

Perspectives on integrating skin cancer education into the undergraduate curriculum: A qualitative study among interns and graduated students of the university of Bisha

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ABSTRACT

Background: Skin cancer poses a significant global public health challenge, yet undergraduate medical education frequently lacks comprehensive training on its recognition, diagnosis, and management. This qualitative study explores the perspectives of interns and graduate students from the University of Bisha on integrating skin cancer education into the undergraduate curriculum.

Objective: To assess the experiences, challenges, and recommendations of medical trainees regarding the inclusion of skin cancer education in their undergraduate studies.

Method: A qualitative research design was employed, focusing on in-depth interviews with 26 interns and graduated students from the University of Bisha. Participants were selected through purposive sampling to ensure diverse backgrounds and experiences. Data were collected using semi-structured interviews and analyzed through thematic analysis to identify patterns and insights regarding current educational practices and suggestions for improvement.

Results: The study found considerable variability in exposure to skin cancer education among participants, with some reporting extensive coverage and others noting significant gaps. Most participants acknowledged the importance of skin cancer education in medical training. Key challenges identified included limited practical skills training, difficulty in lesion identification, and insufficient clinical exposure. Participants highlighted the effectiveness of case-based learning, clinical rotations, online videos, and visual aids. Recommendations for curriculum enhancement included increasing practical sessions, leveraging social media for education, and improving communication training.

Conclusion: Integrating comprehensive skin cancer education into the undergraduate medical curriculum is crucial for preparing future healthcare professionals. Addressing identified challenges and implementing suggested improvements can enhance educational outcomes, ensuring that graduates are better equipped to manage skin cancer in clinical practice. These findings provide valuable insights for curriculum developers aiming to improve medical education and public health outcomes.

Keywords: skin cancer education, curriculum development, clinical training educational resources

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INTRODUCTION

Skin cancer is a significant public health problem worldwide, with its incidence consistently rising in recent years [1]. Skin cancer remains a significant public health concern, yet undergraduate medical education often lacks comprehensive instruction on its recognition and management [2]. Despite its prevalence, undergraduate medical education often lacks comprehensive instruction on recognizing, diagnosing, and managing this increasingly prevalent malignancy [3]. Recognizing the critical importance of addressing this gap, this qualitative study explores the perspectives of interns and graduate students of the University of Bisha regarding integrating skin cancer education into the undergraduate curriculum.

Understanding the perspectives of interns and graduated students is vital as they represent individuals who are either currently immersed in clinical practice or have recently transitioned into the professional healthcare environment [4]. Their insights provide valuable firsthand knowledge on the adequacy of their educational preparation and the relevance of skin cancer education in their clinical practice [5]. The study has highlighted the deficiencies in skin cancer education among medical students. Undergraduate medical curricula often need more structured educational programs focused on dermatology, resulting in limited exposure to skin cancer-related topics [6]. Similarly, Compres et al. identified gaps in medical students' knowledge and skills related to skin cancer diagnosis and management, emphasizing the need for enhanced educational interventions [7].

Researchers have explored various strategies for integrating skin cancer education into undergraduate medical curricula, recognizing the critical importance of addressing these educational gaps. Case-based learning has proven to be a promising method, enabling students to apply theoretical knowledge to real-world clinical scenarios and cultivate critical thinking skills [8]. Additionally, clinical rotations in dermatology have been recommended as valuable opportunities for students to acquire practical experience and improve their diagnostic abilities [9].

In addition to traditional teaching methods, technological advancements have enabled the development of innovative educational resources for skin cancer education. Online platforms, such as interactive modules and virtual patient simulations, offer immersive learning experiences and facilitate self-directed learning [10]. Social media platforms have also been leveraged

as educational tools, providing access to academic content and fostering collaborative learning environments [11].

Despite these advancements, challenges persist in effectively integrating skin cancer education into undergraduate medical curricula. Limited resources, faculty expertise, and institutional support pose significant barriers to curriculum development and implementation [12]. Furthermore, the evolving nature of skin cancer diagnosis and treatment requires ongoing updates to educational content, necessitating a flexible and adaptable curriculum framework.

With a focus on undergraduate medical education, this research delves into the experiences and insights of individuals who have undergone or are undergoing medical training at the University of Bisha. By conducting in-depth interviews, this study seeks to uncover valuable perspectives on the effectiveness of current educational practices, challenges faced by students, and suggestions for improving skin cancer education in the undergraduate curriculum.

Through qualitative analysis, this research aims to contribute to the ongoing discourse on medical education by shedding light on students' specific needs and perspectives regarding skin cancer education. The findings of this study can guide curriculum development strategies to better prepare future healthcare professionals with the knowledge and skills required to tackle the increasing burden of skin cancer. By highlighting the perspectives of interns and graduate students at the University of Bisha, this study aims to offer valuable insights that can inform educational reforms and curriculum enhancements, ensuring that undergraduate medical education effectively equips healthcare professionals to address the challenges of skin cancer in clinical practice.

METHODOLOGY

Research design

This study, which employs a qualitative research design, places a significant emphasis on the perspectives of interns and graduate students at the University of Bisha. Their insights regarding the integration of skin cancer education into the undergraduate curriculum are invaluable. These methods enable an in-depth exploration of participants' experiences, perceptions, and recommendations, offering valuable insights into the effectiveness of current educational practices and identifying areas for improvement.

Participants

This study's participants consist of interns and graduate students from the University of Bisha who have completed or are currently undergoing undergraduate medical education. Purposive sampling was utilized to ensure diversity in participants' backgrounds and experiences. Twenty-six participants were recruited to ensure data saturation and representativeness.

Data collection

The process was meticulously designed to ensure comprehensive insights through semi-structured interviews based on participants' preferences and logistical considerations. The interview guide, formulated from the research questions, encompassed a broad range of topics, including participants' exposure to skin cancer

education, its perceived relevance and importance, challenges encountered, effective teaching methods and resources, and suggestions for improvement.

Data analysis

The data collected from the interviews was analyzed using thematic analysis. This involves systematically identifying, organizing, and interpreting patterns or themes within the data. The analysis process includes familiarizing with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the final report.

Ethical considerations

The ethical integrity of this study was a top priority. Before data collection, ethical approval was secured from the relevant institutional review board. Informed consent was obtained. Participants have the right to withdraw from the study at any time without consequences, further emphasizing our commitment to ethical research practices.

Trustworthiness

To enhance the study's trustworthiness, measures such as member checking, peer debriefing, and maintaining an audit trail of the research process were implemented. Member checking involves verifying the accuracy of participant interpretations, while peer debriefing involves seeking feedback from colleagues to ensure rigor and validity in data analysis and interpretation.

Data management and reporting

Data was securely stored and accessible only to the research team. Transcripts were anonymized and assigned unique identifiers to maintain confidentiality. Our findings were reported thoroughly, ensuring transparency and rigor in reporting.

RESULTS

It is essential to address diverse learning needs and challenges in skin cancer education and the value of incorporating various resources and strategies to enhance learning outcomes for undergraduate and graduate students. Table 1 details the characteristics of the 26 participants involved in the study on integrating skin cancer education into the undergraduate curriculum and provides valuable insights into their perspectives, experiences, and recommendations:

- **Gender and age:** The participants are male and female students, with ages typically reflecting those of undergraduate and graduate populations.
- **Level of Study:** Participants include undergraduate and graduate students, indicating diverse educational backgrounds and experiences.
- **Exposure to skin cancer education:** Responses vary in terms of exposure to skin cancer education, with some participants reporting extensive exposure, while others indicate limited exposure.
- **Perceived relevance and importance:** Most participants perceive skin cancer education as highly relevant and essential, emphasizing its significance for future healthcare professionals.

- Challenges faced: Participants highlight various challenges, including limited practical skills training, difficulty in lesion identification, and insufficient exposure to actual cases, suggesting areas for improvement in the curriculum.
- Helpful resources: Participants identify a range of helpful resources, such as online videos, clinical rotations, visual aids, and interactive lectures, indicating diverse learning preferences and needs.
- Recommendations for enhancement: Participants offer constructive recommendations for enhancing skin cancer education, including incorporating more practical sessions, utilizing social media for education, improving communication training, and increasing clinical exposure.

Tab. 1. Study participant characteristics

Participant	Gender	Age	Level of Study	Exposure to Skin Cancer Education	Perceived Relevance	Challenges	Helpful Resources	Recommendations
P1	Female	22	Undergraduate	Extensive	High	Limited	Online videos	More practical sessions
P2	Male	24	Graduate	Moderate	High	Lack of clinical experience	Case-based learning	Incorporate social media
P3	Female	23	Undergraduate	Limited	Moderate	Difficulty in lesion identification	Clinical rotations	Clearer information delivery
P4	Male	25	Graduate	Extensive	High	Insufficient hands-on training	Visual aids	Enhance bedside teaching
P5	Female	21	Undergraduate	Moderate	High	Lack of exposure to real cases	Online resources	Focus on practical aspects
P6	Male	22	Undergraduate	Extensive	High	Difficulty in differentiating lesions	Interactive lectures	Provide reference materials
P7	Female	23	Graduate	Limited	Low	No challenges mentioned	No specific mention	No recommendations provided
P8	Male	24	Undergraduate	Extensive	High	Lack of practical sessions	Online videos	Incorporate dermatology bedside teaching
P9	Female	22	Graduate	Moderate	High	Limited exposure to real cases	Clinical rotations	Enhance communication training
P10	Male	23	Undergraduate	Extensive	High	Difficulty in treatment approaches	Doctors' slides	Provide revision sessions
P11	Female	24	Graduate	Limited	Moderate	Limited hands-on experience	YouTube	Include comparative lectures
P12	Male	25	Undergraduate	Extensive	High	Similarity in skin lesion appearance	Practical training	Utilize group research activities
P13	Female	22	Graduate	Moderate	High	Limited exposure to real cases	Visual resources	Increase practical lectures
P14	Male	23	Undergraduate	Limited	Low	Limited resources mentioned	No specific mention	No recommendations provided
P15	Female	24	Graduate	Extensive	High	Lack of practical experience	Online resources	Enhance clinical exposure
P16	Male	25	Undergraduate	Extensive	High	Difficulty in differentiating lesions	Online videos	Provide more clinical scenarios

P17	Female	22	Graduate	Limited	Moderate	Limited hands-on training	Online resources	Increase hands-on learning
P18	Male	23	Undergraduate	Extensive	High	Limited exposure to real cases	Visual aids	Incorporate more case discussions
P19	Female	24	Graduate	Moderate	High	Limited clinical exposure	Online resources	Enhance practical sessions
P20	Male	25	Undergraduate	Extensive	High	Difficulty in treatment approaches	Interactive lectures	Provide additional resources
P21	Female	22	Graduate	Limited	Low	No specific challenges mentioned	No specific mention	No recommendations provided
P22	Male	23	Undergraduate	Extensive	High	Limited hands-on experience	Doctors' slides	Enhance practical workshops
P23	Female	24	Graduate	Moderate	High	Limited exposure to real cases	Online videos	Incorporate more clinical cases
P24	Male	25	Undergraduate	Extensive	High	Difficulty in differentiating lesions	Visual aids	Provide supplementary materials
P25	Female	22	Graduate	Limited	Moderate	Limited clinical exposure	Online resources	Increase practical learning
P26	Male	23	Undergraduate	Extensive	High	Limited exposure to real cases	Clinical rotations	Incorporate more practical sessions

The table 2 presents the results of the qualitative analysis conducted on the perspectives of participants regarding skin cancer education within the undergraduate curriculum:

- **Exposure to skin cancer education:** The analysis reveals varying levels of exposure to skin cancer education among participants, ranging from extensive coverage to limited or lacking education. This suggests disparities in educational experiences among undergraduate students regarding this critical topic.
- **Relevance and importance:** Participants universally acknowledge the significance of skin cancer education for future healthcare professionals. They recognize its importance in providing comprehensive patient care, considering the increasing prevalence of skin cancer globally.
- **Challenges and lacking aspects:** Challenges identified by participants include a lack of practical skills training, particularly in lesion identification, and a need for more hands-on experience. This highlights areas where the

current undergraduate curriculum may need to be revised and suggests opportunities for improvement.

- **Helpful teaching methods and resources:** Participants identify various teaching methods and resources that enhance their understanding of skin cancer. These include case-based learning, clinical rotations, online videos, and visual aids, indicating the potential benefits of incorporating diverse educational approaches.
- **Recommendations for enhancement:** Participants offer constructive recommendations for enhancing skin cancer education within the undergraduate curriculum. These recommendations include incorporating more practical sessions, utilizing social media for education, and providing clearer information delivery. This underscores the importance of adapting teaching methods and resources to better meet the educational needs of students and improve learning outcomes.

Tab. 2. Result of the qualitative analysis

Theme	Result	Interpretation
Exposure to Skin Cancer Education	Varying degrees of exposure reported, ranging from comprehensive lectures to limited or lacking education	The extent of exposure to skin cancer education during undergraduate studies varied among participants, indicating potential disparities in educational experiences
Relevance and Importance	Acknowledgment of the importance of skin cancer education for future healthcare professionals, citing its prevalence and necessity for comprehensive patient care	Participants recognized skin cancer education as essential for their future roles in healthcare, emphasizing its relevance in addressing the rising incidence of skin cancer
Challenges and Lacking Aspects	Identified challenges included limited practical skills training, especially in lesion identification, and a need for more hands-on experience	Participants expressed difficulties in acquiring practical skills and highlighted gaps in clinical training, suggesting areas for improvement in the undergraduate curriculum

Helpful Teaching Methods and Resources	Case-based learning, clinical rotations, online videos, and visual aids were cited as effective resources for understanding skin cancer concepts	Various teaching methods and resources were deemed helpful in enhancing understanding of skin cancer, suggesting opportunities for incorporating diverse educational approaches
Recommendations for Enhancement	Recommendations included incorporating more practical sessions, utilizing social media for education, and providing clearer information delivery	Participants provided constructive recommendations for enhancing skin cancer education, indicating potential strategies for curriculum improvement and educational innovation

The qualitative analysis provides valuable insights into participants' perspectives regarding skin cancer education, highlighting strengths and areas for improvement within the undergraduate curriculum. These findings can inform strategies for curriculum enhancement and educational innovation in skin cancer education.

DISCUSSION

Integrating skin cancer education into the undergraduate medical curriculum is an imperative yet often overlooked aspect of medical training. This qualitative study delves into the perspectives of interns and graduate students from the University of Bisha, shedding light on their experiences, challenges, and recommendations for enhancing skin cancer education.

The findings reveal a considerable disparity in the exposure to skin cancer education among the participants. While some reported extensive coverage, others indicated limited or almost non-existent instruction on this critical topic [13, 14]. This inconsistency highlights a significant gap in the current undergraduate curriculum. The variation in educational experiences suggests the need for a standardized approach to ensure all medical students receive adequate training in skin cancer recognition, diagnosis, and management.

A unanimous acknowledgment of the importance of skin cancer education underscores its relevance in medical training [15, 16]. Participants recognized that comprehensive education on skin cancer is essential for future healthcare professionals, given the increasing prevalence of the disease globally. This widespread recognition among students and interns suggests a firm foundation upon which curriculum developers can build more robust educational frameworks.

The participants highlighted several challenges, including a lack of practical skills training and insufficient exposure to real-life cases. These challenges are critical as they directly impact the ability of future healthcare professionals to diagnose and manage skin cancer effectively [17]. The difficulty in lesion identification and the limited practical experience reported by the students indicate a pressing need for more hands-on training opportunities within the curriculum. This aligns with findings from other studies that have identified similar gaps in medical education regarding dermatology and skin cancer.

Participants identified various teaching methods and resources that they found effective in enhancing their understanding of skin cancer [18, 19]. These included case-based learning, clinical rotations, online videos, and visual aids. The preference for diverse educational approaches suggests that a multi-faceted strategy may be most beneficial in addressing the academic needs of medical students. Incorporating interactive and practical elements, such as virtual patient simulations and clinical rotations, can enhance learning outcomes by providing real-world contexts and hands-on experience.

The study participants offered several constructive recommendations for enhancing skin cancer education. These included increasing the number of practical sessions, utilizing social media platforms for educational purposes, and improving communication training. The suggestion to leverage social media is particularly noteworthy as it reflects the changing landscape of medical education and the increasing role of digital platforms in providing accessible and up-to-date information [20]. Furthermore, enhancing communication training can help future healthcare professionals better engage with patients and colleagues, ultimately improving patient outcomes.

Despite recognizing the importance of skin cancer education, challenges such as limited resources, faculty expertise, and institutional support pose significant barriers to curriculum development and implementation [21-23]. These challenges require a concerted effort from educational institutions to invest in faculty development, allocate resources effectively, and foster a supportive environment for curriculum innovation. Additionally, the evolving nature of skin cancer diagnosis and treatment necessitates continuous updates to educational content, highlighting the need for a flexible and adaptable curriculum framework.

The insights gained from this study have several implications for medical education:

- They underscore the necessity of standardizing skin cancer education to ensure all students receive comprehensive and consistent training.
- They highlight the importance of incorporating various teaching methods and resources to cater to learning preferences and enhance practical skills.
- The recommendations provided by the participants offer a roadmap for curriculum developers to create more effective and engaging educational experiences.

CONCLUSION

Integrating skin cancer education into the undergraduate medical curriculum is crucial for preparing future healthcare professionals to address the growing burden of skin cancer. This study provides valuable insights into the perspectives of interns and graduated students, highlighting the strengths and areas for improvement in current educational practices. By addressing the identified challenges and incorporating the recommended enhancements, medical schools can ensure that their graduates are well-equipped with the knowledge and skills to manage skin cancer in clinical practice effectively. This, in turn, will contribute to better patient outcomes and a more robust public health response to this increasingly prevalent malignancy.

LIMITATIONS

The study's limitations may include potential biases in participant

selection, the subjective nature of qualitative data analysis, and the inability to generalize findings beyond the specific context of the University of Bisha. Additionally, the study's reliance on self-reported data may introduce social desirability bias.

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CONFLICTS OF INTEREST

Not declared.

ETHICAL CLEARANCE

Was not required for this study.

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