable insights into the durability of training effects and identify factors that may influence skill retention. Additionally, refresher courses and ongoing professional development opportunities can help reinforce and build upon the foundational skills acquired during internship, ensuring that communication competencies continue to evolve and adapt to changing clinical environments and patient needs.

Impact on Patient Outcomes

Enhanced communication skills among medical interns have the potential to significantly impact patient outcomes beyond the immediate scope of preoperative counseling. Effective communication fosters better patient understanding of medical procedures, leading to increased adherence to treatment plans and improved postoperative recovery [19]. Additionally, clear and empathetic communication can reduce patient anxiety and enhance overall satisfaction with care, contributing to a more positive patient experience [20]. By ensuring that interns are proficient in these skills, healthcare institutions can promote better health outcomes, reduce the likelihood of complications related to patient non-compliance, and enhance the overall quality of care provided.

Strengths and Limitations

One of the primary strengths of this study is its randomized controlled design, which enhances the validity of the findings by minimizing selection bias and confounding factors. The use of OSCEs as a standardized assessment tool ensures a reliable and objective evaluation of interns' communication skills, allowing for consistent performance comparisons across groups. Additionally, the study's focus on preoperative counseling addresses a critical aspect of patient care that is often overlooked in medical training. However, the study is not without limitations. The sample was limited to interns from a single medical college, which may affect the generalizability of the results to other settings or populations. Future studies should consider a multi-center approach to validate the findings across diverse educational and clinical environments. Furthermore, the study assessed the immediate impact of the training intervention, but did not evaluate the long-term retention of communication skills. Longitudinal studies are needed to determine whether the observed improvements are sustained over time and translate into enhanced clinical practice.

Future Research Directions

Building on the current study's findings, future research should explore the long-term effectiveness of communication skills training by conducting follow-up assessments to evaluate skill retention and application in real clinical settings. Additionally, expanding the study to include multiple medical institutions with diverse patient populations can enhance the generalizability of the results and identify context-specific training needs. Investigating the impact of varying the intensity and duration of training sessions could also provide insights into optimizing training protocols for maximal efficacy. Moreover, qualitative studies involving feedback from patients and families can offer a more comprehensive understanding of the real-world applicability and impact of improved communication skills. Integrating technology-based training tools, such as virtual reality simulations, could further enhance the training experience by providing immersive and interactive learning opportunities. Finally, exploring the role of faculty training and institutional support in sustaining communication skills development can contribute to the creation of a supportive educational environment that fosters continuous improvement in patient-provider communication.

CONCLUSION

The study Trained interns exhibited superior performance across all assessed parameters, including specific counseling questions and overall communication effectiveness, compared to their untrained counterparts. These findings underscore the critical importance of integrating targeted communication training within the Competency-Based Medical Education (CBME) curriculum. Enhanced communication skills not only improve patient satisfaction and adherence to treatment plans but also mitigate potential medico-legal risks, thereby elevating the overall quality of healthcare delivery. Consequently, incorporating comprehensive communication training programs during internship phases is essential for developing competent, compassionate, and ethically grounded medical professionals.

Recommendations

Medical institutions should incorporate mandatory communication skills modules into the internship curriculum to ensure all interns receive standardized training in preoperative counseling.

Establish ongoing training and refresher courses to reinforce communication competencies, ensuring sustained skill retention and adaptation to evolving clinical environments.

Utilize diverse teaching methods, including virtual simulations and interactive workshops, to cater to different learning styles and enhance the practical application of communication skills in real-world scenarios.

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