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Exploring the Curriculum Needs and Expectations of School Health Nurses as Disability Educators in Ghana: A Focus Group Study

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Abstract

Background/Introduction

School Health Nurses in Ghana comprise various levels of community health nurses and public health nurses who perform other tasks in preventive, promotive, primary care and referral services in the community, including health education for students in public schools. The current barriers and disparities faced by people with disabilities in Ghana, alongside the recommendations to use community engagement and sensitisation to address these issues effectively, make it imperative to train school health nurses as disability educators. This study examined the curriculum needs and expectations of school health nurses to inform the development of an appropriate training programme to enable them to function as disability educators.

Methods

In this qualitative study using a constructivist paradigm, school health nurses stationed at four health institutions in the Accra Metropolis of the Greater Accra Region of Ghana were recruited by purposive sampling and six focus groups were conducted. The transcripts were analysed by thematic analysis

Results

Three themes, with subthemes, emerged regarding the needs and expectations of school health nurses relating to a curriculum for disability educators. These were 1) Curriculum content and delivery (comprising Disability knowledge acquisition, Variety in educational resources, Comprehensive non-punitive assessment approach, Variable and negotiable options in timing, scheduling, and duration); 2) Educational Environment and Experience (comprising Skill Development, Emphasis on a Learner-Centred Approach in Teaching Strategies, Diversity in Learning Environment, employing Diverse Educators Who Embrace Humanistic Teaching Methods, Affordability, Responsibility and Support from Stakeholders). Then lastly, 3) Professional Development (focused on Attitudinal Transformation, Acknowledgement, and Recognition).

Conclusion

The findings indicated that school health nurses needed a competency-based curriculum tailored to overcome barriers to participation, ensure effective inclusive engagement, achieve all intended learning outcomes, and support their career development. Based on our findings, we recommend developing a curriculum that incorporates all necessary elements for school health nurses to be trained as disability educators, enabling them to address the barriers and disparities faced by people with disabilities in Ghana. Additionally, this training would support these healthcare workers in improving their communication, understanding, and attitudes towards people with disabilities, enhancing their support during interactions in the community.

INTRODUCTION / BACKGROUND

People with disabilities (PWD) make up about 8% of the population of Ghana (1) and face challenges such as reduced access to health and education services, stigma, and discrimination, resulting in marginalisation and social exclusion (2, 3). Health workers also have poor perceptions and attitudes towards PWD (4). Meanwhile, several recommendations have focused on using community education and sensitisation to address these issues (5–8). Furthermore, future disability interventions are reported to require family and community engagement by harnessing external agents of change, such as community health workers and community-based health planning and services in Ghana (9).

In line with these recommendations, the Princess Marie Louise Children's Hospital (PML), a public hospital that provides preventive services, rehabilitative, and clinical care for children and the community (10), has been engaged in community education on disability since 2023 (11). In Ghana, SHNs are partly made up of community health workers (CHWs), also known as community health nurses (CHNs). CHNs make up the majority of SHNs and work alongside Public Health Nurses (PHNs) to provide preventive and promotive healthcare services to students and teachers, while also raising awareness about various health

issues (12). A limiting feature of CHNs is the short duration of their training programme (12–14). The training programmes are often foundational and cover primary care, prevention, and referral services, but do not comprehensively cover topics such as disability (13, 15). In some low-middle-income countries (LMICs), CHWs have been involved in disability-related interventions (15), and therefore, this could be investigated in Ghana. These workers have been identified as agents in disability-related services in LMICs, especially for creating awareness in communities (15, 16) and screening (15–18).

However, this is not the situation in Ghana since the training of CHWs is integrated with their areas of functioning. While CHWs in Ghana study Community-Based Rehabilitation and other topics on disability as part of their curriculum, the amount of information provided is limited by the need to teach other competing topics, since the curriculum is integrated (13). Also, though CHWs are expected to be involved in disability education, as in other LMICs, opportunities to do so are limited because of the other functions they perform. Furthermore, efforts at tackling the issues contributing to the marginalisation of PWD seem inadequate (5, 6, 8). Additionally, while there are some University courses on disability, there is no evidence of SHNs' participation in qualitative needs assessment studies focused on developing a disability course or training. Lastly, given the current evidence of the stigma and societal barriers faced by PWD, there is a pressing need for public education and awareness. A structured training programme could fill the gap in disability education for SHNs and help them function more effectively. Therefore, it is necessary to understand the curricular needs and expectations that would inform the training of SHNs in this field as disability educators

This study, done at the PML in Accra, Ghana, explored SHNs' curriculum needs and expectations as disability educators. The findings from this study will help inform the development of a training programme that meets the needs and expectations of the SHNs, enabling them to fulfil their future role as disability educators in the Ghana Health Service (GHS) School Health Program (SHP).

METHODS

Study design

This research employed a qualitative approach within a constructivist paradigm, collecting data through focus group discussions (FGDs). FGDs have been recognised as a method of choice in performing needs assessment in medical education research (19, 20), which is similar to the context of this study, as it is a needs assessment to inform the curriculum for training SHNs as disability educators.

Study Site

The study was conducted at the Princess Marie Louise Children's Hospital (PML) and involved participants from this site and three additional public healthcare institutions under the GHS. These were the Ussher Hospital, Mamprobi Hospital, and Kaneshie Polyclinic in the Asiedu Ketteke, Ablekuma South, and Okaikwei sub-metropolitan areas, respectively, all within the Accra Metropolitan Area (AMA).

Study population

The study population consisted of SHNs working under the GHS in the three abovementioned catchment areas in the Accra Metropolis. These nurses range from mostly CHNs, who have two years of training, to some PHNs, who have completed a three-year diploma or a degree in nursing or midwifery with some having two-year training in public health after working for 1–2 years. They generally work in public health, running child welfare clinics, conducting home visits, and managing the SHP under the GHS. At the time of the study, 10 SHNs were stationed at the PML, 15 at the Ussher Hospital, 26 at Mamprobi Hospital, and 23 at Kaneshie Polyclinic, making a total of 74. The eligibility criterion for inclusion was a SHN who had worked for at least one year at any public healthcare institution within the Accra Metropolis catchment area.

Sample size determination, sampling method, and recruitment

Using purposive sampling, 60 SHNs were recruited from the study population, considering increased costs, longer duration, and the limited time to enable at least three focus groups to be formed in all three sub-metros of the Accra Metropolitan area. The selection of the sites was based on proximity to PML. The Principal Investigator (PI), a member of the collaborator team from PML, with support from the Medical Superintendent of PML, contacted all the leaders of other health institutions involved. They assisted in recruitment through the various heads of their Public Health units, where all the SHNs are assigned. The recruited SHNs engaged in an in-person participant information session by the PI at all the health facilities involved. The Head of the Public Health unit encouraged recruitment through reminders at weekly staff meetings. Additionally, recruitment materials, including posters with recruitment information, were posted on station walls and at the units of the SHNs. Furthermore, information on participation and reminders about the focus group study were sent through the WhatsApp social media platform

Data Collection Technique and Tools

Data collection during the FGDs was conducted via audio and video recordings in the hospital's conference room at the study site. Each FGD lasted 60 to 90 minutes and was conducted in a spacious, conducive meeting room, where participants were seated comfortably around a table, free from external influences and distractions, and felt secure and relaxed. Video recordings allowed for observation and capture of nonverbal communication, which was analysed by the PI. A single moderator led the FGD with the participants while the PI observed, took field notes, and kept a reflective journal. The moderator was trained and used a guide (See supplementary material) with open-ended questions and prompts to stimulate the discussions (20, 21). The participants were pseudonymized using identification numbers to ensure confidentiality, and the data were stored electronically. FGDs were done in person as the location and context of the study are in a low-middle-income country, and using virtual platforms can be challenging due to technology-related constraints (22, 23). The moderator facilitated introductions to ensure everyone was familiar with each other and clarified to the participants that sharing awkward positions, exposing socially disapproved expectations, or disagreeing on points of view was allowed and was managed. The moderator encouraged participation and used good prompts to seek elaboration and clarification when needed.

Ethical Considerations

Permission to conduct the study was obtained from institutions employing SHNs. Participation was voluntary, and consent was obtained from all participants before each FGD. Academic and ethical approval for this study was obtained from the University of Warwick, Coventry, UK (Study ID. REGO-WMS-ME-24.037). Additional ethical approval for the study was obtained from the GHS Ethics Review Committee (ERC) (Protocol ID. GHS-ERC 020/12/24). Participants received 150 Ghana Cedis (GHC) as compensation for lunch and transport.

Data Analysis

The PI transcribed the recordings of the FGDs verbatim. The data analysis was done using inductive thematic analysis by the PI (24). The first step, familiarisation with the data, involved listening to the recordings, transcribing the data, and reading and re-reading it. The data transcripts were imported into NVivo software (NVivo15) for qualitative analysis. Meanwhile, to ensure credibility (25), transcribed data (text) was emailed to participants for member checking to ensure the accuracy of the transcribed recordings. During the NVivo software analysis, the initial codes were generated. After coding, themes were identified and generated, then reviewed, named, and defined by the PI. One of the ways transferability was achieved was by explaining the sampling strategy used in this study and using “thick descriptions” during analysis (25), and reporting. The Supplementary material contains the themes and corresponding codes, along with a description and a sample for each code. In the Results section, edited versions of the transcription were used in the quotes to ensure readability and clarity of the core message of each participant.

RESULTS

Six focus groups, comprising 9 to 11 SHNs (a total of 59 SHNs) from the four health institutions, participated in the study. Of all the SHNs, 58 were female, 27 were CHNs, and the others were PHNs. Three main themes emerged from the FGDs (Table 1):

Table 1
Themes emerging from FGD data analysis

Main themes	Subthemes
1. Curriculum content and delivery	- Disability Knowledge Acquisition
	- Variety in Educational Resources
	- Comprehensive, Non-Punitive Assessment Approach
	- Variable and negotiable options in timing, scheduling and duration
2. Educational Environment and Experience	- Skill Development
	- Emphasis on a Learner-Centered Approach in Teaching Strategies
	- Diversity in Learning Environment
	- Diverse Educators Who Embrace Humanistic Teaching Methods
	- Affordability
	- Responsibility and Support from Stakeholders
3. Professional Development	- Attitudinal Transformation
	- Acknowledgement and Recognition

The themes and subthemes (with supporting quotes) will be discussed below.

Theme 1: Curriculum content and delivery

Subtheme 1.1: Disability Knowledge Acquisition

SHNs suggested that the planned course should encompass knowledge about the types and causes of disabilities, prevention, and emotional aspects. It should also include myths and misconceptions, address stigma, and consider legal and policy issues. This is illustrated by the following quote.

“We would like to be taught about the types and causes of disability because if I know the causes, I can educate on prevention” (Participant 207).

Subtheme 1.2: Variety in Educational Resources

SHNs recommended various educational resources, including physical items such as textbooks, printed handouts, and flip charts.

"I prefer the handouts and also flip charts. Flip charts because sometimes the pictures make learning easier" (Participant 608).

Additionally, virtual resources included online platforms like YouTube and e-platforms featuring multimedia content. It also encompassed digital search tools such as Google, PubMed, ChatGPT, and Meta AI, as well as audio-visual materials such as video projections and podcasts. Key requirements included simplicity in English and the provision of e-learning devices. See supplementary material for more examples.

Subtheme 1.3: Comprehensive, Non-Punitive Assessment Approach

Participants' preferences for assessment centred mainly on non-scoring, non-punitive options to avoid intimidation while thoroughly evaluating theoretical knowledge and practical skills. Some participants preferred scored assessments to determine course completion. However, most advocated for supervised, progressive practical demonstrations with feedback and competency-based evaluations that emphasised practical skill validation and self-reflection opportunities. Furthermore, they wanted a combination of assessment methods, including self-administered pre-tests and post-tests, individual and group evaluations with simultaneous feedback, and formative assessments with ongoing guidance

This is illustrated by the following quote, and see supplementary material for more examples.

"I also prefer you giving me feedback for each program or per the content that you bring out. You take the feedback per chapter content so that you know the progress. That's what I prefer, not just taking quizzes, feedback and how you can improve" (Participant 509).

Subtheme 1.4: Variable and negotiable options in timing, scheduling, and duration

SHNs' course timing and scheduling preferences exhibited diverse views regarding weekdays versus weekends and mornings versus evenings. They articulated the necessity for flexible timing to accommodate work, social, and family responsibilities, advocating for various scheduling options to be made available. An optimal format for sessions included two to three synchronous in-person or virtual meetings per week, each lasting two hours or less. The preferred course duration was six months or less, with a majority favouring three to six months, depending on course content and engagement frequency. This is illustrated by the following quote; see the supplementary material for more examples.

“So, it can be designed to meet the needs of everybody because our needs and values are different. So, if it comes like that, it's favorable for us” (Participant 601).

Theme 2: Educational Environment and Experience

Subtheme 2.1: Skill Development

SHNs expressed their desire to learn various skills from the course, including community communication and engagement techniques, sign language to interact with the deaf, and disability etiquette for respectful interaction with PWD. Additionally, they wanted to acquire observational and interaction skills to detect and support PWD in the community.

This is illustrated by the following quote; see the supplementary material for more examples.

"Sometimes, you have to do a demonstration in front of the students. After that demonstration, because they have seen what you were doing and after you educate them and explain that demonstration, they will understand it better, so that, in case, maybe when they find that situation, they can remember that at least they thought of this, and it will help them how to relate to those children with disabilities” (Participant 109).

Subtheme 2.1: Emphasis on a Learner-Centred Approach in Teaching Strategies

SHNs preferred self-directed, self-paced, interactive adult learning and learner-centred approaches, which included participatory experiences. They recommended collaborative activities such as peer teaching, group discussions, and knowledge construction. Furthermore, they desired hands-on and experiential learning activities, including demonstrations, role-playing, simulation exercises, and case studies. They sought experiences that combined various adult learning approaches with less emphasis on traditional lectures.

This is illustrated by the following quote; see the supplementary material for more examples.

“In the learner-centred method, you, the learner, are more involved than the one that the lecturer will rattle everything, and the lecture ends there” (Participant 207).

Subtheme 2.3: Diversity in Learning Environment

SHNs expect the learning environment to include comfortable physical spaces for small-group settings and well-ventilated rooms accessible for PWD, and should strongly consider inclusive settings such as placements in special schools in Ghana and non-governmental organisations (NGOs) that support PWD. It should utilise a hybrid learning model that combines in-person and virtual sessions, which are flexible and adaptable to work schedules and responsibilities. Investment in technology-enabled platforms, including social media applications such as WhatsApp and Telegram, as well as online meeting platforms like Zoom,

Microsoft Teams, and Google Meet, should be considered, alongside e-learning platforms such as Google Classroom. SHNs acknowledge potential barriers like internet costs, access, and the availability and compatibility of devices.

This is illustrated by the following quote; see the supplementary material for more examples.

"Virtual is also expensive. I need a phone good enough to be on Zoom, a better charger, and a conducive area, so maybe you have to go to the internet cafe or the restaurant"(Participant 202).

Subtheme 2.4: Diverse Educators Who Embrace Humanistic Teaching Methods

SHNs' expectations for educators in the course include personal qualities such as patience, friendliness, approachability, empathy, flexibility, a good sense of humour, and professionalism. Educators should possess a profound understanding of disabilities, along with practical experience. The course should feature educators with disabilities and guest speakers who are experts in the field (e.g., parents, caregivers, health professionals). They should be adaptable in their teaching styles, encourage questioning, demonstrate strong communication skills, and facilitate discussions and explain complex topics in accessible language.

This is illustrated by the following quote; see the supplementary material for more examples.

"I side with everyone, a little bit of this and that, everything. I'm in a 'collaboration', strict, friendly, approachable, tolerant, empathetic, because sometimes some of us are emotional. So, you need to come to our level to be able to understand us, so that we can continue from where we stopped the other time"(Participant 507).

Subtheme 2.5: Affordability

Most SHNs believed their health institutions and the government should bear the cost of the training. Some were willing to contribute a small amount for specific resources or certification. Others argued that even with virtual sessions, they'd incur indirect costs (e.g., internet data). The consensus was that the course should be free or affordable to ensure equal participation opportunities.

This is illustrated by the following quote; see the supplementary material for more examples.

"It should be a token that management can float or go ahead for us to benefit because we cannot, because we, the health workers, all our trainings are free. So, if we are to pay, be it in the form of something little, maybe a small registration fee or something, so that at least we can all benefit" (Participant 606).

Subtheme 2.6: Responsibility and Support from Stakeholders

SHNs emphasised the need to pre-empt bureaucracy by addressing potential administrative hurdles to ensure smooth implementation and sustainability. They expressed the need for commitment and accountability, and expect multi-level support from the following:

• Micro level: Institutional leaders

• Meso level: Ghana Education Service, School Health programme coordinators

• Macro level: Ministry of Health, Government of Ghana

One participant suggested tracking the course's impact through field data collection.

This is illustrated by the following quote; see the supplementary material for more examples.

"I just don't understand because Ghana is 50 to 60 years old, and it is high time that some of these courses were being run. Had it not been for this programme, I would never have known that some of these courses are not being studied. Therefore, I would suggest that the management, or perhaps those organising this, do this course, that this will do a great deal of good for the country." (Participant 101).

Theme 3: Professional Development

Subtheme 3.1: Attitudinal Transformation.

SHNs expect to learn appropriate attitudes when engaging with PWD, and transformative attitudes to help dispel misconceptions about disabilities. These attitudes are expected to foster non-discriminatory perspectives and help develop patience, empathy, and approachability towards PWD. It includes promoting inclusive thinking in others to challenge societal norms and stigmas. This is illustrated by the following quote; see the supplementary material for more examples.

"I should be able to develop the attitude in the sense of being approachable and then patient in my dealings with people with disabilities" (Participant 605).

Subtheme 3.2: Acknowledgement and Recognition

SHNs' expectations for course recognition and benefits include a certificate of completion recognising achievement of a career milestone, as well as a graduation celebration ceremony to mark their new roles. They also expect Continuous Professional Development (CPD) credits, which can accumulate with those from other sources to ensure accreditation from the Nursing and Midwifery Council of Ghana (NMC) for annual Personal Identification (PIN) renewal. They expect certification to enhance their CVs, improve their job prospects, and open up opportunities for international postgraduate studies, specialisation, or work abroad.

This is illustrated by the following quote; see the supplementary material for more examples.

"Certificates and CPD. The reason is that at least you need something that would show that you've really gone through a training like this. And to renew your PINs, because you have built some skills, and even with the certificates, it can open many avenues for you, especially for some of us who want to travel later" (Participant 401).

DISCUSSION

In this study, the curriculum needs and expectations of SHNs as disability educators in Ghana were explored using open-ended questions and prompts to examine themes related to learning objectives/outcomes, the learning environment, educational resources, teaching strategies, scheduling, and assessment. The results can inform the development of a training course that meets SHNs' needs and expectations to fulfil their future role as disability educators in the Ghana Health Service, School Health Programme. This study revealed that SHNs are receptive to the idea of serving as agents of change to address disability issues in Ghana. SHNs acknowledged their deficiency due to their limited training (12, 13) and were able to articulate their needs and expectations.

SHNs sought a competency-based curriculum that would facilitate comprehensive knowledge acquisition, provide engaging experiences for skill development, and foster attitudes that would enable them to work as effective health professionals in the area of disability. Attitudinal and skill-building activities were outlined as expectations in the course, including role-play, which is interactive and particularly useful in developing skills in medical education (26). These expectations align with the three domains of learning for creating effective learning objectives according to Bloom's taxonomy: cognitive (knowledge), affective (attitudes), and psychomotor (skills) (27).

The manuals used in the training programmes for CHNs, who constitute the majority of the SHNs, contained limited information on disability (13). Moreover, there is evidence of the recognised need for knowledge within communities in Ghana, as lack of knowledge significantly contributes to the false perceptions, myths, and misconceptions that lead to the disparities and challenges faced by PWD (5, 8). Health workers have also been blamed for reinforcing these negative perceptions (4), emphasising the importance of training SHNs. Educational resources would, therefore, be valuable to SHNs, including both physical and online materials.

Key examples of educational resources that resonated with most participants were the use of social media tools, such as WhatsApp. This platform can also be used to share images, links to educational resources, text, voice messages, and various files, such as PDFs, which are easy to manage and download. WhatsApp has improved the ability to quickly share information and

connect with other students and educators during virtual learning in Ghana (28). It now features an artificial intelligence (AI) update, referred to as Meta A.I. These AI tools, such as ChatGPT, have proven to be beneficial for independent research in medical education (29). Multimedia educational resources, such as YouTube, have also been found to have a significant impact on medical education (30). However, access to these digital educational resources may be limited by technology-related challenges, such as cost and connectivity issues, in a lower-middle-income country like Ghana (22, 23).

Regarding an assessment strategy, the SHNs wanted more formative assessments that were not limited to theoretical knowledge but also included practical-based elements. They wanted a more assessment-for-learning (AfL) approach (31). This form of learning is defined by the absence of punitive or grading measures, instead emphasising providing students with feedback on their answers as they advance. It also facilitates the assessment of responses to questions and expectations, fostering an environment conducive to feedback and peer dialogue among students (31).

Determining the timing and schedule for the course proved challenging, as SHNs participate in primary care and preventive and promotive health services across various catchment areas and facilities (12, 32). SHNs had varied preferences for the time of day and day of the week, influenced by work schedules and personal commitments at home. Thus, flexible and varied options should exist, tailored to the training cohort, with assessments tied to completed work hours, and some aspects of the curriculum can be designated as core and others as electives. As they gain more experience, refresher courses can be organised to provide more expertise in areas that require further training.

The curriculum expectations included investing more in Learner-Centred/Adult-oriented teaching strategies than in traditional teaching methods, such as lectures. Such expectations align with Malcolm Knowles's theory of “Andragogy" within practice, where, during the learning process, participants assume more significant roles and responsibilities and are more self-directed and independent (33). Participants learn through experience and become more invested in learning as they understand the objectives and value the competencies gained, leading to increased internal motivation and alignment with their needs (33). This theory contrasts with "Pedagogy," which refers to the traditional methods used on young people, who are typically passive recipients of knowledge and play no active role in the process (33). Adult learning methods are impactful in achieving learning objectives in health professions education (34, 35).

Learners thrive in supportive, welcoming, and engaging environments that challenge them to reach their full potential. When these elements are absent, they can adversely impact the learning experience. Most of their needs and expectations aligned with the material (physical and virtual spaces) and psychosocial (personal, social, and organisational) dimensions of a conceptual framework for learning environments (36). The value of this conceptual framework lies in its guidance for understanding issues and fostering an environment that addresses these problems, offering a beneficial and enriching experience for the learner (36). Without this framework, community placements in schools and NGOs for PWD, which pertain to the “social” and “organisational” themes, can easily be overlooked, as including such activities in the programme would necessitate greater investment. Nevertheless, SHNs viewed this as an essential aspect of their learning.

Expectations included a hybrid model of both in-person and virtual learning environments. Zoom, a video conferencing application, is recognised for its useful features in presentations and collaborative methods within medical education (37), is one of the most commonly used platforms by SHNs for synchronous interaction and learning. In the learning environment, SHNs expect PWD and various stakeholders associated with them in the community to act as educators and value the attributes of educators that align with humanistic teaching, as this is beneficial for creating a safe learning environment (38).

Financial barriers are recognised as some of the factors that affect continuing education in nursing in Ghana (39), validating the expectation that the training on disability would be affordable and free for SHNs. Also, SHNs expressed the need for acknowledgement and recognition. Acknowledging and rewarding healthcare workers is one of the strategies recognised for reinforcing the change needed for them to perform new roles (40). Awarding certificates for training with CPD credits, and sharing and recognising them at the end of courses during graduation, can therefore be beneficial to SHNs.

Lastly, stakeholders at various levels of leadership, as stated by the SHNs, are expected to support this initiative to ensure its implementation and sustainability. This is in line with recommendations that the government and other stakeholders pay greater attention to educating the public about the effects rooted in indigenous practices that impede the rights of PWD (6).

STRENGTHS AND LIMITATIONS

A strength of this study is that most participants articulated their needs and expectations, shared personal experiences in a friendly, humorous manner, and fostered a positive atmosphere. This environment encouraged engagement with others' opinions and further sharing, effectively generating a "group effect" that enabled the rapid collection of diverse perspectives. Limitations in this study included the presence of dominant voices in two of the focus groups, which appeared to have overshadowed the quieter voices of some participants, potentially skewing group perspectives. The moderator mitigated this by directing questions and prompts to the quieter participants to keep them engaged and contributing to the discussions. Additionally, groupthink may have occurred, where prevailing opinions led to unexplored insights and a lack of critical thinking. Lastly, data saturation may not have been achieved, as a new subtheme, Affordability, emerged towards the end of the FGDs, along with another probable subtheme that was briefly mentioned by one participant regarding data collection for monitoring and evaluation of the training, but this was not fully explored due to time and cost constraints.

CONCLUSION AND RECOMMENDATIONS:

SHNs have participated in this qualitative study to determine their needs and expectations for a curriculum to train them as disability educators. The key findings from this study indicated that SHNs preferred a competency-based disability education curriculum tailored to overcome barriers to participation, ensure effective multistakeholder collaboration, achieve all intended learning outcomes, and support the career development of SHNs. Based on the main themes identified in this study, recommendations include:

• A proposed comprehensive curriculum should address various aspects of disability, using multiple educational resources, flexible timing in delivery and should incorporate a formative assessment approach.

• For the educational environment and experience, it should be an affordable training programme supported by stakeholders, providing an inclusive hybrid educational environment with humanistic educators that encourage skill development and employ a learner-centred approach to teaching.

• For professional development, completing the training should be recognised with certification, graduation, and accreditation while also transforming SHNs' attitudes to support PWD better and roll out community disability education.

This advocacy for training of SHNs as disability educators is vital for Ghana, promoting a culture of acceptance and support, and ultimately, improving the lives of PWD.

Abbreviations

1. Accra Metropolitan Area
AMA
2. Assessment for learning
AfL
3. Artificial intelligence
AI
4. Community health nurses
CHNs
5. Community health workers
CHWs
6. Continuous Professional Development
CPD
7. Ethics Review Committee
ERC
8. Focus group discussions
FGDs

9. Ghana Cedis
GHC
10. Ghana Health Service
GHS
11. Low
middle-income countries-LMICs
12. Ministry of Health
MOH
13. Non
governmental organisations-NGOs
14. Nursing and Midwifery Council of Ghana
NMC
15. People with disabilities
PWD
16. Personal Identification
PIN
17. Princess Marie Louise Children's Hospital
PML
18. Principal Investigator
PI
19. Public Health Nurses
PHNs
20. School Health Program
SHP

Declarations

Ethics approval and consent to participate

All subjects provided informed consent before participating in the study. The study was conducted in accordance with the 1964 Declaration of Helsinki and its subsequent amendments, and the protocol was approved by the academic and ethical committee of the University of Warwick, Coventry, UK (Study ID. REGO-WMS-ME-24.037) and the Ghana Health Service Ethics Review Committee (Protocol ID. GHS-ERC 020/12/24).

Consent for publication

Not applicable

Availability of data and materials

All transcripts were made available, along with supplementary material that includes the focus group guide, the themes and corresponding codes, and a description and a sample for each code.

Competing interests

The authors declare that they have no competing interests

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Authors' contributions

CCN – Principal Investigator (PI), collected data, analysed and drafted the manuscript

JEA – Moderator of the Focus Group Discussion, reviewed transcripts of FGD and the manuscript

EMAT – MSc Project Co-supervisor of Project in Ghana, provided guidance to the PI, reviewed and edited the manuscript

MYN – Worked with PI by facilitating and providing support for all administrative approvals, preparations, and logistics for the research at the study site, and reviewed the manuscript

MN – Worked with PI by facilitating and providing support for all administrative approvals, preparations, and logistics for the research at the study site, and reviewed the manuscript

RO – Worked with PI by facilitating and providing support for all administrative approvals, preparations, and logistics for the research at the study site, and reviewed the manuscript

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