Medical Students' Perspectives on the Effectiveness of an ESP Program Based on the Calgary-Cambridge Guide for Improving Communication Skills in Medical Interviews

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Medical Students' Perspectives on the Effectiveness of an ESP Program Based on the Calgary-Cambridge Guide for Improving Communication Skills in Medical Interviews

Abstract

The current research examined medical students' perspectives on the effectiveness of an ESP program, based on the Calgary-Cambridge Guide, for improving communication skills in medical interviews. Utilizing a descriptive design, the research combined quantitative scale data with qualitative interviews for a comprehensive analysis. The research involved 41 fifth-year medical students from Misr University for Science and Technology (MUST) in Egypt, who were enrolled in the spring semester of 2024. The research tools included a scale with statements rated on a 5-point Likert scale, focusing on communication skills across the five stages of medical interviews as outlined by the Calgary-Cambridge Guide: Initiating the session, gathering information, physical examination, treatment planning, and closing the session. Additionally, qualitative interviews with open-ended questions were conducted to identify the most effective aspects of the program, evaluate its impact on students' competence and confidence during medical interviews, and gather suggestions for future improvements. Notably, only 10 participants agreed to take part in the interviews, each lasting about 10 minutes. The findings indicated that the Calgary-Cambridge Guide-based Training Program significantly improved medical students' communication skills at various stages of medical interviews. These improvements highlight the effectiveness of ESP programs in medical communication education.

Key words: medical Students, ESP Program, Calgary Cambridge Guide, Communication Skills in the Medical Interview.

Medical Students' Perspectives on the Effectiveness of an ESP Program Based on the Calgary-Cambridge Guide for Improving Communication Skills in Medical Interviews"

Dr. Amal Fahim ElQersh

وجهة نظر طلاب كلية الطب فى فعالية برنامج اللغة الإنجليزية لأغراض خاصة كبرنامج تدريبى قائم على دليل كالجارى كامبريدج في تحسين مهارات الاتصال أثناء المقابلة الطبية

تناول البحث الحالي وجهات نظر طلاب الطب حول فعالية برنامج اللغة الإنجليزية لأغراض خاصة، بناءً على دليل كالغاري كامبريدج، لتحسين مهارات الاتصال في المقابلات الطبية. وباستخدام التصميم الوصفي، جمع البحث بيانات المقياس الكمي مع المقابلات النوعية لإجراء تحليل شامل. شمل البحث 41 طالبًا من طلاب الطب في السنة الخامسة من جامعة مصر للعلوم والتكنولوجيا (MUST) في مصر، والذين تم تسجيلهم في الفصل الدراسي الربيعي لعام 2024. وتضمنت أدوات البحث مقياسًا بعبارات مصنفة على مقياس ليكرت المكون من 5 نقاط، مع التركيز على حول مهارات الاتصال عبر المراحل الخمس للمقابلات الطبية على النحو المبين في دليل كالجاري-كامبريدج: بدء الجلسة، وجمع المعلومات، والفحص البدني، وتخطيط العلاج، واختتام الجلسة. بالإضافة إلى ذلك، تم إجراء مقابلات نوعية مع أسئلة مفتوحة لتحديد الجوانب الأكثر فعالية للبرنامج، وتقييم تأثيره على كفاءة الطلاب وثقتهم أثناء المقابلات الطبية، وجمع الاقتراحات للتحسينات المستقبلية. ومن الجدير بالذكر أن 10 مشاركين فقط وافقوا على المشاركة في المقابلات، التي استغرقت كل منها حوالي 10 دقائق. أشارت النتائج إلى أن برنامج التدريب القائم على دليل كالجاري-كامبريدج أدى إلى تحسين مهارات التواصل لدى طلاب الطب بشكل ملحوظ في المراحل المختلفة من المقابلات الطبية. تؤكد هذه التحسينات على فعالية برامج اللغة الإنجليزية لأغراض خاصة في التعليم الطبى.

الكلمات المفتاحية: طلاب الطب، برنامج اللغة الإنجليزية لأغراض خاصة ، دليل كالجاري كامبريدج، مهارات الاتصال أثناء المقابلة الطبية.

Medical Students' Perspectives on the Effectiveness of an ESP Program Based on the Calgary-Cambridge Guide for Improving Communication Skills in Medical Interviews

Introduction

English for Specific Purposes (ESP) programs have gained significant traction in medical education, particularly in non-native English-speaking contexts. These programs are specifically tailored to meet the linguistic and communicative needs of medical students, ensuring they are equipped to navigate the complexities of patient interactions in English. When combined with established communication frameworks like the Calgary-Cambridge Guide, ESP courses provide a structured and targeted approach to developing the communication skills crucial for medical interviews.

Effective communication is fundamental in healthcare, as it directly impacts patient satisfaction, adherence to treatment plans, and overall clinical outcomes. Physicians who communicate well are better able to build rapport with patients, making them feel heard and understood, which significantly enhances patient satisfaction. For instance, Oates et al. (2000) found that patients who perceived their doctors as good communicators were more satisfied with their care and more likely to follow medical advice.

Moreover, good communication is directly linked to improved patient outcomes. Clear and empathetic exchanges between healthcare providers and patients facilitate accurate information sharing and adherence to treatment plans, leading to better symptom resolution, pain control, and emotional health, as demonstrated by Stewart's systematic review in 1995. On the other hand, failures in communication are a leading cause of medical errors. A 2015 report by the Joint Commission highlighted that communication failures were the primary root cause of over 70% of sentinel events in hospitals.

Recognizing the importance of communication skills, medical education has increasingly incorporated structured training programs. Communication training first appeared in the early 1970s (Whitehouse, 1991) and has since become a key component of medical curricula in the US (Makoul, 2001; Rider et al., 2006), the UK (Brown, 2008; von Fragstein et al., 2008), and various European countries (Deveugele et al., 2006; van Dalen et al., 2002). Among these programs, the Calgary-Cambridge framework stands out for its

Medical Students' Perspectives on the Effectiveness of an ESP Program Based on the Calgary-Cambridge Guide for Improving Communication Skills in Medical Interviews"

Dr. Amal Fahim ElQersh

comprehensive approach to teaching communication skills in clinical settings (Silverman, 2009).

At Misr University for Science and Technology (MUST) in Egypt, an ESP-based training program titled "Good Practice Communication Skills in English for the Medical Practitioner" has been implemented. This program, grounded in the Calgary-Cambridge framework, aims to enhance the communication skills necessary for effective medical interviews, integrating linguistic knowledge with clinical competencies from the early stages of medical education.

Assessing students' perceptions of this program is crucial for identifying its strengths and areas for improvement. While there is extensive literature on the theoretical benefits of communication skills training, there is a gap in empirical research focusing specifically on students' perceptions of ESP programs based on the Calgary-Cambridge Guide (Kurtz, Silverman, & Draper, 2005). Understanding these perceptions can provide valuable insights into the program's effectiveness and guide future enhancements in medical education curricula.

This research focuses on exploring medical students' perspectives at MUST, Egypt, on the effectiveness of an ESP-based training program grounded in the Calgary-Cambridge Guide. By investigating how students perceive the impact of this program on their ability to conduct medical interviews, this study aims to contribute valuable insights into the role of ESP in medical education and its potential to enhance the communication competencies of future healthcare professionals.

Statement of the Problem

Despite the well-documented importance of effective communication in healthcare and the growing integration of communication training in medical education, there remains a significant gap in understanding how students perceive these training programs, particularly those that combine English for Specific Purposes (ESP) with structured communication frameworks like the Calgary-Cambridge Guide. At Misr University for Science and Technology (MUST) in Egypt, an ESP-based training program has been implemented to enhance medical students' communication skills in English, specifically for medical interviews. However, little is known about how these students perceive the effectiveness of this program in preparing them for real-world clinical interactions. This

gap in empirical research is concerning, as students' perceptions can provide critical insights into the strengths and weaknesses of the program, guiding necessary refinements and improvements. Therefore, this research seeks to explore and analyze medical students' perspectives on the effectiveness of the ESP program at MUST, aiming to fill the existing research gap and contribute to the enhancement of communication training in medical education.

Questions of the Research

This research aims at investigating the following questions:

1. What are the perspectives of medical students regarding the effectiveness of an ESP program based on the Calgary Cambridge guide in improving their communication skills during medical interviews?

2. What are the perspectives of medical students regarding the effectiveness of an ESP program based on the Calgary Cambridge guide in improving their communication skills of "Initiating the Session" stage of the medical interviews?

3. What are the perspectives of medical students regarding the effectiveness of an ESP program based on the Calgary Cambridge guide in improving their communication skills of "Gathering Information" stage of medical interviews?

4. What are the perspectives of medical students regarding the effectiveness of an ESP program based on the Calgary Cambridge guide in improving their communication skills of "Physical Examination" stage of medical interviews?

5. What are the perspectives of medical students regarding the effectiveness of an ESP program based on the Calgary Cambridge guide in improving their communication skills of "Treatment Planning" stage of medical interviews?

6. What are the perspectives of medical students regarding the effectiveness of an ESP program based on the Calgary Cambridge guide in improving in improving their communication skills of "Closing the session" stage of medical interviews?

7. Which specific components of an ESP program based on the Calgary Cambridge guide do medical students perceive as most beneficial for improving their communication skills?

Medical Students' Perspectives on the Effectiveness of an ESP Program Based on the Calgary-Cambridge Guide for Improving Communication Skills in Medical Interviews"

Dr. Amal Fahim ElQersh

8. How do medical students perceive the impact of an ESP program based on the Calgary Cambridge guide on their confidence and competence in conducting medical interviews?

9. What suggestions do medical students have for improving an ESP program based on the Calgary Cambridge guide?

Literature Review

ESP in Medical Education

English for Specific Purposes (ESP) is a branch of language education that focuses on teaching English in a way that meets the specific needs of learners within particular professional or academic fields. The development of ESP as a distinct area of study emerged in the mid-20th century, largely driven by the increasing demand for English proficiency in specific professional contexts, such as business, law, and medicine (Hutchinson & Waters, 1987). ESP is characterized by its focus on the learner's goals and the specific language functions and forms that are necessary for success in a particular domain (Dudley-Evans & St John, 1998). Unlike General English, which emphasizes broad language skills, ESP courses are tailored to address the specialized vocabulary, discourse, and communication strategies required in specific professional environments (Robinson, 1991). This targeted approach ensures that learners acquire the language skills most relevant to their field, thereby enhancing both their linguistic competence and their professional effectiveness.

In the context of medical education, ESP has become increasingly important as English has established itself as the lingua franca of the global medical community. Medical students and professionals are often required to communicate in English with colleagues, patients, and in academic settings, making proficiency in medical English essential (Orr, 2002). ESP courses in medical education typically focus on developing students' abilities to understand and use medical terminology, communicate effectively with patients, and engage with English-language medical literature (Chia et al., 1999). These courses are designed to meet the specific communicative needs of medical students, which include not only the ability to discuss medical conditions and treatments but also the interpersonal skills required for patient interviews and consultations (Bosher & Smalkoski, 2002). By integrating communication frameworks like the Calgary-Cambridge Guide into ESP programs, educators can further enhance the relevance and effectiveness of these

courses, ensuring that medical students are well-prepared for the communicative demands of their profession.

Communication Skills Training Programs for Medical Students

Communication skills training programs are essential for medical students, providing the foundation for effective patient care and professional development. These programs are designed to enhance students' ability to communicate clearly and empathetically with patients, which is critical for accurate diagnosis, treatment adherence, and overall patient satisfaction (Brown & Bylund, 2008).

The significance of these programs is evident in several ways. First, effective communication between healthcare providers and patients is linked to better health outcomes, helping to build trust, reduce patient anxiety, and ensure that patients fully understand their conditions and treatment plans, leading to better adherence and collaboration (Stewart, 1995). Additionally, good communication skills enable medical students to gather more accurate patient histories, which is vital for correct diagnoses and appropriate treatment plans (Smith et al., 2007).

Furthermore, communication training fosters a patient-centered approach, teaching students to consider the emotional, psychological, and social aspects of patient care. This holistic view enhances patient satisfaction and engagement (Boon & Stewart, 1998). Professional development also benefits, as students who communicate effectively with patients, colleagues, and other healthcare professionals are better prepared for teamwork, leadership, and professional interactions (Yedidia et al., 2003).

The long-term benefits of communication skills training extend beyond immediate patient care. Studies indicate that doctors who communicate well experience lower burnout levels and higher job satisfaction, contributing to more fulfilling medical careers (Maguire & Pitceathly, 2002). Additionally, modern healthcare requires sensitivity to cultural, linguistic, and individual differences among patients. Communication training often includes cultural competence, improving interactions with patients from diverse backgrounds (Lie et al., 2008).

Finally, communication skills are increasingly recognized as a core competency by medical accrediting bodies, leading to their formal integration into medical curricula worldwide, underscoring their essential role in medical education (Makoul, 2001; Rider et al., 2006). In summary, communication skills training programs are vital for medical

Medical Students' Perspectives on the Effectiveness of an ESP Program Based on the Calgary-Cambridge Guide for Improving Communication Skills in Medical Interviews"

Dr. Amal Fahim ElQersh

students as they equip them with the tools needed for high-quality, patient-centered care, improved diagnostic accuracy, and strong professional relationships.

The Calgary Cambridge Guide

The Calgary-Cambridge Guide was developed in the late 1990s by Suzanne Kurtz and Jonathan Silverman. The goal was to create a comprehensive and structured approach to teaching and assessing communication skills in medical education. Recognizing the critical role of effective communication in clinical practice, Kurtz and Silverman aimed to integrate communication training into medical curricula in a systematic way. Their work culminated in the publication of the guide, which has since become a foundational tool in medical education worldwide (Kurtz et al., 2003). The guide provides a structured, step-by-step framework for medical interviews, from initiation to closure. This structure ensures that healthcare providers can conduct thorough and efficient patient interactions, addressing all necessary aspects without omission (Kurtz et al., 2003).

A significant strength of the guide is its promotion of patient-centered care. It emphasizes active listening, empathetic responses, and patient engagement in decision-making. This approach has been linked to higher patient satisfaction and better health outcomes, underscoring the importance of effective communication in clinical practice (Silverman et al., 2013).

In the realm of education, the Calgary-Cambridge Guide serves as a comprehensive tool for assessing communication skills. It offers clear evaluation criteria, which aids in identifying areas for improvement and providing specific, constructive feedback to learners (Brown & Bylund, 2008). This has made it a widely adopted method in medical training programs, facilitating the development of tailored modules that address various communication challenges faced by healthcare professionals (Bachmann et al., 2013).

The guide's effectiveness is supported by empirical research, demonstrating that structured communication training improves medical students' and practitioners' skills, leading to better patient outcomes (Yedidia et al., 2003). In the same vein, Rider et al. (2006) explored how the Calgary Cambridge framework supports patient-centered care. They found that students trained with the framework were better at addressing patients' psychosocial needs, demonstrating empathy, and involving patients in decision-making processes. The authors also confirmed its adaptability across different clinical settings and

specialties further enhances its utility, allowing for customization to meet the diverse needs of various patient populations and healthcare environments.

In addition, Cleland et al. (2005) explored the perceptions of faculty members regarding the Calgary Cambridge framework. It found that while faculty generally viewed the framework positively, they emphasized the need for adequate training and resources to effectively implement it in the curriculum.

Furthermore, Lane & Rollnick (2007) examined the use of the Calgary Cambridge framework from the perspective of faculty members. It identified challenges in implementation, such as time constraints and the need for faculty development. However, it also underscored the framework's effectiveness in providing a structured and comprehensive approach to teaching communication skills.

Brown et al. (2010) as well examined the implementation of the Calgary Cambridge framework in undergraduate medical education. The researchers found that students who received training based on the framework showed significant improvement in their ability to gather information, provide explanations, and build relationships with patients. The study highlights the framework's practical benefits in a real-world educational setting.

Moreover, Lang et al. (2013) investigated the integration of the Calgary Cambridge guide in a clinical skills curriculum for medical students. The results indicated that students who underwent training using the framework reported higher levels of preparedness for patient interviews and felt more competent in their communication abilities.

Overall, the Calgary-Cambridge Guide's detailed framework, focus on patient-centered care, robust assessment capabilities, and empirical validation make it an invaluable resource in both medical education and practice, significantly contributing to the enhancement of communication skills among healthcare providers (Makoul, 2001).

Communication skills in the Calgary-Cambridge Guide

The Calgary-Cambridge Guide outlines specific communication skills for each phase of the medical interview, aimed at ensuring effective patient interaction. These communication skills integrated into each step of the Calgary-Cambridge Guide are essential for building rapport, gathering information, conducting physical examinations, planning treatment, and effectively closing the session during medical interviews (Silverman et al., 2013). The Calgary-Cambridge model is presented in the following diagram, which aids to enhance communication skills training visually and

Medical Students' Perspectives on the Effectiveness of an ESP Program Based on the Calgary-Cambridge Guide for Improving Communication Skills in Medical Interviews"

Dr. Amal Fahim ElQersh

conceptually. The first diagram (Figure 1) summarizes the medical interview as a sequential five-step process: initiation of the session; gathering information; physical examination; explanation and planning; and closing the session.

Figure 1

The Phases of the Medical Interview
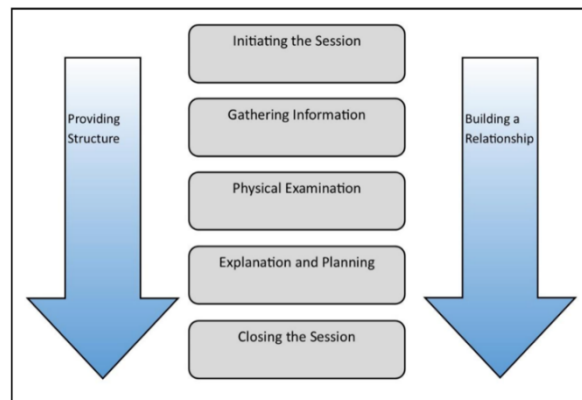
Note. Adapted from the Calgary Cambridge Guide

 The first phase, "Initiating the Session", involves establishing rapport by building trust through non-verbal cues such as maintaining eye contact and using a welcoming tone. This phase also includes identifying the reason for consultation by using open-ended questions to encourage the patient to express their concerns freely, and obtaining consent by clearly explaining the purpose of the consultation and ensuring the patient's comfort (Silverman, Kurtz, & Draper, 2013).

In the second phase, "Gathering Information", active listening is crucial. This involves paying close attention to the patient's verbal and non-verbal cues to fully understand their concerns. Healthcare providers should use a mix of open and closed questions to explore the patient's narrative and gather specific information. Facilitating the patient's narrative without interruption allows them to share their story, while clarifying and summarizing

ensures mutual understanding of key points between the patient and provider (Silverman et al., 2013).

The third phase, "Physical Examination", requires clear explanations of the examination procedures to address any concerns or anxieties the patient may have. Maintaining professionalism and sensitivity is essential, as it involves respecting the patient's privacy and dignity throughout the examination process. This phase also includes responding to any discomfort or pain experienced by the patient, ensuring their comfort and well-being (Silverman et al., 2013).

"Planning the Treatment", the fourth phase, involves providing clear explanations of the diagnosis, treatment options, and potential risks and benefits in language that the patient can understand. Engaging the patient in shared decision-making by discussing treatment options and considering their preferences and values is crucial. Additionally, addressing the patient's concerns and questions attentively helps to clarify any uncertainties about their treatment plan (Silverman et al., 2013).

The final phase, "Closing the Session", includes summarizing the main topics discussed during the consultation to ensure both the patient and healthcare provider are clear on the outcomes and next steps. Checking for understanding by asking if the patient has any further questions or concerns ensures they grasp the information provided. This phase also involves planning follow-up by discussing any necessary appointments or actions, and providing the patient with clear instructions on what to do next (Silverman et al., 2013).

Summary

The literature review underscores the critical role of English for Specific Purposes (ESP) in tailoring language education to meet the distinct needs of various professional fields, with medical education being a prime example. As English increasingly serves as the global lingua franca in medicine, ESP courses specifically designed for medical contexts are essential for equipping students with the specialized vocabulary and communication skills necessary for effective practice.

Communication skills training programs are pivotal in medical education, as they directly influence patient care quality, diagnostic accuracy, and overall professional development. The integration of communication frameworks, such as the Calgary-Cambridge Guide, into medical curricula represents a significant advancement in this area.

Medical Students' Perspectives on the Effectiveness of an ESP Program Based on the Calgary-Cambridge Guide for Improving Communication Skills in Medical Interviews"

Dr. Amal Fahim ElQersh

The Calgary-Cambridge Guide offers a structured approach to teaching and assessing communication skills, promoting patient-centered care through its detailed, step-by-step framework. Its focus on active listening, empathetic responses, and patient engagement has been empirically validated, demonstrating its effectiveness in enhancing medical students' and practitioners' communication abilities.

The guide's comprehensive framework not only aids in improving interpersonal interactions but also addresses the practical challenges faced in medical interviews and consultations. While the framework is well-regarded and widely adopted, challenges related to implementation and the need for faculty training persist. Addressing these issues will be crucial for maximizing the guide's benefits.

In summary, the Calgary-Cambridge Guide, alongside effective ESP courses, plays a vital role in preparing medical students for the complexities of patient interactions and professional communication. Continued research and refinement of these tools will further enhance their effectiveness, ensuring that medical professionals are well-equipped to meet the demands of contemporary healthcare environments.

Method

I. Research Design

The research employed a descriptive design to investigate medical students' perspectives of the effectiveness of a training program based on Calgary Cambridge guide in enhancing their communication skills during medical interactions, combining quantitative scale data with qualitative interviews for a nuanced understanding.

II. Participants

The research included 41 fifth year medicine students from Misr University for Science and Technology (MUST) in Egypt, who were enrolled in the spring semester 2024. Their average age is 23-25. These students are chosen as they are enrolled in ESP course for medical students, titled "Good Practice Communication Skills in English for the Medical Practitioner", and aims to develop the communication skills necessary for medical interviews. It's worth noting that the 41 students participated in the scale, while only 10 out of them were willing to participate in the following structured interview, which conducted for gaining an in-depth understanding and comprehensive explanation of the effect of the training program from the perspective of the medical students.

III. Data Collection and Instruments

I. Communication skills scale based on Calgary Cambridge Guide

Data were collected through a scale comprised statements that students rated on a 5-point Likert scale. It focused on the communication skills of the five stages of medical interview in consistent with Calgary Cambridge guide; Initiating the session, gathering information, physical examination, treatment planning and closing the session.

Validity of the scale

To ensure the validity of the communication skills scale, the initial version was reviewed by a panel of experts in EFL curriculum and instruction to ensure the face validity in terms of the clarity of the scale statements in accordance with the English level of the students, as well as experts in medicine to ensure the construct and content validity of items of the scale. The panel evaluated the items for its content and construct in accordance with communication skills during the medical interview and for their appropriateness for the students' level and the clarity of the language. While they approved the scale, they recommended including some negatively worded items. Consequently, the researcher revised the scale as shown in Table 1.

Table 1

Scale of Communication Skills in the Medical Interview

	Communication skills	Scale				
		Strongly disagree 1	Disagree 2	Neutral 3	Agree 4	Strongly agree 5
1.Intianiating the session	1.I can greet the patient warmly and introduce myself and explain my role. 2.I am unable to create a comfortable and respectful environment 3.I can set the agenda of the interview.					

Medical Students' Perspectives on the Effectiveness of an ESP Program Based on the Calgary-Cambridge Guide for Improving Communication Skills in Medical Interviews"

Dr. Amal Fahim ElQersh

	4.I do not obtain permission for specific circumstances such as taking notes or if a student doctor is present during the interview.					
2. Gathering Information	5. I can use open-ended questions effectively. 6. I am unable to demonstrate active listening and empathy. 7. I cannot use verbal and non-verbal facilitating techniques. 8. I cannot take an accurate history of the presenting complaints, past medical history, and family history by employing an appropriate questioning technique. 9. I can ask about descriptions of the nature and intensity of the pain. 10. I can take a complete social history by investigating occupational, environmental,					

	financial, educational, family/support networks and lifestyle factors. 11. I can clarify and summarize information accurately.					
3. Physical examination	12. I can explain each step clearly before performing it. 13. I can maintain patient comfort and dignity. 14. I cannot demonstrate thoroughness and attention to detail. 15. I cannot give instructions and communicate findings using patient-friendly manner and vocabulary during the exam.					
4. Treatment planning	16. I do not involve the patient in decision-making. 17. I do not clearly explain the treatment options outlining their benefits and side effects. 18.I provide detailed instructions and address patient concerns.					

Medical Students' Perspectives on the Effectiveness of an ESP Program Based on the Calgary-Cambridge Guide for Improving Communication Skills in Medical Interviews"

Dr. Amal Fahim ElQersh

	19. I ensure patient understanding and agreement with the plan.					
5. Closing the session	20. I can summarize the key points of the session clearly. 21. I can ensure the patient understands and agrees on the next steps. 22. I outline support systems available to the patient. 23. I offer an opportunity for the patient to ask questions. 24.I end the session on a positive and supportive note.					

Note. Adapted from Calgary Cambridge Guide

Reliability of the scale

To determine the reliability of the Communication Skills scale, the researcher administered it to a sample of 30 medical students. The results were gathered, and Cronbach's alpha was calculated, yielding a result of 0.855. This value indicates that the scale is reliable.

Internal Consistency Reliability of the scale

Internal consistency was assessed by examining the correlations between each sub-skill and the total score of the Communication Skills scale. Table 2 presents these correlations, all of which were found to be statistically significant at the 0.01 level. The correlation values, ranging from 0.809 to 0.831, indicate a high level of internal consistency, confirming that the scale reliably measures the intended construct.

Table 2

Correlation between the sub-skills and the total sum of the scale score

Sub-skills	Total scores of Communication Skills scale
Initiating the session stage	**0.828**[**]
Gathering information stage	**0.816**[**]
Physical examination stage	**0.809**[**]
Treatment planning stage	**0.817**[**]
Closing the session stage	**0.831**[**]

II. The interviews

The interview featured open-ended questions (questions 7-9) designed to explore the most effective aspects of the program, assess whether the program has enhanced students' competence and confidence during medical interviews, and invite students to offer suggestions for future improvements in the program. It's worth mentioning that only 10 of the participants were willing to participate in the interview and each interview lasted for 10 minutes.

III. Ethical Considerations

The researcher obtained consent from all participants, and measures were taken to ensure confidentiality and data security throughout the study process.

IV. Description of the training program

The training program, based on the Calgary-Cambridge Guide, aims to enhance medical students' communication skills. It focuses on several key areas: spoken communication strategies, non-verbal communication, active listening, voice management to build rapport and provide encouragement, and cultural awareness. The program equips students with the necessary language and communication skills to effectively handle each stage of patient interactions, as outlined in Table 1. The program was delivered over a 10-week period, with one session per week lasting 3 hours, making the program's total duration 30 hours. The program employs a variety of methods, including discussions, audio recordings, and videos. Formative assessments consist of essays on the skills taught, while summative assessments include two quizzes and a final exam, predominantly featuring multiple-choice questions.

Medical Students' Perspectives on the Effectiveness of an ESP Program Based on the Calgary-Cambridge Guide for Improving Communication Skills in Medical Interviews"

Dr. Amal Fahim ElQersh

Results

I. To address questions 1-6, the data were analyzed with the Statistical Package for Social Sciences (SPSS), version 25. A t-test and ETA squared were employed to assess the effect size (d) of the Calgary-Cambridge Guide-based Training Program on improving Communication Skills during medical interviews for medical students.

To answer the first question:

1. What are the perspectives of medical students regarding the effectiveness of an ESP program based on the Calgary Cambridge guide in improving their communication skills during medical interviews?

The data were analyzed using statistical methods, including descriptive statistics (means and standard deviations) and a one-sample t-test. Table 3 presents the results related to communication skills during the medical interview.

Table 3

Results of The scale of Communication Skills during the Medical Interview of the study Group (n = 41)

Sub-skills	N	Mean	Std. Deviation	Assumed average	t. value	Sig. Value	η^2	d	Effect size
1. Initiating the session stage	41	17.80	2.33	12	15.979	0.00	0.86	2.50	Large
2. Gathering information stage	41	31.68	3.44	21	19.895	0.00	0.91	3.11	Large
3. Physical examination stage	41	18.17	2.70	12	14.629	0.00	0.84	2.28	Large
4. Treatment planning stage	41	17.88	2.59	12	14.530	0.00	0.84	2.27	Large
5. Closing the session stage	41	22.59	3.61	15	13.446	0.00	0.82	2.10	Large
Total Communication Skills during the Medical Interview	41	108.12	13.41	72	28.701	0.00	0.95	4.48	Large

Table 3 indicates that the mean score for Communication Skills during the Medical Interview was 108.12, surpassing the assumed average of 72. This suggests that the scores are consistently higher than the assumed average. The table also shows a significant

difference in Communication Skills test scores during the Medical Interview, favoring the actual average. The t-value of 28.701 is significant at the 0.01 level, further supporting the actual average.

To assess the effect and educational significance of these findings, the value of ETA squared (η^2) and the effect size (d) were calculated. ETA squared was 0.95, indicating substantial practical significance. This means that 95% of the variance in students' scores can be attributed to the Calgary Cambridge Guide-based Training Program. The effect size (d) was 4.48, which is considered large as it exceeds 0.80. These results confirm that the Calgary Cambridge Guide-based Training Program was highly effective in enhancing and developing Communication Skills during the Medical Interview.

To answer the second question:

T2. What are the perspectives of medical students regarding the effectiveness of an ESP program based on the Calgary Cambridge guide in improving their communication skills of "Initiating the Session" stage of the medical interviews?
The data were treated statistically using the descriptive (Means and Standard Deviations) and a one sample t-test. Table 4 shows the results of communication skills during initiating the session stage of th medical interview.

Table 4

Results of The scale of Communication skills during initiating the session stage of the medical interview of the study Group (n = 41)

Sub skills	N	Mean	Std. Deviation	Assumed average	t. value	Sig. Value	η^2	d	Effect size
1. I can greet the patient warmly and introduce myself and explain my role.	41	4.49	0.75	3	12.775	**0.00**	0.80	2.00	**Large**
2. I am unable to create a comfortable and respectful environment	41	4.56	0.63	3	15.756	**0.00**	0.86	2.46	**Large**
3. I can set the agenda of the interview.	41	4.29	0.87	3	9.481	**0.00**	0.69	1.48	**Large**
4. I do not obtain permission for specific circumstances such	41	4.46	0.78	3	12.048	**0.00**	0.78	1.88	**Large**

Medical Students' Perspectives on the Effectiveness of an ESP Program Based on the Calgary-Cambridge Guide for Improving Communication Skills in Medical Interviews"

Dr. Amal Fahim ElQersh

						0.00			Large
as taking notes or if a student doctor is present during the interview.									
Total "Initiating the session stage" skills	41	17.80	2.33	12	15.979		0.86	2.50	

Results of The scale of Communication skills during initiating the session stage of the medical interview of the study Group (n = 41)

Table 4 indicates that the mean score for Communication skills during the initiation stage of the medical interview was 17.8, which surpasses the assumed average of 12. The table also shows that the mean scores consistently exceeded the assumed average.

Table 4 highlights a significant difference in Communication skills during the initiation stage of the medical interview, with results favoring the actual average. The t-value of 15.979 is significant at the 0.01 level, supporting the effectiveness of the actual average.

ETA squared was 0.86, suggesting substantial practical significance. This implies that 86% of the variation in student scores could be attributed to the Calgary-Cambridge Guide-based Training Program. The effect size (d) of 2.50 indicates a strong effect and educational importance in enhancing Communication skills during the initiation stage of the medical interview.

The effect size d is notably large, exceeding 0.80. These findings confirm that the Calgary-Cambridge Guide-based Training Program was highly effective in improving Communication skills during the initiation stage of the medical interview.

To answer the third question:

3. What are the perspectives of medical students regarding the effectiveness of an ESP program based on the Calgary Cambridge guide in improving their communication skills of "Gathering Information" stage of medical interviews?

The data were treated statistically using the descriptive (Means and Standard Deviations) and a one-sample t-test. Table 5 shows the results of Communication skills during Gathering information stage of the medical interview.

Table 5

Results of The scale of Communication skills during Gathering information stage of the medical interview of the study Group (n = 41)

Sub skills	N	Mean	Std. Deviation	Assumed average	t. value	Sig. Value	η^2	d	Effect size
I can use open-ended questions effectively.	41	4.46	0.74	3	12.579	0.00	0.80	1.96	Large
I am unable to demonstrate active listening and empathy.	41	4.59	0.67	3	15.153	0.00	0.85	2.37	Large
I cannot use verbal and non-verbal facilitating techniques.	41	4.46	0.74	3	12.579	0.00	0.80	1.96	Large
I cannot take an accurate history of the presenting complaints, past medical history, and family history by employing an appropriate questioning technique.	41	4.68	0.57	3	18.992	0.00	0.90	2.97	Large
I can ask about descriptions of the nature and intensity of the pain.	41	4.59	0.67	3	15.153	0.00	0.85	2.37	Large
I can take a complete social history by investigating occupational, environmental, financial, educational, family/support networks and lifestyle factors.	41	4.44	0.71	3	12.999	0.00	0.81	2.03	Large
I can clarify and summarize information accurately.	41	4.46	0.71	3	13.188	0.00	0.81	2.06	Large
Total Gathering information stage skills	41	31.68	3.44	21	19.895	0.00	0.91	3.11	Large

Medical Students' Perspectives on the Effectiveness of an ESP Program Based on the Calgary-Cambridge Guide for Improving Communication Skills in Medical Interviews"

Dr. Amal Fahim ElQersh

Table 5 demonstrates that the mean score for Communication skills during the Gathering Information stage of the medical interview was 31.68, which is higher than the assumed average of 21. The table indicates that the mean scores were consistently above the assumed average.

Table 5 also reveals a significant difference in Communication skills during the Gathering Information stage, with the results favoring the actual average. The t-value of 19.895 is significant at the 0.01 level, supporting the effectiveness of the actual average.

ETA squared was 0.91, highlighting its substantial practical significance. This suggests that 91% of the variation in student scores may be attributed to the Calgary-Cambridge Guide-based Training Program. The effect size (d) of 3.11 indicates a strong effect and notable educational importance in enhancing Communication skills during the Gathering Information stage of the medical interview.

The effect size d is considerably large, exceeding 0.80. These findings affirm that the Calgary-Cambridge Guide-based Training Program was highly effective in improving Communication skills during the Gathering Information stage of the medical interview.

To answer the fourth question:

4. What are the perspectives of medical students regarding the effectiveness of an ESP program based on the Calgary Cambridge guide in improving their communication skills of "Physical Examination" stage of medical interviews?

The data were treated statistically using the descriptive (Means and Standard Deviations) and a one sample t-test. Table 6 shows the results of Communication skills during Physical examination stage of the medical interview.

Table 6

Results of The scale of Communication skills during Physical Examination stage of

Sub-skills	N	Mean	Std. Deviation	Assumed average	t. value	Sig. Value	η^2	d	Effect size
I can explain each step clearly before performing it.	41	4.37	0.89	3	9.853	**0.00**	0.71	1.54	**Large**
I can maintain patient comfort and dignity.	41	4.73	0.67	3	16.507	**0.00**	0.87	2.58	**Large**
I cannot demonstrate thoroughness and attention to detail.	41	4.61	0.70	3	14.667	**0.00**	0.84	2.29	**Large**
I cannot give instructions and communicate findings using patient-friendly manner and vocabulary during the exam.	41	4.46	0.90	3	10.445	**0.00**	0.73	1.63	**Large**
Total Physical examination stage skills	41	18.17	2.70	12	14.629	**0.00**	0.84	2.28	**Large**

the medical interview of the study Group (n = 41)

Table 6 indicates that the mean score for Communication skills during the Physical Examination stage of the medical interview was 18.17, exceeding the assumed average of 12. This signifies a significant difference in Communication skills during this stage, with the results favoring the actual average. The t-value of 14.629 is significant at the 0.01 level, supporting the effectiveness of the actual average.

ETA squared was 0.84, demonstrating substantial practical significance. This suggests that 84% of the variation in student scores may be attributed to the Calgary-Cambridge Guide-based Training Program. The effect size (d) of 2.28 indicates a strong effect and considerable educational importance for enhancing Communication skills during the Physical Examination stage of the medical interview.

Medical Students' Perspectives on the Effectiveness of an ESP Program Based on the Calgary-Cambridge Guide for Improving Communication Skills in Medical Interviews"

Dr. Amal Fahim ElQersh

The effect size d is notably large, exceeding 0.80. These results affirm that the Calgary-Cambridge Guide-based Training Program was highly effective in improving Communication skills during the Physical Examination stage of the medical interview.
To answer the fifth question:

T5. What are the perspectives of medical students regarding the effectiveness of an ESP program based on the Calgary Cambridge guide in improving their communication skills of "Treatment Planning" stage of medical interviews?

The data were treated statistically using the descriptive (Means and Standard Deviations) and a one sample t-test. Table 7 shows the results of Communication skills during Treatment planning stage of the medical interview.

Table 7

Results of The scale of Communication skills during Treatment planning stage of the medical interview of the study Group (n = 41)

Sub- skills	N	Mean	Std. Deviation	Assumed average	t. value	Sig. Value	η^2	d	Effect size
I do not involve the patient in decision-making.	41	4.29	0.87	3	9.481	**0.00**	0.69	1.48	**Large**
I do not clearly explain the treatment options outlining their benefits and side effects.	41	4.56	0.71	3	14.101	**0.00**	0.83	2.20	**Large**
I provide detailed instructions and address patient concerns.	41	4.51	0.78	3	12.437	**0.00**	0.79	1.94	**Large**
I ensure patient understanding and agreement with the plan	41	4.51	0.75	3	12.984	**0.00**	0.81	2.03	**Large**
Total Treatment planning stage skills	41	17.88	2.59	12	14.530	**0.00**	0.84	2.27	**Large**

Table 7 shows that the mean score for Communication skills during the Treatment Planning stage of the medical interview was 17.88, which is above the assumed average of 12. This indicates a significant difference, with the actual average being higher. The t-

value of 14.53 is significant at the 0.01 level, confirming the favorability of the actual average.

ETA squared was 0.84, indicating substantial practical significance. This suggests that 84% of the variation in student scores can be attributed to the Calgary-Cambridge Guide-based Training Program. The effect size (d) of 2.27 highlights a strong effect and considerable educational importance in improving Communication skills during the Treatment Planning stage of the medical interview.

The effect size d is notably large, surpassing 0.80. These findings validate that the Calgary-Cambridge Guide-based Training Program was effective in enhancing Communication skills during the Treatment Planning stage of the medical interview.

To answer the sixth question:

6. What are the perspectives of medical students regarding the effectiveness of an ESP program based on the Calgary Cambridge guide in improving in improving their communication skills of "Closing the session" stage of medical interviews?

The data were treated statistically using the descriptive (Means and Standard Deviations) and a one samples t-test. Table 8 shows the results of Communication skills during closing the session stage of the medical interview.

Table 8

Results of The scale of Communication skills during Closing the session stage of the medical interview of the study Group (n = 41)

Sub-skills	N	Mean	Std. Deviation	Assumed average	t. value	Sig. Value	η^2	d	Effect size
I can summarize the key points of the session clearly.	41	4.46	0.84	3	11.161	0.00	0.76	1.74	Large
I can ensure the patient understands and agrees on the next steps.	41	4.56	0.78	3	12.877	0.00	0.81	2.01	Large
I outline support systems available to the patient.	41	4.32	0.91	3	9.302	0.00	0.68	1.45	Large
I offer an opportunity for the patient to ask questions.	41	4.56	0.90	3	11.158	0.00	0.76	1.74	Large

Medical Students' Perspectives on the Effectiveness of an ESP Program Based on the Calgary-Cambridge Guide for Improving Communication Skills in Medical Interviews"

Dr. Amal Fahim ElQersh

I end the session on a positive and supportive note.	41	4.68	0.72	3	14.916	**0.00**	0.85	2.33	**Large**
Total Closing the session stage skills	41	22.59	3.61	15	13.446	**0.00**	0.82	2.10	**Large**

Table 8 indicates that the mean score for Communication skills during the Closing the Session stage of the medical interview was 22.59, which exceeds the assumed average of 15. This shows a significant difference, with the actual average being notably higher. The t-value of 13.446 is significant at the 0.01 level, supporting the advantage of the actual average.

ETA squared was 0.82, highlighting its practical significance. This means that 82% of the variation in student scores can be attributed to the Calgary-Cambridge Guide-based Training Program. The effect size (d) of 2.10 demonstrates a strong effect and significant educational value in enhancing Communication skills during the Closing the Session stage of the medical interview.

The effect size d is notably large, exceeding 0.80. These results confirm that the Calgary-Cambridge Guide-based Training Program was effective in improving Communication skills during the Closing the Session stage of the medical interview.

II. To address questions 7-9, the researcher interviewed 10 students to investigate the most valuable aspects of the program for improving medical students' communication skills, the extent to which the program boosted their confidence and competence in conducting medical interviews, and their suggestions for program enhancement.

Regarding the most beneficial elements of the program, all students agreed that each component was crucial for enhancing their communication skills during medical interviews. Some students highlighted that learning communication strategies was particularly important, as well as understanding the impact of active listening, the significance of empathy, and mastering the cone questioning technique.

When asked about the program's impact on their confidence and competence, all students unanimously felt that it greatly improved both areas. They reported that the program provided them with essential skills that boosted their confidence during medical interviews and enhanced their competence, especially through active listening and empathetic communication, which helped them build trust and rapport with patients.

For suggestions on program improvement, some students recommended incorporating simulated role plays, while others suggested introducing the program earlier in their academic study, rather than in the fifth year, to allow for earlier practice of these skills.

Discussion

The statistical results from the research demonstrate that the Calgary-Cambridge Guide-based Training Program significantly enhances medical students' communication skills across various stages of medical interviews. The statistical analysis, including t-tests and effect size calculations, confirms that the program has a substantial impact on improving communication skills during the initiation, gathering information, physical examination, treatment planning, and closing stages of medical interviews.

The results of this research align with the existing literature on communication skills training in medical education. Research consistently shows that structured communication skills training programs significantly enhance medical students' abilities to conduct effective interviews (Kurtz, Silverman, & Draper, 2016). The Calgary-Cambridge Guide-based Training Program, with its substantial effect size (d = 4.48) and ETA squared (0.95), supports these findings by demonstrating a strong impact on various stages of the medical interview.

The significant improvement in communication skills during the initiation stage (d= 2.50) is consistent with studies emphasizing the importance of effective initiation in medical interviews. According to Silverman et al. (2013), starting an interview with a clear introduction and agenda-setting is crucial for building rapport and ensuring effective communication. The Calgary-Cambridge program's success in enhancing these skills aligns with literature highlighting the role of structured training in improving initial patient interactions (Neal et al., 2019).

The enhancement observed in the Gathering Information stage (d=3.11) corroborates findings from studies that stress the role of active listening and effective questioning in

Medical Students' Perspectives on the Effectiveness of an ESP Program Based on the Calgary-Cambridge Guide for Improving Communication Skills in Medical Interviews"

Dr. Amal Fahim ElQersh

obtaining comprehensive patient histories (Baker et al., 2016). The program's emphasis on open-ended questions and empathetic listening reflects best practices outlined by medical communication experts, reinforcing the idea that targeted training can improve data collection during interviews (Little et al., 2020).

Improvements in communication during the Physical Examination stage (d=2.28) resonate with literature on the significance of clear and empathetic communication during physical examinations. Effective communication in this context helps maintain patient comfort and dignity, which is well-documented in the literature as essential for positive patient experiences and accurate data collection (Ong et al., 2017)

The study's findings regarding the Treatment Planning stage (2.27) are supported by literature that highlights the importance of involving patients in decision-making and providing clear explanations about treatment options. Research by Charles et al. (2006) and Elwyn et al. (2010) underscores the value of shared decision-making and transparent communication in treatment planning, aligning with the improvements observed in this study.

Improvements in closing the session (d=2.10) are consistent with literature emphasizing the importance of summarizing and ensuring patient understanding at the end of an interview (Rogers et al., 2013). The Calgary-Cambridge program's effectiveness in this area supports existing recommendations for structured closure techniques to enhance patient comprehension and satisfaction.

The positive student feedback and suggestions for program enhancement, such as incorporating simulated role plays and introducing the program earlier, are in line with literature advocating for practical, hands-on training and early integration of communication skills training in medical curricula (Kurtz et al., 2016; Rees et al., 2019). Simulation and early exposure have been shown to enhance skill acquisition and retention, reinforcing the study's findings and suggestions.

Limitations of the study.

While efforts were made to ensure the representativeness of the sample, findings may not be generalizable to all medical students or educational contexts. Additionally, self-report

measures and social desirability bias may have influenced participants' responses. Despite these limitations, this research contributes valuable insights into the effectiveness of communication skills training programs in medical education.

Conclusion

The research highlights the substantial impact of the Calgary-Cambridge Guide-based Training Program on enhancing medical students' communication skills throughout various stages of medical interviews. The findings reveal significant improvements in several key areas:

1. Initiating the Session: The program markedly improved students' ability to greet patients, establish a respectful environment, and set the session agenda.

2. Gathering Information: Students demonstrated enhanced skills in using open-ended questions, actively listening, and compiling comprehensive patient histories.

3. Physical Examination: Participants became more adept at explaining examination procedures, maintaining patient comfort, and clearly communicating their findings.

4. Treatment Planning: There was a notable advancement in involving patients in decision-making, articulating treatment options, and addressing patient concerns effectively.

5. Closing the Session: Students showed improved proficiency in summarizing key points, ensuring patient understanding, and concluding the session on a supportive note.

These results not only confirm but also extend existing literature on the effectiveness of structured communication training in medical education. The improvements observed in this research underscore the Calgary-Cambridge Guide-based Training Program's alignment with established evidence supporting the value of ESP programs in medical communication education. The findings reinforce the crucial role of such training programs in developing essential communication skills for medical professionals, emphasizing the ongoing need for targeted educational interventions.

Suggestions for Further Studies

In light of the findings of the current research, the researcher suggests further studies as follows:

Medical Students' Perspectives on the Effectiveness of an ESP Program Based on the Calgary-Cambridge Guide for Improving Communication Skills in Medical Interviews"

Dr. Amal Fahim ElQersh

- Longitudinal Assessment of the Calgary-Cambridge Guide-Based ESP Program: Sustained Impact on Medical Students' Communication Skills over Time.
- Comparative Effectiveness of the Calgary-Cambridge Guide-Based ESP Program and Alternative Medical Communication Training Models.
- Cross-Cultural Evaluation of the Calgary-Cambridge Guide-Based ESP Program: A Comparative Study across Multiple Universities.
- Self-Reported vs. Observed Communication Skills: Analyzing the Discrepancies Among Medical Students Post Calgary-Cambridge Guide-Based Training.
- Instructor Perspectives on the Calgary-Cambridge Guide-Based ESP Program: Insights into Implementation and Improvement.

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Medical Students' Perspectives on the Effectiveness of an ESP Program Based on the Calgary-Cambridge Guide for Improving Communication Skills in Medical Interviews"

Dr. Amal Fahim ElQersh

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