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# Community health fairs as experiential learning: a qualitative exploration of benefits and challenges

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## Abstract

**Background** The shortage of clinical placements and preceptors necessitates innovative approaches to healthcare education. Community health fairs (CHF) offer a potential solution, but their effectiveness as learning environments is limited. Further, there is lack of recent literature exploring CHF settings as potential learning environments. This study examined and explored the benefits and challenges of healthcare students and faculty participating in a CHF setting.

**Methods** Using a semi-structured guide developed by the researchers for this study, qualitative conversational interviews were conducted with 14 participants (7 students, 7 faculty) involved in an annual CHF. Prior to the interview, all participants completed a demographic data sheet. All interviews were audio-recorded, transcribed, checked for accuracy, and de-identified, and MAXQDA was used to manage and code the interviews. Two coders analyzed the transcripts, and a third coder served to confirm the qualitative findings, and Clarke and Braun thematic analysis was employed to develop themes. Descriptive statistics were used to describe the sample.

**Results** Seven faculty participated in this study; the age range was 34–64 and years in practice ranged from 7 to 23, four participants were advanced practice nurses (28.6%), two mental health providers (14.3%), and one dental provider (7.1%). The student participants consisted of five dental hygiene students (35.7%) and two nursing students (14.3%). Participants were predominantly female (92.9%), with one male participant (7.1%). The average interview lasted 8 min reflecting the dynamic and fast-paced nature of CHF. Four major themes emerged from the interviews: (1) Skills development and practical experience, (2) Perspective enhancement, (3) Challenges within the Learning environment, and (4) Recommendations for enhancing health fair settings experiences.

**Conclusions** CHF can serve as valuable active learning environments that promote clinical skill development and broaden perspectives. To improve CHF experiences, participants discussed increasing collaborations with other healthcare institutions within the state, making the examination rooms more realistic, and increasing privacy for the patients. Participants also recommended pre-training of healthcare volunteers and incorporating technology for teaching patients. More research is needed to evaluate the utility of CHF as a learning environment. This is urgent since clinical settings are limited and saturated. Further, researchers should continue doing research in this environment since the literature is scant and dated.

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**Keywords** Qualitative research, Health fairs, Students, health occupations, Faculty, nursing, Interprofessional education

## Background

Over the last decade, securing adequate clinical sites for students in health-related professions has become increasingly challenging. Factors such as a growing number of healthcare programs and limited availability of preceptors have contributed to this shortage [1, 2]. Despite the increased need for diverse clinical placements, the role of community health fairs (CHF) as effective learning environments remains under-researched. Limited recent studies have explored their value in preparing students to address complex social determinants of health in real-world settings [3, 4]. Further, traditional clinical settings, while valuable, often present limitations. These include insufficient exposure to diverse patient populations and variations in supervision and case complexity, which can hinder comprehensive skill development [5, 6]. These challenges necessitate innovative approaches to clinical education that complement traditional methods and ensure that students in healthcare professions are well-prepared for practice.

To address these challenges, CHFs have emerged as a promising alternative, offering a real-world setting where students can apply theoretical knowledge and develop practical skills. CHFs are healthcare events that provide cost-effective medical services, preventative screenings, resources, and education to people from underserved or marginalized people who may not otherwise receive it. The unique elements of CHFs incorporate faculty and students from clinical and non-clinical professional programs (e.g., social work, nursing, and business) and community partners into the interprofessional healthcare process [7]. Despite the potential usefulness of CHFs as a learning environment, the literature is scarce and dated. There is an urgent need to explore this setting to identify the strengths and weaknesses of this setting. Grounded in Kolb's [8] experiential learning theory which emphasizes the importance of concrete experiences in knowledge construction, and Bandura's [9] social cognitive theory which highlights the role of observational learning and social modeling, CHFs provide a unique environment for students to engage in patient care and learn from interprofessional colleagues actively. This learning experience also emphasizes the critical tenets of Knowles' [10] learning principles: relevance, problem-solving, and self-direction [10, 11]. Students can navigate real-world health challenges by engaging in patient interactions and health education activities within a CHF, enhancing their critical thinking and adaptability [11–13].

Furthermore, CHFs foster interprofessional collaboration, a critical competency in modern healthcare [14,

15]. Working alongside students from other disciplines like pharmacy, dental hygienists, social work, or public health allows nursing students to develop communication, teamwork, and collaborative problem-solving skills essential for providing high-quality patient care. This exposure prepares students for future clinical practice and contributes to improved patient outcomes. The purpose of this study was to examine the educational potential of CHFs as alternative clinical training sites by exploring the lived experiences of healthcare students and interprofessional faculty. Specifically, this study seeks to answer the following research questions:

1. What are the perspectives and experiences of faculty and students who participate in an annual HCF?
2. What are the barriers and facilitators to adequate service provision within the CHF setting?

## Methods

Although this study utilized elements of mixed methods, the current manuscript reports exclusively on the qualitative dimensions of healthcare students' and interprofessional faculty's experiences at a CHF, focusing on thematic insights derived from conversational interviews. Our goal when using a mixed methods approach, survey methodology, and conversational interviews was to integrate the breadth of quantitative data with the depth and context of qualitative data. In this study, the providers and students working at the CHF were able to provide rich data. This combination allows the investigation of multiple dimensions of a phenomenon that might be missed by using only one method. Recognizing that CHFs offer a dynamic, real-world learning environment where participants engage in diverse health education activities and interact with various community members, we employed a qualitative approach to delve deeper into their perceptions and interpretations of these experiences. Specifically, we chose conversational interviewing as our primary qualitative approach to collect the data due to its alignment with the unique context of CHFs. These events are often characterized by a fast-paced atmosphere with multiple providers and activities coinciding. As Leverenz [16] described, conversational interviewing offers a flexible and adaptable approach that allows researchers in CHFs to integrate into this bustling environment seamlessly. These interviews' short, informal nature allows for authentic and spontaneous responses from participants, capturing the nuances and complexities of their experiences in real time. According to Swain and King [17], informal conversations in

qualitative research foster a relaxed environment, promote greater ease of communication, and produce rich, more realistic data. One of the issues with conversational interviewing is the short time frame available for in-depth discussions. However, despite its brevity, this method has proven effective in hectic environments where quick, yet meaningful interactions are necessary. It allows for the collection of valuable insights without disrupting the fast-paced nature of the setting, making it a practical approach in time-constrained situations.

This methodology aligns with Knowles' Adult Learning Theory [10], which emphasizes understanding learners' lived experiences and perspectives. By engaging in conversational interviews within the context of the CHF, we sought to gain insights into how students and faculty make meaning of their participation in this unique learning environment, how they perceive the benefits and challenges of interprofessional collaboration, and how their experiences at the CHF may influence their future practice. This study was approved by the University's Institutional Review Board (IRB 276141). The study was considered exempt by IRB and was conducted in accordance with the institutional ethical standards consistent with the 1964 Helsinki Declaration.

### Study setting

CHFs are typically held in diverse locations, such as churches, schools, or community centers, and offer a range of health services to the public [18]. The CHF in this study, held annually since 2007 at a local church, is organized by a health ministry team comprised of interprofessional healthcare providers. The fair provides free services, including physical exams, dental care information, mental health assessments, and screenings, to approximately 400 individuals annually, predominantly from Black/African American and Hispanic communities. Volunteers from various clinical settings and a local university representing diverse healthcare disciplines assist in providing these services. This interprofessional collaboration aligns with the growing recognition of the importance of teamwork in healthcare, emphasizing the benefits of shared decision-making and coordinated care [19, 20]. The CHF serves as a real-world learning laboratory for students and professionals, mirroring the collaborative nature of modern healthcare practice.

### Participant selection

We used purposive sampling to recruit diverse participants who were actively involved in the annual CHF. The sample size of 14 participants, representing both students and faculty from various healthcare disciplines, participated, ensuring that diverse perspectives across healthcare disciplines were captured. While small, this sample allowed for an in-depth exploration

of experiences specific to the unique CHF setting. Prior to starting the conversational interview participants were provided with information about the study and we requested verbal consent form prior to starting the interview. All participants were 18 years of age or older. The student participants represented diverse healthcare professions, including nursing, dentistry, pharmacy, and public health. The faculty participants also represented a range of disciplines, ensuring diverse perspectives on the CHF's educational and service delivery aspects.

Before engaging in conversational interviews, all participants completed a demographic data sheet to gather information. The data demographic sheet for faculty members consisted of eight items: age, gender, race, ethnicity, specialty, years of experience as a provider, years of teaching, and previous history of participating in health fairs. The student demographic data sheet consisted of seven items: age, gender, race, ethnicity, highest degree completed, specialty, and previous history of participation in health fairs.

### Data collection

Consistent with the conversational interviewing approach, a concise list of open-ended questions was developed to elicit participants' perspectives on the learning opportunities, challenges, and overall experiences at the CHF [21]. These questions, refined through collaborative discussions and voting during a research team meeting, aimed to explore:

- Students' and faculty's experiences applying their knowledge and skills at the fair.
- Participants' perceptions of the fair's effectiveness in facilitating clinical skill development.
- Identification of logistical or educational barriers and facilitators encountered by participants during their experience at the CHF.
- Suggestions for improvement to enhance the learning value of future health fair experiences for both students and faculty.

All interviews were conducted in a quiet area within the CHF by a single researcher who was experienced in qualitative interviewing. Despite the flexibility of conversational interviewing, the brief and informal nature of the interactions may have limited the depth of data collection. To mitigate this, the researcher employed probing techniques and follow-up questions to capture meaningful insights within the time constraints imposed by the fast-paced CHF environment. Interviews were digitally recorded on an encrypted iPad for accuracy and uploaded to a secure university server accessible only to the research team. All recordings were professionally transcribed verbatim, checked for accuracy, and

interviews were de-identified. The average interview duration was 8 min, reflecting the dynamic and fast-paced nature of the CHF environment.

# Data analysis

We employed Clarke and Braun's six-step thematic analysis [22] to identify patterns and themes within the

**Table 1** Characteristics of faculty participants

Characteristics	No. of participants (%)
Age (years)	
34	2 (28.6)
35	1 (14.3)
40	1 (14.3)
45	1 (14.3)
48	1 (14.3)
64	1 (14.3)
Gender	
Female	7 (100.0)
Ethnicity	
Non-Hispanic	7 (100.0)
Race	
Black or African American	5 (71.4)
White	2 (28.6)
Specialty	
Primary nurse practitioner	1 (14.3)
Family nurse practitioner	3 (42.9)
Psychiatric-mental health nurse practitioner/Women's health nurse practitioner	1 (14.3)
Dental hygiene	1 (14.3)
Therapist	1 (14.3)
Work area	
Primary care	4 (57.1)
Specialty care clinic	1 (14.3)
Outpatient mental health	1 (14.3)
Preventative dental hygiene clinic	1 (14.3)
Work location	
Rural or small town	2 (28.6)
Large city	5 (71.4)
Years of experience of the specialty	
7	2 (28.6)
11	1 (14.3)
12	3 (42.9)
23	1 (14.3)
Years of teaching	
2	2 (28.6)
3	1 (14.3)
6	1 (14.3)
7	1 (14.3)
8	1 (14.3)
15	1 (14.3)
Ever participated in a health fair	
Yes	7 (100.0)

interview data. Two research team members independently coded the first three interview transcripts using MAXQDA software [23] facilitating the organization and comparison of codes. Once initial codes were established, a coding framework was collaboratively developed within MAXQDA and applied to categorize the entire dataset systematically. The coding team convened weekly to discuss emerging codes, identify patterns, and refine themes through an iterative process, utilizing MAXQDA's features to visualize connections and relationships between codes. Any disagreements were resolved through consensus. A third team member of the research team performed confirmation coding analysis.

# Trustworthiness and rigor

We employed several rigorous qualitative research strategies to ensure the trustworthiness of the findings. The research team maintained a detailed audit trail throughout the research process and data analysis process to document decision-making. Furthermore, the research team had regular meetings to maintain the integrity of the data. Lastly, during data analysis, a third member of the research team, who has extensive experience in organizing and working at health fairs settings helped confirm the themes. All coding disagreements were resolved by consensus.

# Results

## Participant demographics

The study sample consisted of 14 participants involved in the annual CHF: seven healthcare professionals (Table 1) and seven students (Table 2). The healthcare providers, comprised of four advanced practice nurses (28.6%), two mental health providers (14.3%), and one dental provider (7.1%), with a mean age of 43 years old and practice years ranging from 7 to 23. The student sample consisted of five dental hygiene students (35.7%) and two nursing students (14.3%). The mean age of participants was 29 years old and were predominantly female (92.9%), with one male participant (7.1%).

## Qualitative data analysis results

Overall, participants viewed the CHF as a valuable learning experience that enhanced clinical skills and broadened health and healthcare delivery perspectives. The goal was to understand the participants perspectives towards CHF setting as a potential learning environment. Additionally, if this setting was conducive for learning and teaching, what would be the potential barriers. The themes below describe the perspective of the students and faculty, and they provided recommendations to overcome the barriers. Students appreciated the opportunity to apply theoretical knowledge in a real-world setting, while faculty valued the chance to observe students

**Table 2** Characteristics of student participants

Characteristics	No. of participants (%)
Age (years)	
21	2 (28.6)
22	1 (14.3)
23	1 (14.3)
24	1 (14.3)
28	1 (14.3)
64	1 (14.3)
Gender	
Male	1 (14.3)
Female	6 (85.7)
Ethnicity	
Hispanic, Latino, or Spanish origin	2 (28.6)
Other	5 (71.4)
Race	
Black or African American	1 (14.3)
White	5 (71.4)
Latino	1 (14.3)
Highest educational degree	
Bachelor of science in nursing (BSN)	1 (14.3)
Associates in science and art	1 (14.3)
Biology, Dental hygiene (BS)	1 (14.3)
Bachelor of science in interdisciplinary studies	1 (14.3)
CPH	1 (14.3)
Undergraduate student	2 (28.6)
Specialty	
Administration health and pay	1 (14.3)
Dental hygiene	5 (71.4)
Public health	1 (14.3)
Ever participated in a health fair	
Yes	3 (42.9)
No	4 (57.1)

in action and interact with community members. Four major themes emerged from the interviews: (1) Skills Development and Practical Experience, (2) Perspective Enhancement, (3) Challenges Within the Learning Environment, and (4) Recommendations for Enhancing Health Fair Settings Experiences.

### Theme 1: skills development and practical experience

Most participants emphasized how the health fair allowed them to apply classroom knowledge to real-world scenarios directly. Faculty regardless of discipline, and students expressed the benefits of volunteering at the health fair for improving skills. *One student stated: "It's one thing to learn about blood pressure in class, but actually taking it on a patient makes it click.* The hands-on nature of the fair was crucial for developing core skills. A faculty member noted: *"The fair provides a low-stakes*

*environment where students can practice basic assessments and patient communication techniques."*

### Theme 2: perspective enhancement

The CHF provided a valuable opportunity for participants to witness firsthand the social determinants of health (SDOH), such as poverty and access to care, which significantly influence patient outcomes. Participants discussed how the CHF setting provided an opportunity to meet individuals from other cultures and spoke different languages. Several participants reflected on how this exposure broadened their views. For example, one student participant reported: *"I realized how many different factors impact health, not just the medical stuff we learn in school, and I got to see people from other cultures, that spoke other languages."* One faculty participant stated: *"The fair exposes students to socioeconomic challenges faced by patients—this builds empathy and shapes their approach to care."*

### Theme 3: challenges within the learning environment

Students and faculty noted various challenges inherent in the health fair settings. For example, the fast-paced nature of the health fair posed challenges for learners and sometimes hindered the effectiveness of focused instruction. For example, one student participant stated: *"Sometimes it's hard to focus on what I am supposed to learn and take care of all the healthcare concerns of the individual because everybody moves so quickly in this setting."* A faculty participant echoed the same sentiments: *"There are limitations as to what you can do in this setting because the patients move so quickly and it's hard to teach at the same time"* Another common challenge was the lack of privacy and realism of the setting. For example, one student participant stated: *"I enjoy the setting, but the exam rooms were not realistic and there was no privacy since everybody could hear you."* Similarly, a faculty participant, stated: *"It was hard to concentrate because the exam room walls were too thin - it was just a tarp, sometimes I had a hard time hearing my patient."*

### Theme 4: recommendations for enhancing health fair experiences

Participants offered several recommendations to enhance the effectiveness of CHF as learning environments. These recommendations centered on three key areas: preparation, collaboration, and technology integration.

**Preparation.** Participants emphasized the importance of investing time in preparing both students and staff before the CHF. Preplanning or preparation would increase satisfaction, and participants might feel more confident and competent in their roles, leading to better performance. Thorough preparation, including pre-fair training on communication, cultural sensitivity, and



instrumentation use could equip participants with the knowledge and skills necessary to provide high-quality care and education. For example, one student participant stated: *"I was a little nervous when I saw the equipment because I had never used that type of glucometer."* Another student participant stated: *"I wished someone had told me how I was participating in the health fair and what equipment I was going to use."*

**Collaboration.** Expanding collaborations with other institutions and organizations was identified as a crucial strategy to increase the range of services offered at CHF. Plus, collaboration brings together diverse perspectives and ideas, fostering creativity and innovations. Which can improve services in underserved areas. One faculty participant stated: *"It is vital to collaborate and invite other organizations that could help us increase our reach."* Another faculty participant stated: *"Health fairs occur annually, we need to work with other professionals that could help us to provide more services so we can help more people."*

**Technology Integration.** The integration of technology emerged as a promising avenue for enhancing health and patient education. Increasing use of technology provides patients with a wealth of health information online which patients might not be aware of. For example, a student participant suggested: *"We could use videos to demonstrate health practices like proper toothbrushing to parents"* Another student suggested: *"Incorporating interactive health apps to provide personalized information to attendees."*

## Discussion

### Theme 1: skills development and practical experience

A major issue we encountered is that CHF are common in health care but research utilizing this approach remains limited with most of the literature being over 7 or 10 years old. Our study contributes to this outdated body of knowledge by providing fresh insights and up-to-date findings addressing a critical gap and enhancing the relevance of CHF in today's clinical landscape. Consistent with our findings, Landy et al. [24] reported that first-year medical students participating in a community health fair found the experience promoted the development of clinical skills through direct patient contact. Another study by Fournier et al. [25] discussed how health fairs can be an effective educational tool for enhancing students' application of theoretical knowledge in real-world settings. CHF offer a unique setting for truly reinforcing clinical skills. Our findings align with Kolb's experiential learning theory, which emphasizes the importance of applying theoretical knowledge in real-world settings. Similar studies, such as those by McCullough and Poirier (2016), demonstrated how CHF facilitate the development of clinical skills and empathy, reinforcing the idea that

immersive, hands-on learning is critical in healthcare education [14]. The health fair, emphasizing hands-on patient interactions, effectively bridges the gap between classroom learning and real-world clinical practice. This finding supports previous research on the value of experiential learning modalities within healthcare education, which have been shown to improve knowledge retention, clinical skills, and problem-solving abilities [26, 27].

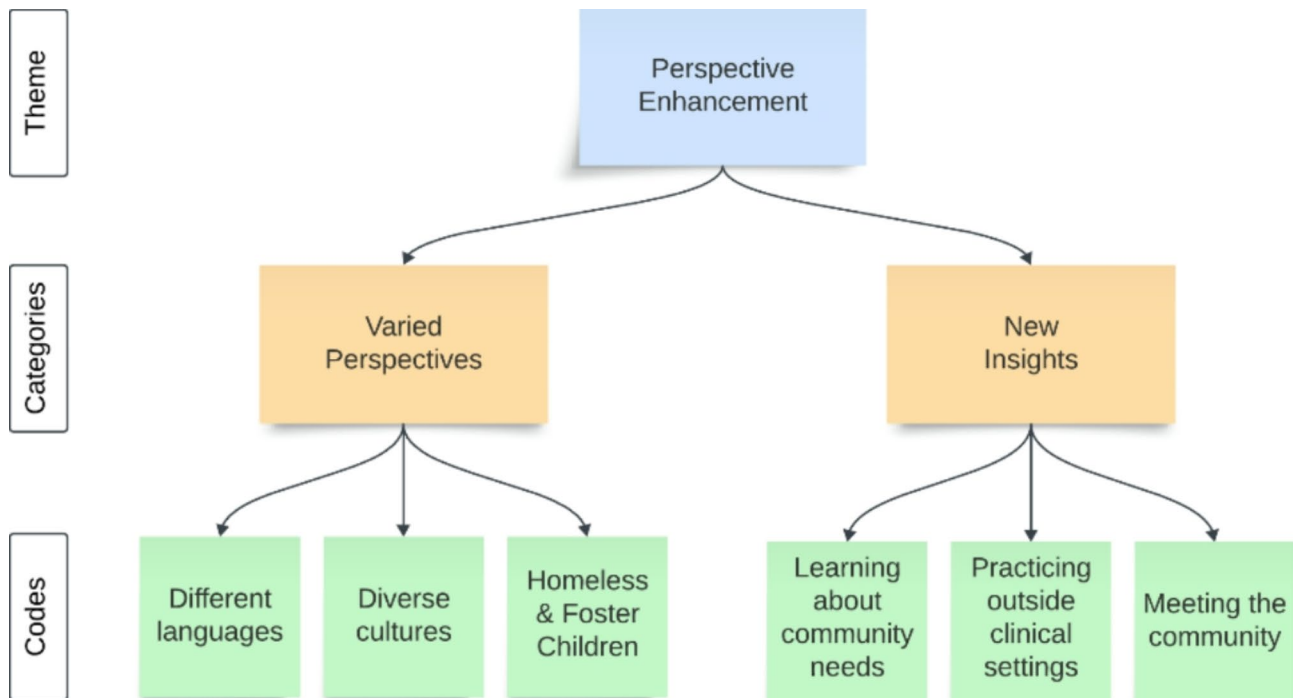
Health fairs are generally viewed positively, providing essential services to individuals in need. Most participants feel a sense of comfort since these events are usually held in their local communities [18]. However, health education professionals have not fully taken advantage of this setting as a learning environment. This aligns with McCullough and Poirier's [28] findings that students participating in community health fairs significantly improve their self-reported knowledge and skills related to public health practice.

### Theme 2: perspective enhancement

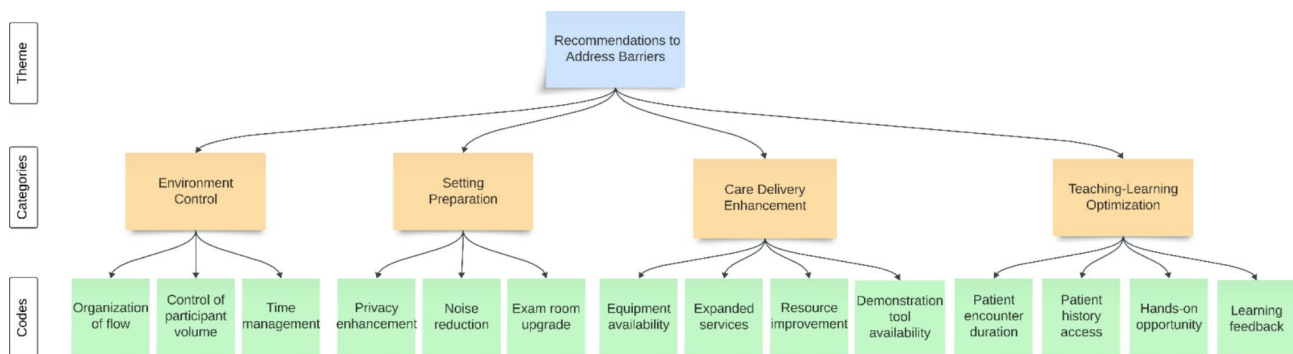
In this study, we found that students and faculty were impressed with the health fair's opportunity to meet and help patients from diverse backgrounds, including those with different languages, cultures, and socioeconomic statuses (See Fig. 1). This finding is significant as it has not been widely discussed in the literature. Given the non-homogenous nature of the patient population, it highlights the importance of preparing healthcare students to meet diverse needs effectively. Participants' exposure to this diversity expanded their perspectives, prompting them to consider factors beyond purely medical concerns, such as socioeconomic status, access to care, and cultural beliefs. This exposure aligns with ongoing efforts to integrate social justice and health equity principles into healthcare curricula [29]. By doing so, we are better preparing our healthcare students to serve a diverse patient population, ultimately improving the quality of care.

### Theme 3: challenges within the learning environment

The study also underscores the need for intentional planning and structured support to address logistical constraints and enhance the educational impact of health fairs. Future research should investigate the long-term impact of participation in CHF on students' clinical competencies and professional development. Longitudinal studies that track student outcomes beyond the CHF event could provide valuable insights into how these experiences shape their careers. Additionally, exploring the scalability of CHF across different regions and healthcare settings would enhance the generalizability of the findings. While recognizing the benefits, this study also highlights the challenges of using uncontrolled, often resource-limited environments as learning sites. This



**Fig. 1** Qualitative mapping of Theme 2 - perspective enhancement



**Fig. 2** Qualitative mapping of Theme 4: recommendations for enhancing health fair experiences

tension between the value of real-world experiences and the necessity of structured support is a critical aspect of experiential learning. Balancing these factors is essential to maximize the educational potential of health fairs and ensure that students are well-prepared to address the complex needs of diverse patient populations in their future careers. This concept, while important, has not been thoroughly explored in the literature.

#### Theme 4: recommendations for enhancing health fair experiences

Fournier et al. [25] found that pre-fair training significantly enhanced student learning outcomes at health fairs. Similarly, Ansari et al. [30] highlight the importance of partnerships and collaboration in community health nursing, emphasizing that effective collaboration

is crucial for addressing complex health issues and improving community health outcomes. Supporting this, Cicognani et al. [31] and Sarker and Joarder [32] demonstrate the positive impact of interagency collaboration on community-based health promotion programs. Building on these recommendations and the experiences of participants (See Fig. 2), optimizing the educational and community impact of community health fairs (CHFs) requires a multifaceted approach. These recommendations were based on the barriers described by the participants. Investing in thorough preparation, fostering meaningful collaboration, and strategically integrating technology can enhance both student learning experiences and community health services. However, while technology offers significant potential, its integration must be carefully planned with attention to accessibility,

usability, and cultural relevance to ensure its effectiveness. Lastly, the integration of technology in health fairs is vital to diminish the digital divide that is growing in healthcare between minority groups.

### Limitations

This study provides valuable insights into the experiences of healthcare students and faculty at a CHF; however, it is essential to acknowledge its limitations. Firstly, the study was conducted at a single CHF. While this approach allowed for an in-depth exploration of participant experiences through conversational interviews, the findings may not be generalizable to other CHFs. Secondly, while the purposive sampling approach captured diverse perspectives, it may have introduced selection bias, as participants who volunteered for the study may have had particularly positive or negative experiences. This bias could skew the results toward more extreme views, limiting the generalizability of the findings. Future studies could incorporate random sampling or broader recruitment strategies to address this limitation. Future research with larger, more diverse samples and multiple health fair settings would strengthen the generalizability of the findings. Future studies could consider incorporating anonymous surveys to mitigate this potential bias and provide additional perspectives, to triangulate the findings.

### Conclusions

This study examined the experiences of healthcare students and faculty participating in an annual CHF, highlighting the potential of CHFs as valuable experiential learning environments. Participants emphasized the role of CHFs in bridging the gap between theoretical knowledge and practical application, fostering clinical skill development. The hands-on nature of the CHF allowed students to apply classroom learning in real-world scenarios, enhancing their understanding of fundamental health assessment. Furthermore, participants supported the broadening of perspectives that occurred due to the CHF experience. However, participants identified several challenges associated with CHF, including the fast-paced and uncontrolled environment, limited resources, and the need for more structured educational support. Addressing these limitations is crucial for maximizing the academic potential of CHFs and ensuring that students receive a comprehensive and enriching learning experience. The findings of this study underscore the practical value of CHFs as alternative clinical education sites, particularly in the context of increasing shortages of traditional placements. By providing opportunities for skill development, interprofessional collaboration, and exposure to diverse patient populations, CHFs represent a scalable solution that can address current gaps in healthcare education. Educators should consider incorporating

CHFs more systematically into curricula, with structured support to maximize learning outcomes. By addressing logistical challenges and intentionally incorporating educational objectives, health fairs can become powerful tools for fostering clinical skill development.

### Abbreviations

CHF	Community health fairs
MAXQDA	MAX Weber Qualitative Data Analysis
SDOH	Social determinants of health

### Supplementary Information

The online version contains supplementary material available at <https://doi.org/10.1186/s12909-025-07071-4>.

Supplementary Material 1

Supplementary Material 2

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### Author contributions

MR interpreted the interview transcripts, conducted the thematic analysis of the codes, drafted the manuscript, and substantially revised them. SW drafted the manuscript, conducted a thematic analysis, and contributed to the analysis of findings. JJ analyzed the demographics of the participants and substantially revised the manuscript. EF contributed to the review of the literature and substantially revised the manuscript. ML and SS substantially revised the manuscript and served as secondary coders for the qualitative data. All authors read and approved the final manuscript.

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### Data availability

All data generated or analyzed during the current study are included in this published article [and its supplementary information files].

### Declarations

#### Ethics approval and consent to participate

This study was approved and was considered exempt by the University's Institutional Review Board (IRB 276141). To protect the participants, the study was conducted in accordance with the institutional ethical standards consistent with the 1964 Helsinki Declaration. Information about the study was provided and informed consent was obtained in verbal form from the participants.

#### Consent for publication

Not applicable.

#### Competing interests

The authors declare no competing interests.

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