

Research

Identifying the needed knowledge and skills for health education specialists: qualitative study with stakeholders in Saudi Arabia

Knowledge and skills for health education specialists

Samah Alageel¹ · Lamis Al-Sayyari¹ · Sultana A. Alhurishi¹

Received: 10 January 2023 / Accepted: 13 March 2023

Published online: 20 March 2023

© The Author(s) 2023 [OPEN](#)

Abstract

Background Health education specialists play a major role in promoting a healthy lifestyle, preventing, and managing diseases. This study aimed at identifying the needed skills and knowledge of health education specialists with an interest in disease prevention and the transformation of healthcare in Saudi Arabia.

Methods This study employed a qualitative case study approach, using focus group interviews. The study was conducted at King Saud University with three different stakeholder groups (alumni, employers, and faculty members) using convenience sampling. Data was analyzed using thematic analysis.

Results We have conducted four focus group interviews with a total of 29 participants. We have identified five main themes from the data; *Medical and clinical related knowledge and skills, Communication and engagement with the community, Planning and evaluating health programs, Health systems and health policy, and Marketing and technological skills.* Participants highlighted the need to respond to the changing demands of the labor market, the different roles of health education specialists, and patient education vs. public education. Counseling and behavior change were viewed as key roles of health education specialists. In addition to the skills needed to create content and conduct research. Furthermore, equipping health education graduates in the fields of digital health and occupational health was viewed as a key factor in improving their employability and readiness for the labor market.

Conclusion Study participants identified multiple skills and knowledge gaps which were deemed important to improve the quality of graduates from the health education program. Future studies are recommended to estimate their importance based on the rating of alumni, faculty staff, and employers.

Keywords Health education specialists · Knowledge and skills · Allied healthcare professionals · Focus group · Saudi Arabia

Supplementary Information The online version contains supplementary material available at <https://doi.org/10.1007/s44217-023-00033-2>.

✉ Samah Alageel, samalageel@ksu.edu.sa | ¹Community Health Sciences Department, College of Applied Medical Sciences, King Saud University, Riyadh, Kingdom of Saudi Arabia.



1 Introduction

Non-communicable diseases (NCDs) are the main driver of mortality globally [1]. In Saudi Arabia, 73.2% of deaths were due to NCDs [2]. Lifestyle risk behaviors are prevalent in Saudi Arabia, with 80% of the Saudi population being physically inactive and 93% having an insufficient intake of fruits and vegetables [3]. The burden of NCDs and risk factors emphasized the need for health promotion and disease prevention to reduce its prevalence and incidence in the Saudi population.

In response to that need, the Saudi Vision 2030 aimed to enhance the quality of living by improving different aspects of population's lifestyle. One of its main objectives is to improve health by focusing on preventive strategies and lifestyle changes to reduce the cost of healthcare and improve the public's quality of life [4]. This was translated through restructuring the healthcare sector in Saudi Arabia to become more comprehensive, effective, and integrated care with a strong emphasis on health promotion and disease prevention [5]. These changes are conducted with the expansion of digitalization of healthcare delivery and utilization. The new vision also aims on following evidence-based international standards and patient and public satisfaction [5]. All these proposed changes in healthcare require a reevaluation of the skills and knowledge of healthcare professionals in Saudi.

Allied health professionals, including health education specialists, focus on keeping people healthy and preventing or managing diseases. Health education specialists work toward engaging and empowering individuals and the public to adopt healthy behaviors and make changes that reduce the risk of developing chronic diseases and other morbidities [6].

Health Education is an emerging profession. In Saudi Arabia, many universities offer a bachelor's degree in health education. Health education specialists are well recognized by the healthcare institutions and are classified by the Saudi Commission for Health Specialties; an organization responsible for licensing all healthcare workers in Saudi Arabia [7]. King Saud University continues to offer this program since 1981 which requires a 4-year theoretical based program followed by an internship year [7]. The program targets both male and female candidates, however, female uptake of the program is considerably higher. The program has been accredited nationally by the Saudi Education and Training Evaluation Commission.

Due to the increasing roles and demands focused on disease prevention and treatment an increased need for qualified health education specialists emerged. This newly emerged need has increased the focus on the skills and knowledge needed by the program's graduates. Therefore, aligning the health education curriculum in universities with the needs of the stakeholders is important to fulfill the demands of the workplace and meet the expectations of the graduates in health education. This study aimed to identify the needed skills and knowledge of health education specialists with an interest in disease prevention and the transformation of healthcare in Saudi Arabia from the perceptions of different stakeholders. The results of this project will aid in translating the needs of the labor market into changes in the health education specialist curricula in universities.

2 Methods

This study employed a qualitative case study approach using focus group interviews with different stakeholders to explore the necessary skills and knowledge of health education graduates in Saudi Arabia. Qualitative research methods are suitable for exploring perceptions and gain an in-depth understanding of stakeholders' experiences [8]. In this study we adapted a constructivist qualitative basis emphasizing the importance of participants' observations and experiences to understand the researched phenomenon [9]. This study was reviewed and approved by King Saud University Human Research Ethics Committee (approval number: KSU-HE-21-490). The research team are faculty members in the Health Education program in King Saud university with interests in curriculum development. The research team are also health education specialists and advocate for the health education profession.

Focus group interviews were used in this study as they provide the chance to understand people's ideas and experiences in a naturalistic setting where social context is more influential than individual accounts [10]. Due to the global pandemic and social distancing measures, data was collected online (via Zoom). We also used the health education interns' internship logbooks as secondary data for analysis. The logbook is meant to provide the students a chance to reflect on their experiences during their internship year, highlight the main courses that were beneficial

during their training, and state the new skills they developed. The logbook also provides students with the chance to suggest courses/topics that would have been helpful for them to fully perform their job. These reflections were analyzed in relation to this study's aim.

2.1 Study setting and sample

The study was conducted at King Saud University. The interviews were conducted among three different stakeholders' groups using convenience sampling. These groups are Health Education graduates, faculty members of the Health Education program; and employers, who have employed Health Education program graduates. We interviewed each group independently, to allow participants the freedom to discuss their unique experiences and views. We conducted two focus groups with graduates, one focus group with faculty members and one focus group with employers. We continued interviewing until we reached theoretical saturation. We decided that this was reached when an additional focus group interview was believed not to provide further codes and themes.

2.2 Data collection

Before each scheduled group interview, participants were sent information explaining their role in the study and the interview procedure. Before the interview, a short questionnaire was used to collect socio-demographic data, including age, gender, employment status, and education level and all participants were asked to give informed consent. Interviews lasted approximately an hour. The interviews were used to address different perspectives and experiences about learning and teaching health education skills and knowledge. The interview guide (Supplementary file 1) was developed following the literature of similar studies [11, 12]. Participants had the freedom to discuss any relevant areas that were not covered by the guide. Two researchers (SA & LA) moderated the focus group interviews. SA & LA are faculty members in the Health Education program, who have professional relationship with some of the study participants. Interviews were conducted in November 2021.

2.3 Data analysis

The interviews were audio recorded for analysis using reflexive thematic analysis [13]. The authors followed the steps of a thematic analysis, which included: data familiarization, generating initial codes, sorting and grouping codes to search for themes, reviewing themes and defining final themes and interpretation [13]. As part of the familiarization stage, two authors (SA & LA) listened to all interview recordings before coding, where initial impressions of interpretations were created. SA independently coded two transcripts and LA independently coded another two transcripts, then meetings were conducted to discuss the coding of the four transcripts and amend the codes as needed. We applied an inductive approach of coding to ensure that codes and themes are generated from the data. A codebook was developed and the relationship between codes were examined (Example provided in Supplementary file 2). Categories were then derived by grouping codes together to produce the preliminary themes. All themes and sub-themes were identified and interpreted by the whole team to improve the study results' rigor and reliability [8].

3 Results

We have conducted four focus group interviews with a total of 29 participants. The sample included participants from three different groups; alumni ($n = 16$), faculty members ($n = 7$), and employers ($n = 6$) (see Table 1 for sample characteristics). The focus groups revealed an existing gap between the program's academic journey and the job roles expected of the graduates. There was consistency between the views of different stakeholder's groups.

Health education specialists have the potential to work in a variety of settings assuming different roles. Throughout the interviews, participants emphasized the importance of including the skills and knowledge they need as health education specialists based on their potential future roles working directly with patients or for organizations that serves the public. Some participants also highlighted the importance of being able to adapt to the changing health system and the newly founded job opportunities to improve their chances of employability.

Table 1 Characteristics of the study participants

Category	N
Alumni sample (N = 16)	
Educational level	
Bachelors	14
Masters	2
Age	
20—25	7
26—30	8
31—35	1
Graduation year	
2011–2015	3
2016–2021	13
Work sector	
Clinical—patient education	1
Community health education	5
Both patient and community education	5
Others	4
Teaching staff sample (N = 7)	
Educational level	
Masters	4
PhD	3
Specialty	
Health informatics	1
Health education and promotion	2
Public health	3
Epidemiology	1
Employers sample (N = 6)	
Work experience	
5–10 years	2
More than 10 years	4
Specialty	
Health education and promotion	5
Healthcare management	1
Work sector	
Clinical—hospital	5
Community—Ministry of Health	1

“I feel that one of the most important qualities that health education graduates must have been adaptability because the labor market now has many jobs in which health education graduates can be employed in, therefore they need to have skills beyond patient education.” (Alumni focus group)

We have identified four main themes from the data; *Medical and clinical related knowledge and skills, Communication and engagement with the community, Planning and evaluating health programs, Health systems and health policy, and Marketing and technological skills.*

3.1 Theme 1: medical and clinical related knowledge and skills

Participants highlighted the need for variety of medical and clinical knowledge and skills to prepare them for joining the workforce. Participants discussed the importance of having research skills and how they are relevant in the field of health education. Health education specialists should be able to conduct all steps of scientific research. Searching

for credible information was perceived as an essential part of a health education specialist's job. Additionally, some participants emphasized the importance of developing research skills in line with Saudi Arabia's increasing interest in research.

"It is important to have a course for research, because of the current trend in investing in research, and now we are required to do research." (Employers focus group)

Some participants mentioned how important it was for them to acquire statistical skills and to master epidemiology in the field of health education.

"We were required during the internship to take part in a project which calculates statistics and hospital's indicators. The epidemiology course and the equations we studied helped us a lot." (Alumni focus group—1)

All participants discussed the importance of strengthening the health education specialists' medical knowledge. There is a need to improve specialist's knowledge of diseases and disease management. There was a perceived special emphasis on chronic disease knowledge due to its burden on the healthcare system and its high prevalence in Saudi Arabia.

"Especially since chronic diseases we have in Saudi Arabia are very high and need a strong emphasis on it so that we have sufficient skills and information to deal with these diseases." (Alumni focus group)

Additionally, participants explained the importance of improving pharmacological knowledge, including medication safe use and medication adherence.

"From my observation, there is a weakness in medical information. First: health information about medical terminology, pharmacology: any medicines such as scientific or commercial names, pathology, and their names. I wish there is more focus on preparing students to have all the needed medical and pharmacological knowledge so they can provide education to the patient and the public based on evidence!" (Employers focus group)

Many participants discussed the need to include up-to-date skills and knowledge on occupational health and safety in the health education specialist academic program. Health education specialists were viewed as essential members in promoting the health and safety of the employees of any organization. This was often discussed in relation to Saudi Arabia's interest in improving the overall quality of life of its occupants which includes the promotion of occupational health.

"We were not discussing the health of those working in office workplaces, for example, and how to promote health in these institutions, especially with the quality-of-life program, and there is great interest in this aspect, and most of the large employers require the presence of health education specialists." (Alumni discussion group—1)

Participants additionally mentioned the need to adapt the academic program of health education to the emerging needs and trends in health care and the changing needs of the populations. Some participants mentioned that due to the aging population of Saudi Arabia, geriatric health is an important field in health education. Furthermore, mental health was perceived as a core field that should be focused on, specifically in terms of prevention. Other fields that were mentioned included children's and women's health.

"Adding a mental health course..., understanding the psychological problems of the patient, because they can be struggling during the education session. Understanding psychological diseases, in general, teaches the health care professional how to deal with the patient, especially some patients with chronic diseases who suffer from: depression, bipolar, schizophrenia, etc. So mental health should be taught and how to communicate with different segments of society." (Employers discussion group)

3.2 Theme 2: communication and engagement with community

Participants perceived that one of the most important skills for a health education specialist is to communicate health information effectively. The skill is defined as the ability to simplify the information to the receiver and to make sure that they understand the information presented. Communication skills were highlighted in relation to health education specialists' ability to communicate with patients as well as staff and colleagues.

"I hope that we improve graduates' communication skills, persuasion skills and also good listening skills." (Employers focus group)

“The skill of imparting information, I see it to be honest as a core skill and we must pay close attention to it during all college years, not only during the internship. The skill of delivering information is essential, whether the health education specialist works with a patient, in any administration or as an academic.” (Alumni focus group)

Counseling and behavior change are perceived to be key roles of health education specialists. Therefore, participants explained the need to for health education specialists to understand and master the social and psychological aspects of health. Participants explained how these concepts strengthen health education specialists’ understanding of human behavior and therefore provide them with the skills to facilitate behavior change on both the patient and the community levels. Health education specialists must be knowledgeable on the theoretical basis of health behavior, using up-to-date psychological and social theories. Participants viewed understanding the complexity of health behavior as a facilitator to empathetic communication which was discussed as an important skill for a health education specialist.

“I mean, when we talk to patients, the expectations are illogical, at the end of the day, we are human beings, and the habit that they acquired in twenty years happens day and night, I expect them to change it and adopt another behavior, the ability to understand, consider and empathize is very important.” (Alumni focus group)

Participants discussed the importance of the field of school health in health education. Health education specialists should have the skills and knowledge to provide health education in school settings.

“I always say that when we start educating from a young age, the information becomes established. I hope in the future that there will be a school health education course that has more training and be more up to date than what I studied.” (Alumni focus group)

3.3 Theme 3: planning and evaluating health programs

All participants highlighted the importance of being able to plan and evaluate health education programs. Which include skills in planning programs and writing program proposals and objectives. There was a special emphasis on learning how to assess community needs and evaluate the impact of health education programs. Participants also discussed the importance of learning to work with a multi-disciplinary team and how to delegate based on specialty which was viewed as an essential aspect of successful program planning.

“It is important to know how to design a program and how to target people in this program and how to write the proposal and submit it and get approvals from the higher authorities and make it convincing.” (Alumni focus group—1)

“It is important to learn how to involve the whole team. I do not say that I am a health education specialist and do everything on my own. I need to know my role and duties, and in return, I know the role of the entire team, including the pharmacist and others.” (Employers focus group)

3.4 Theme 4: health systems and health policy

Health education specialists need to be aware of the different health systems, especially the Saudi health system. Some participants also perceived that it is important to cover aspects of health management and quality. Few participants have also mentioned that it is important to provide health education specialists with a background in health policy.

“It is important to include in the program an explanation of the Saudi health system, especially with the changes that have taken place, so that we would know our role in this system.” (Alumni discussion group)

3.5 Theme 5: marketing and technological skills

Many participants discussed the importance of having the skills for creating health-related content as a health education specialist that is both attractive and engaging. Some participants also mentioned the need to be trained to develop content in Arabic. Others highlighted the importance of learning how to utilize up-to-date channels for health education content, such as social media.

“During the internship, we worked a lot in creating content, and most of us know how to do that, but we must have creativity in the way of communicating information and in different ways.” (Alumni focus group)

Some participants explained that many marketing techniques and skills should be adapted by health education specialists. The concept of social marketing should be emphasized and mastered by specialists, whether working with patients or the public.

"It is very important to expand and get deeper into health marketing methods and how to market health awareness information persuasively and creatively." (Internship Logs)

Many participants discussed the importance of the field of health informatics in health education including telemedicine and cyber security. The role of digital health was perceived as the modern form of health education. Social media and virtual clinics were playing a major role in health education during the global pandemic (COVID19), their use was viewed to be essential, and therefore health education specialists need to learn to use them efficiently.

"The virtual world that we entered after Covid, the virtual clinics, the provision of education and social media, to be honest, until now I have not seen anyone deal with it as effectively as the health educator." (Employers discussion group)

4 Discussion

This study explored stakeholders' perceptions on the health education program graduates aiming to understand the current gap between their job roles and the academic program. The goal was to support the preparedness for the practice of the health education profession. Based on the analysis the gaps were categorized into five main themes, Medical and clinical related knowledge and skills, Communication and engagement with the community, Planning and evaluating health programs, Health systems and health policy, and Marketing and technological skills. The themes were derived from the participant's perceptions and experience as employers, graduates of the program or faculty staff. The study's findings may serve as recommendations that assess the health education programs' areas of improvement.

Findings from this study were consistent with previous research suggesting variability in job titles and scope of practice of health education specialists [12]. This variability of scope of practice could be viewed as an opportunity to increase graduate employment by making them attractive to different job opportunities and institutions. However, it is posing a challenge for programs to prepare health education professionals who might serve in different work settings and job titles. There is a need to advocate for the health education profession and its graduates' skills in order to allow them to be an effective part of the work force [12]. The findings highlighted the gap between the knowledge and skills acquired during the academic year and the job tasks the graduates face after they are employed. Many of the required skills and knowledge were not covered in the health education curriculum [14]. The current transformation in healthcare and policies in Saudi Arabia focuses on the prevention and health awareness of society and using technological advances for health care delivery [15]. Which further emphasizes the need for empowering health education graduates in the fields of health informatics and digital health. Additionally, health education programs need to be adaptable to the changes in the population's health needs, such as mental health and geriatric care. Geriatric care was recommended to be included in the health education programs due to the aging population of Saudi Arabia [16]. Mental health was one of the important topics mentioned by some participants due to the rising rate of mental health issues [17], and therefore, programs need to prepare health education specialists with the necessary knowledge and skills in this area.

Additional skills mentioned by the participants were related to research skills and epidemiology, creating content, planning, and evaluating health programs, communication and counselling and marketing skills. Health education programs should include these skills in their curricula to increase the chances of their graduates' employability.

Participants emphasized additional needed knowledge which included medical and pharmacological knowledge and health systems and health policy. Many health education specialists' jobs require clinical counseling and behavior change. Therefore, graduates should be informed on both theoretical and practical aspects of behavior change techniques. Some specialists may work in primary care while others may work in secondary or tertiary care settings, therefore, it's recommended that any health education specialists have basic information in pharmacology.

There is an increasing demand for creating an evidence-based health promotion educational programs that enhances the health education specialists' skills in content creation, measuring the impact of interventions, and research skills. These skills are crucial in planning and implementing health education programs.

Health education as a profession has its own roles, responsibilities, and competencies. Efforts have been made to ensure that health education specialists have the knowledge and skills to practice the profession and improve health [18]. Health education is an emerging profession in Saudi Arabia and due to the lack of a national competency framework it is

important to conduct further studies on the knowledge and skills needed and the current practices of health education specialists in various work settings.

The results will help to align the job needs with the academic programs' output and objectives of the Health Education programs offered in Saudi Arabia. The study is a first towards achieving a bigger goal of identifying health education specialists' competencies.

5 Strengths and limitations

This is, to the authors' knowledge, the first study to identify the needed knowledge and skills for health education specialists using qualitative research methods in Saudi Arabia. The sample included participants with different expertise and experiences which helped in accessing diverse views. The interviews were coded by two researchers which improved the interpretation rigor and the analysis process.

This study is not without limitations. All Alumni samples were females, although male alumni were invited but did not participate. Their experiences could have been different from those who participated in this study. However, the majority of health education specialists are females, therefore the results of this study was believed to reflect the experiences of King Saud University health education graduates. Research participants were aware that the interviewers were faculty members in the Health Education program, and therefore we cannot eliminate the possibility of social desirability bias, where participants might have felt unease in sharing some negative experiences or views. Nevertheless, all participants were encouraged to discuss any point they view important, and we explained that the purpose of this study is to improve educational outcomes and would not affect them negatively in any way. The findings of this study may not be completely transferable beyond the current context as the views are specific to the Health Education program in King Saud University in Riyadh, Saudi Arabia. Therefore, health education graduates in other settings may have different views and needs.

6 Conclusions

The needed skills and knowledge identified in this study were deemed important by participants. Future studies are recommended to estimate their importance based on the rating of alumni, faculty staff, and employers. Moreover, skills and knowledge mentioned could be opportunities for learning on the job, this study did not assess the amount of learning received by alumni on the job in relation to the health education program preparedness.

Acknowledgements The authors would like to thank all participants for their participation in this study.

Author contributions SA, SH & LA contributed to the study conception and design. Material preparation, data collection and analysis were performed by SA. LA contributed to the analysis, interpretation of the data and the writing of the results. The first draft of the manuscript was written by SA. SH & LA commented and edited further versions of the manuscript. All authors read and approved the final manuscript.

Data availability The datasets generated during and/or analyzed during the current study are available from the corresponding author on reasonable request.

Declarations

Competing interests The authors declare no competing interests.

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

References

1. WHO. The top 10 causes of death. 2020.
2. Alqunaibet A, Herbst CH, El-Saharty S, Algwizani A. Noncommunicable diseases in Saudi Arabia: toward effective interventions for prevention. Washington, DC: World Bank Publications; 2021.
3. MOH. World health survey, Saudi Arabia 2019 final report. 2020. <https://www.moh.gov.sa/en/Ministry/Statistics/Population-Health-Indicators/Documents/World-Health-Survey-Saudi-Arabia.pdf>.
4. Program QoL. 2016. Riyadh, Saudi Arabia: Kingdom of Saudi Arabia 2030. <https://www.vision2030.gov.sa/v2030/vrps/qol/>.
5. 2030 V. Health sector transformation program 2021. Health sector transformation program. <https://www.vision2030.gov.sa/v2030/vrps/hstp/>.
6. SOPHE. Health education specialists. <https://www.sophe.org/careerhub/health-education-profession/>.
7. Al-Hashem A. Health education in Saudi Arabia: historical overview. Sultan Qaboos Univ Med J. 2016;16(3): e286.
8. Green J, Thorogood N. Qualitative methods for health research. London: Sage; 2018.
9. Given LM. The Sage encyclopedia of qualitative research methods. Los Angeles: Sage Publications; 2008.
10. Ritchie J, Lewis J, Nicholls CM, Ormston R. Qualitative research practice: a guide for social science students and researchers. Los Angeles: Sage; 2013.
11. Aldubayan K, Aljuraiban G, Aldisi D. Necessary knowledge and skills for dietitians in Saudi Arabia: a qualitative study. Malays J Med Sci. 2019;26(3):110.
12. Baisch BA, Krajny S, Wagner LM, Symons CW. A qualitative analysis of health education practice in applied work settings. Health Promot Pract. 2016;17(6):899–906.
13. Braun V, Clarke V. Reflecting on reflexive thematic analysis. Qual Res Sport Exerc Health. 2019;11(4):589–97.
14. University KS. Curriculum of BSc in health education 2023. <https://cams.ksu.edu.sa/en/node/1055>.
15. Chowdhury S, Mok D, Leenen L. Transformation of health care and the new model of care in Saudi Arabia: Kingdom's vision 2030. J Med Life. 2021;14(3):347.
16. Karlin NJ, Weil J, Felmban W. Aging in Saudi Arabia: an exploratory study of contemporary older persons' views about daily life, health, and the experience of aging. Gerontol Geriatr Med. 2016;2:2333721415623911.
17. Alzahrani F, Alshahrani NZ, Abu Sabah A, Zarbah A, Abu Sabah S, Mamun MA. Prevalence and factors associated with mental health problems in Saudi general population during the coronavirus disease 2019 pandemic: a systematic review and meta-analysis. PsyCh J. 2022;11(1):18–29.
18. Knowlden AP, Cottrell RR, Henderson J, Allison K, Auld ME, Kusorgbor-Narh CS, et al. Health education specialist practice analysis II 2020: processes and outcomes. Health Educ Behav. 2020;47(4):642–51.

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.