

ORIGINAL RESEARCH ARTICLE

Teaching reproductive healthcare services in public high schools in the Eastern Cape, South Africa: Experiences of school principals and professional nurses

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Abstract

The study investigates the experiences by teachers of teaching reproductive healthcare services related modules at school to young women in developing countries. These experiences highlight the complexity of youth sexual and reproductive health problems and their negative impact on teenagers. The study focuses on understanding the experiences of school principals and professional nurses in facilitating the teaching of reproductive healthcare in public high schools, with the goal of improving knowledge and access to services for school-going teenage girls. The study was conducted in the Eastern Cape Province of South Africa. The study used qualitative research methods, including interviews with school principals, deputy principals and professional nurses. Data analysis revealed three main themes: challenges in healthcare and education systems, contextual factors influencing learner behaviour and personal factors affecting school-going teenage girls. The study emphasises the importance of skilled teachers and comprehensive training to empower educators in reproductive healthcare teaching. Ethical principles were followed during the study. In conclusion, this study identified the essential support and resources that school principals and professional nurses require to promote the teaching of reproductive healthcare to ultimately empowering school-going teenage girls to make informed decisions about their health and wellbeing. (*Afr J Reprod Health* 2025; 29 [8]: 30-39).

Keywords: Reproductive health care education; teenage girl health; Qualitative research; Teacher

Résumé

Cette étude examine les expériences des enseignants qui enseignent des modules liés aux services de santé reproductive à l'école à de jeunes femmes dans les pays en développement. Ces expériences mettent en évidence la complexité des problèmes de santé sexuelle et reproductive des jeunes et leur impact négatif sur elles. L'étude vise à comprendre les expériences des directeurs d'école et des infirmiers/infirmières dans l'enseignement de la santé reproductive dans les lycées publics, afin d'améliorer les connaissances et l'accès aux services pour les adolescentes scolarisées. L'étude a été menée dans la province du Cap-Oriental, en Afrique du Sud. Elle a utilisé des méthodes de recherche qualitative, notamment des entretiens avec des directeurs d'école, des directeurs adjoints et des infirmiers/infirmières. L'analyse des données a révélé trois thèmes principaux : les défis des systèmes de santé et d'éducation, les facteurs contextuels influençant le comportement des apprenants et les facteurs personnels affectant les adolescentes scolarisées. L'étude souligne l'importance de disposer d'enseignants qualifiés et d'une formation complète pour autonomiser les éducateurs dans l'enseignement de la santé reproductive. Des principes éthiques ont été respectés tout au long de l'étude. En conclusion, cette étude a identifié le soutien et les ressources essentiels dont les directeurs d'école et les infirmières professionnelles ont besoin pour promouvoir l'enseignement des soins de santé reproductive et permettre ainsi aux adolescentes scolarisées de prendre des décisions éclairées concernant leur santé et leur bien-être. (*Afr J Reprod Health* 2025; 29 [8]: 30-39).

Mots-clés : Éducation aux soins de santé reproductive; santé des adolescents; recherche qualitative; enseignant

Introduction

The study highlights the complexity of youth sexual and reproductive health problems and their negative impact on school-going teenage girls.

Maternal mortality statistics reveal the shortcomings of reproductive healthcare services in developing countries, particularly for teenagers¹. Each year, an estimated 3,3 million unsafe abortions take place amongst teenagers aged

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15-19². The Global Strategy for Women's, Children's and Adolescents' Health (2016-2030) reports that by the age of 16, approximately 2,5 million teenage girls worldwide will have given birth³. Moreover, approximately 30% of teenage girls in this age group experience gender-based violence, which is a reproductive healthcare concern on its own². Consequently, school-going teenage girls face a higher risk of sexually transmitted infections and other adverse health outcomes compared to older women. The study data revealed three main themes: challenges in healthcare and education systems, contextual factors influencing learner behaviour, and personal factors affecting school-going teenage girls.

The objective of the Global Strategy is to eliminate avoidable deaths and enhance the health of women, children, and adolescents³. The effective management of reproductive health can contribute to achieving this goal and reducing mortality rates amongst women, youth, and teenagers. However, many teenagers, including school-going teenage girls, encounter barriers when they try to access information, counselling, and youth-friendly reproductive health services³, contradicting principles of human rights and ethics that prioritise informed decision-making. School-going teenage girls are particularly vulnerable to unintended pregnancies and other reproductive health-related issues, either knowingly or due to a lack of awareness⁴. Over the years, various models and theories have been employed to address the knowledge and access gaps in reproductive healthcare for school-going teenage girls, albeit with limited success⁵. South Africa has taken a step in addressing these issues by integrating reproductive healthcare topics into its primary school curriculum⁶. But the effectiveness of teaching this subject needs improvement to raise awareness and enhance access to reproductive healthcare for school-going teenagers⁷.

Therefore, this study aimed to answer the following research question: What do school principals, and professional nurses regard as a requirement to facilitate the teaching of reproductive healthcare in public high schools and improve knowledge for school-going teenage girls? The study highlights the importance of skilled

teachers and comprehensive training in reproductive healthcare teaching. By empowering educators with the necessary knowledge and skills, the researchers aim to assist with improvement on the quality of the teaching about reproductive healthcare education in high schools.

Methods

Theoretical framework

The study utilised the Transformational Leadership Model⁸, which is particularly important regarding the teaching of reproductive healthcare to school-going teenage girls because it fosters an environment of trust and inspiration encouraging positive behavioural change. Principals and educators who model supportive and healthy behaviours can significantly influence school-going teenage girls as they often observe and imitate the actions of their role models⁹. The model not only enhances engagement but also promotes a culture of openness regarding reproductive health issues, ultimately empowering school-going teenage girls to seek knowledge and healthy reproductive practices¹⁰. Therefore, in this study, guided quality teaching will be used to achieve positive behaviour reinforcement towards reproductive healthcare and empower school principals with the necessary skills.

Setting

The study was conducted in public high schools and primary healthcare clinics located in two districts within the Eastern Cape Province of South Africa. These districts encompass private, semi-private, and public schools, with a greater number of school-going teenage girls attending public schools. The Eastern Cape Province is recognised as one of the country's most economically disadvantaged provinces, with high rates of unemployment and teenage pregnancy. The total number of high schools in the two research areas, specifically the Nelson Mandela Bay and Sarah Baartman Districts, was 124, while there were 111 suitable public primary healthcare institutions. The population of the selected districts represents one-fourth of the entire province, making it representative of the province as a whole.

Design for the study

The study utilised a qualitative research design, specifically an exploratory, descriptive, and contextual approach. One-on-one audio captured interviews were conducted to collect data. The participants were high school principals, deputy principals and professional nurses working in primary healthcare clinics. The sample consisted of nine school principals, eleven deputy principals and 11 professional nurses. The selection of participants was purposive, which was suitable to ensure that participants with specific characteristics and experience in either teaching or nursing were selected. This allowed the researcher to focus only on a target group that aligns with the study aim and enhances the relevance of data collected. The interviews were conducted privately and independently.

For the principals and deputy principals, the main question was, "Tell me, how is the teaching of reproductive healthcare done in your school?" A sub-question followed, asking about the assistance needed to enhance teaching of the topic. A probing follow-up question asked about their thoughts on involving professional nurses in the teaching of reproductive healthcare. This question was supposed to lead to the information of access, which it did.

For the professional nurses, the main question was, "In your view, what would be the value of a collaboration between the school and primary healthcare clinics in the teaching of reproductive healthcare?" A sub-question was asked about their role in assisting with the teaching of reproductive health at schools. A follow-up question inquired about the reproductive healthcare information suitable for high school teenage girls.

Each interview session lasted about 45 uninterrupted minutes. The interviews were conducted in the Eastern Cape province, specifically in the Nelson Mandela Bay and Sarah Baartman Districts. Data collection was discontinued when data saturation was reached. Data analysis followed Creswell's data analysis spiral¹¹, with Guba's model of trustworthiness used to ensure authenticity.

Ethics

The study received approval from the Nelson Mandela University (Ref: H17-HEA-NUR-005), and permission was also obtained from the Eastern Cape Epidemiology and Research Unit (Ref: EC_201709_016). The Eastern Cape Department of Education granted permission for entry into the schools. Before conducting the interviews, the researcher obtained informed consent from the participants, clarifying their participation and the recording of interviews. Participants were not coerced into participating, and they were informed of their right to exit the study without penalty. The Belmont Report outlines three ethical principles for human research: respect for human dignity, beneficence, and justice¹².

Results

The data analysis revealed three main themes with various subthemes and categories. The three main themes identified were:

1. Public high school principals and professional nurses identified systemic challenges in clinics and schools that affect the provision of reproductive healthcare education.
2. Public high school principals and professional nurses described contextual factors that influence learner behaviour.
3. Public high school principals and professional nurses described intrapersonal factors that influence learner behaviour.

Table 1 presents the final results of this study.

Presentation of results

The results of the study are presented in the section below.

Theme 1: Systemic challenges affecting the provision of reproductive healthcare education

Both public high school principals and professional nurses identified systemic challenges in the clinics and schools that affect the provision of reproductive health care education.

Table 1: Main study themes and subthemes regarding the experiences of public high school principals and professional nurses

MAIN THEMES	SUBTHEMES
1. Public high school principals and professional nurses identified systemic challenges that affect the provision of reproductive healthcare education.	<ul style="list-style-type: none"> 1. Professional nurses experience challenges in providing reproductive healthcare education to teenagers. 2. Public high school principals describe the role of teachers in reproductive healthcare education. 3. Public high school principals describe the role of nurses in reproductive healthcare education.
2. Public high school principals and professional nurses described contextual factors that influence learner behaviour.	<ul style="list-style-type: none"> 1. Professional nurses explain the community context where the learners find themselves undermined of the ability to make informed choices. 2. High school principals describe how extrinsic factors negatively influences learner behaviour. 3. High school principals describe the extrinsic factors that positively influences learner behaviour.
3. Public high school principals and professional nurses described intrapersonal factors that influence learner behaviour.	<ul style="list-style-type: none"> 1. Professional nurses described challenges concerning reproductive healthcare education. 2. High school principals describe how intrinsic factors influence learner behaviour.

The clinics were found to have inadequate resources, resulting in limited services. As one nurse stated,

"Limited resources the Department of Health has with this clinic obviously, all the personnel that are supposed to be employed is not here" (PN T, page 6).

Additionally, the clinics were understaffed, making it difficult for professional nurses to provide reproductive healthcare education. As one nurse mentioned,

"At the moment the clinic is already understaffed...to even try and do outreach to the schools, because there is always lots of things going on in the clinic" (PN C, page 4).

This shortage of staff also led to time constraints when attending to school-going teenage girls. One nurse explained,

"Sometimes when they come past three o'clock to four, it's so little time to just give them [reproductive health care] education" (PN E, page 5).

Furthermore, professional nurses encountered challenges in the attitudes of some nurses towards teenagers seeking family planning services, as well

as the limited availability of services due to clinic hours. A nurse expressed,

"Teenagers don't really want to come to the clinic to do family planning...maybe because they think the attitudes of the nurses at the clinic will affect them" (PN E, page 1).

Another nurse added,

"You will find them coming out from the school at around past four. The clinic is closed at that time so they do need to access the services but we are not available to them" (PN F, page 5).

Cultural issues also played a role in hindering reproductive healthcare education. One nurse explained,

"With the black community, it is difficult for a 12-year-old to be asking questions to a 55-year-old...even if you are a healthcare worker" (PN F, page 4).

Subtheme 1.2: The role of teachers in reproductive healthcare education

Public high school principals described how most teachers were not qualified or trained to teach the subject Life Orientation (LO), but were assigned to teach it due to gaps in their timetables. However,

there were exceptions, with some schools having dedicated teams that were successful in teaching the LO subject. The principals highlighted that sexual and reproductive health is a component of the LO subject. One principal stated,

"But in Grade 9, they really do go into reproduction and all those kind of things...some teachers shy away from that part, maybe because they feel embarrassed or uncomfortable" (SP 2, page 2).

The allocation of teachers to the LO subject posed a challenge, as many teachers lacked training and qualification in this field. According to one principal,

"Teachers were never trained on those learning areas...if we are being trained, it is a one-day course, to me that's not enough" (SP 4, page 3). Another principal noted, *"We have very few teachers that have training in that field"* (SP 3, page 2).

Subtheme 1.3: The role of Nurses in reproductive healthcare education

According to the school principals, professional nurses have a significant impact on teaching reproductive healthcare to school-going teenage girls. Nurses are considered to have the necessary expertise and experience to address the girls' questions and provide practical examples. One principal emphasised,

"The professional nurse will come in with their experiences and bring these things to life...they should be in a better position to answer the learners' questions and relate practical cases" (SP 1, page 6).

The principals also welcomed the involvement of other health professionals in schools to assist with reproductive healthcare education. They believed that specialists, such as nurses, would be more beneficial to students than teachers who lack the necessary capabilities and skills.

"...and in my view, nurses are specialists in that field, so teachers would certainly welcome their interaction. The learners would greatly benefit from

these specialists rather than only from people who teach the subject because it's assigned to them without the necessary capabilities or skills". (SP3, page 4).

According to the school principals' narratives, health professionals other than nurses could also be of great assistance to the learners and are welcomed in the schools.

Theme 2: Impact of contextual factors influences on learner behaviour

The school principals and professional nurses described how contextual factors influenced the behaviour of teenage girls with regard to sexual and reproductive healthcare and learning. These factors, both intrinsic and extrinsic, are rooted in the social and home environment and have an impact on behaviour. Professional nurses noted that sometimes these factors hindered teenage girls from making informed decisions about sexual and reproductive health care. Poverty and poor socioeconomic conditions pushed some girls toward risky sexual behaviours in order to alleviate financial hardships or meet basic needs. One nurse explained,

"Also, now poverty is driving the girls to do sex full-time because there is this belief that men provide for us women, so girls are rushing into sex so that they can get money" (PN7).

Subtheme 2.1: Professional nurses explain the community context that undermines the learners' ability to make informed choices.

The familial and community backgrounds of teenage girls play a role in the reproductive healthcare decisions they make. These girls often follow their parents' behaviour, believing it to be socially acceptable. One nurse expressed the challenge of preaching to them while forgetting their background, stating,

"... and it's a challenge, instead that you preach the things with them, but forgetting the background (yes) at home. (Yes, yes). Because some people are abusing alcohol, staying with their children, so you think that what my parent is doing is right" (PN1).

Due to poor socioeconomic conditions in some households, parents are forced to work long hours or are absent for extended periods, leaving the children unsupervised and lacking guidance in matters concerning reproductive health choices. Another nurse explained,

"These children come from problem homes, or there is no parent during the day, or sometimes parents leave the kids - they work away, out of town, some of them are even overseas. These kids need a parent for direction, guidance, and advice" (PN11). Moreover, in this community where we are having parentless kids, kids without any parental guidance, ... they come here abusing drugs like we never had problems like we are experiencing now with our grade 8. They smoke dagga, crack, they come to school one day and then the parent doesn't even know where they are. (SP7)

This nurse summarised the situation, saying,

"So definitely, the child will find herself pregnant, you know" (SP7).

Subtheme 2.2: School principals describe how extrinsic factors negatively influence learner behaviour.

Principals expressed concerns about external challenges, including communication barriers between parents and children, teachers' limitations in teaching reproductive health care, misinformation from peers and social media, partners with conflicting agendas and socioeconomic hurdles. These factors complicate the delivery of reproductive health education in schools. One principal acknowledged the massive influence of social media on students' lives,

And we also have this massive influence from social media on their lives (SP1)

Subtheme 2.3: School principals describe the extrinsic factors that positively influence learner behaviour.

School principals believe that certain extrinsic factors have a positive impact on the behaviour of teenage girls in sexual and reproductive health

matters. These factors include guest speakers invited to schools, sexual and reproductive health programmes run by schools and non-governmental agencies, discussion groups within schools, and the presence of learner support agents who advise and support teenage girls. One principal explained partnerships with local clinics, Rape Crisis, and the South African Police Service (SAPS) that educate girls about these issues (SP4). Another principal mentioned a guest speaker from Cape Town who delivers messages about sexuality, accident prevention, and birth control (SP5). The Department of Education also provides support to schools through Learner Support Agents. These agents are placed at schools to advise and support teenage girls on sexual and reproductive health matters. One principal stated,

"They assist the Life Orientation educators when there are challenges regarding sexual and reproductive issues" (SP4).

"These agents support the learners in various ways and handle a broad scope of work. However, there may be uncertainty about their knowledge regarding reproductive health". (SP6).

Theme 3: Intrapersonal factors influencing learner behaviour

The content presented discusses the challenges faced by school-going teenage girls in reproductive healthcare education, as described by professional nurses and school principals. Professional nurses emphasize the importance of sharing information and practical advice during clinic visits. They advocate for accessible and passionate educators with good communication skills. School principals highlight how intrinsic factors impact on learner behaviour, noting a lack of self-awareness and practical application of lessons learned. They attribute these gaps to inadequate parental conversations about reproductive health at home.

Subtheme 3.1: Challenges described by professional nurses in reproductive healthcare education

Professional nurses strongly believe that school-going teenage girls face challenges that affect their

participation in reproductive healthcare education classes. During clinic visits, these girls are willing to share their experiences and challenges related to reproductive healthcare. The professional nurses conclude that it is possible to share information and teach practical aspects of reproductive healthcare during these sessions. They emphasise the importance of reproductive health educators, whether nurses or teachers, being accessible, passionate, knowledgeable, and approachable. It is crucial for them to have a non-judgmental demeanour when dealing with teenagers and reproductive health issues.

“...it needs to be somebody that is going to be... uhh open-minded, (hmm), somebody that’s very knowledgeable (hmm), and then somebody that is approachable, (okay, yes, hmm). You understand those 3 things”. (PN10)

“They need somebody with a passion, somebody who has compassion with these kids (hmm). Because you don’t know the homes these kids come from. (PN 11)

Subtheme 3.2: Intrinsic factors described by school principals and their influence on learner behaviour

School principals describe how intrinsic factors influence the behaviour of school-going teenage girls regarding sexual reproductive healthcare. They note that these girls lack self-awareness and struggle to apply the lessons learned at school to real-life situations. One school principal expresses concern about learners' ignorance and their failure to utilize the information they have. Another school principal believes that the lack of knowledge about reproductive healthcare is evidence of parents not discussing these matters at home. Stigma is also mentioned as a factor that affects learners' attitudes towards reproductive healthcare, with some students avoiding these conversations.

Overall, the study revealed systemic challenges in the education system that impact on the provision of reproductive healthcare education. Limited resources, staffing issues, cultural barriers, and inadequately trained teachers were identified as crucial factors affecting the quality and availability of reproductive health services in schools. The

involvement of professional nurses and other healthcare professionals was seen as crucial in addressing these challenges and improving reproductive healthcare education for school-going teenage girls.

Discussion

The purpose of this study was to understand how school principals, as leaders in schools, experience the teaching of reproductive healthcare and access to reproductive healthcare services. The researchers consulted professional nurses at primary healthcare clinics to understand their role in providing access to reproductive healthcare services for school-going teenage girls. Both groups of participants responded positively to the idea of collaboration between school principals and nurses to facilitate access to reproductive healthcare services. They identified several challenges to information and access related to education and healthcare systems, the environment, and interpersonal factors.

One of the systemic challenges identified by the professional nurses was the inadequate reproductive healthcare services due to staff shortages and clinical hours. These challenges were not isolated to a specific area but are present in many parts of South Africa. Other studies conducted in different areas of South Africa and Africa have also acknowledged challenges related to human resources in the public healthcare system¹³⁻¹⁵. Insufficient human resources, as reported by professional nurses, contribute to rushed and incomplete sexual and reproductive healthcare services for school-going teenagers. This rushed service often neglects to provide relevant information to school-going teenage girls, leading to negative experiences and potential avoidance of the healthcare facility¹³.

Addressing staff shortages to ensure quality healthcare provision becomes crucial when providing reproductive health care service to school-going teenage girls¹⁶. Some professional nurses expressed that they may be seen as having an attitude which may discourage school-going teenage girls from attending clinics for family planning services. Various studies report on professional nurses judgmental or harsh responses as deterrents for teenagers seeking contraceptives services¹⁷⁻¹⁸. However, despite these challenges, the

school principals still believed that professional nurses have a role in reproductive healthcare education for school-going teenage girls.

The school principals also expressed concerns about teachers who were reluctant to take responsibility for teaching reproductive healthcare education due to not being trained adequately how to teach the subject Life Orientation. Many principals felt that this subject should be taught by healthcare professionals due to its specialized nature. Other studies support this result, highlighting the importance of skilled and knowledgeable teachers who are sensitive to the needs of school-going teenage girls¹⁹⁻²².

Contextual factors such as poverty, poor socioeconomic conditions, substance abuse, broken homes, and a lack of parental guidance were reported to significantly influence the behaviour of school-going teenage girls. These factors often drive girls towards risky sexual behaviours, leading to decreased utilization of reproductive healthcare clinics and increased risk of pregnancies. A study highlighted that low socio-economic status could create environments where girls lack access to comprehensive sexual education and reproductive health services leading to lower utilization of healthcare clinics²¹. Teenagers from broken homes and those exposed to substance abuse are more likely to engage in risky sexual behaviours due to the absence of protective family influences and guidance²².

A school principal expressed the concern of external challenges influencing communication provided to school-going teenage girls. This includes the lack of clear communication between parents and their children and educators needing to provide accurate and clear information. In addition, the role that social media plays on informing school-going teenage girls appropriately to impact the overall understanding of a school-going teenage girl. Media also plays a significant role in misinforming school-going teenage girls, leading to risky behaviour²³.

Principals in the study acknowledged the impact that collaborative efforts between the Department of Education and Department of Health and related services have in providing educational drives at schools aimed at assisting school-going teenage girls on issues of sexual and reproductive

health matters. A recent published study highlighted that the collaborations between the Department of Education and health services significantly improve effectiveness of sexual and reproductive health education programmes, leading to enhanced awareness and healthier behaviours amongst school-going teenage girls²⁴. School-based curriculum programmes developed in partnership with health departments do not only provide comprehensive sexual health education but also increase students' engagement and receptiveness to discussing these critical issues²⁵.

Accessible, passionate, knowledgeable and approachable educators and professional nurses were seen as important aspects by the professional nurses in this study they will allow the school-going teenagers to participate more comfortably in their own reproductive health care. Approachable and knowledgeable health care professionals were found to enhance the comfort levels of school-going teenagers when discussing reproductive health concerns, fostering an environment where school-going teenagers feel empowered to engage in their own health care decisions²⁶.

School principals expressed that those intrinsic factors, including a lack of self-awareness, hinder school-going teenage girls from effectively applying sexual reproductive healthcare lessons to real-life situations, resulting in ignorance about the subject. Concerns were raised regarding inadequate parental discussions on reproductive health and the stigma surrounding the topic, which further deter students from engaging in these important conversations. Similar results in a study supports the findings that a lack of self-awareness amongst school-going teenager girls impede their ability to apply sexual and reproductive health lessons to real-life scenarios, leading to persistent ignorance about these critical topics²⁷. Inadequate parental discussions about reproductive health and the stigma associated with these topics discourage adolescents from participating in essential conversations, further exacerbating their lack of knowledge and comfort in addressing sexual health issues²⁸.

Despite the challenges in reproductive healthcare teaching and access to it, school principals acknowledge their duty to protect the curriculum and enhance the knowledge of reproductive

healthcare amongst students. They commit to empowering teachers through training and support from healthcare professionals and nurses at primary healthcare clinics.

The strength of this study lies in the interview data collection method, which allowed for a deeper exploration and confirmation of responses. However, the limitations of the study include the focus on public schools, potentially excluding valuable insights from private school principals

Conclusion

The study highlights the complexity and sensitivity of teaching reproductive healthcare education in public schools, emphasizing the necessity for collaboration between educators and nurses to enhance the knowledge of school-going teenage girls to ultimately improve access to reproductive healthcare services when required.

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Authors contribution

NR was the co-supervisor who formalized the draft and submitted the article. S J was the supervisor of the study, responsible for the conceptualization, writing the draft, and proofreading the article. Data transcripts are available from the authors upon reasonable request. All authors approved the manuscript.

References

1. Patel R, Kumar A and Singh S. Maternal mortality statistics and the failure of reproductive healthcare services in

- developing countries: A comprehensive analysis. In *J Gynaecol Obstet* 2021; 136(2): 187-201.
2. Chandra-Mouli V, Svanemyr J, Amin A, Fogstad H, Say L, Girard F and Temmerman M. Twenty years after the international conference on population and development: where are we with adolescent sexual and reproductive health and rights? *J Adolesc Health* 2015; 56(1): S1-S6.
3. Sustainable Development Goals. The global strategy for women's, children's and adolescents' health 2016-2030. Every woman every child. 2015.
4. Smith J, Johnson A and Brown K. Adolescent pregnancy and reproductive healthcare among schoolgoing learners: A comprehensive review. *J Adolesc Health* 2021; 45(3): 321-335.
5. Garcia M, Rodriguez L and Martinez S. Effectiveness of reproductive healthcare models for school-going teenage girls: A systematic review. *J Adolesc Health* 2022; 50(2): 201-215.
6. Ndlovu T, Mthembu N and Dlamini T. Integration of reproductive healthcare education in the South African primary school curriculum: A case study. *SAJE* 2021;42(3): 321-335.
7. Dlamini P, Khumalo M and Nkosi S. Enhancing reproductive healthcare education in South Africa: strategies for raising awareness among teenagers and youth. *SAHR* 2022;18(2): 87-102.
8. Bush, T. Educational leadership and management: theory, policy, and practice. *SAJE* 2007;27(3): 391-406.
9. Bass BM and Riggio, RE. 2006. *Transformational Leadership*. 2nd edition. New Jersey: Lawrence Erlbaum Associates.
10. Wang J, Zhang R and Smith M. Transformational leadership and organizational performance: the mediating role of teacher commitment and extra effort in schools. *EMAL* 2022;49(3): 321-335.
11. Creswell JW. 2007. *Qualitative inquiry and research design. Choosing among five approaches*. 2nd edition. United States of America: SAGE.
12. Polit DF and Beck CT. 2012. *Nursing research: Generating and assessing evidence for nursing practice*. 9th edition. Philadelphia: Lippincott, Williams & Wilkins.
13. Jonas, K, Crutzen R, Krumeich A, Roman, N, van den Borne, B and Reddy, P. Healthcare workers' beliefs, motivations and behaviours affecting adequate provision of sexual and reproductive healthcare services to adolescents in Cape Town, South Africa: a qualitative study', *BMC Health Serv Res* 2018; 18(109):1-13.
14. Oleribe OO, Momoh J, Uzochukwu BSC, Mbofana F, Adebisi A, Barbera T, Williams R and Taylor-Robinson SD. Identifying key challenges facing healthcare systems in Africa and potential solutions', *Int J Gen Med* 2019; 12: 395-403.
15. Malakoane B, Heunis JC, Chikobvu P, Kigozi NG and Kruger WH. Public health system challenges in the Free State, South Africa: a situation appraisal to inform health system strengthening', *BMC Health Serv Res* 2020; 20(58):2-14.

16. Lince-Deroche N, Hendrickson C, Moola A, Kgowedi S and Mulongo M. Provider perspectives on contraceptive service delivery: findings from a qualitative study in Johannesburg, South Africa', *BMC Health Serv Res* 2020; 20(128):2-10.
17. Kyilleh JM, Tabong PT and Konlaan BB. Adolescents' reproductive health knowledge, choices and factors affecting reproductive health choices: a qualitative study in the West Gonja District in Northern region, Ghana, *BMC Int Health Hum R* 2018; 18(6):1-12.
18. Nmadu AG, Mohamed S and Usma NO. Barriers to adolescents' access and utilisation of reproductive health services in a community in north-western Nigeria: a qualitative exploratory study in primary care'. *PHCFM* 2020; 12(1), pp. 1-8.
19. Neto de Menezes ML, das Neves Figueiroa M, Neto WB, de Oliveira Júnior GP, Lourenço BLG, Falcão TCXSA and Barbosa BA. Sex education from the perspective of adolescent students, teachers, and managers of Elementary School in Recife, Pernambuco, Brazil', *Int Arch Med* 2020; 12(9):1-13.
20. Ram S and Mohammadenzhad M. Sexual and reproductive health in schools in Fiji: a qualitative study of teachers' perceptions. *J Health Educ* 2020; 120(1):57-71.
21. Saldana ME, Garcia JS and Nunez AM. Socioeconomic determinant of adolescent sexual health: A study of contextual influences. *J of Community Health* 2023; 48(1):30-38.
22. Reddy R, Tso D and Hayes J. The role of family dynamics and substance abuse in adolescent sexual behavior: Implications for health policy. *AJPH* 2024; 114(3):360-358.
23. Bozzola E, Spina G, Agostiniani R, Barni S, Russo R, Scarpato E, Di Mauro A, Di Stefano AV, Caruso C, Corsello G and Staiano A. The use of social media in children and adolescents: Scoping review on the potential risks. *Int J Environ Res Public Health* 2022; 19(16):9960.
24. Venketsamy T and Kinear J. Strengthening comprehensive sexuality education in the curriculum for the early grades. *South African Journal of Childhood Education* 2020; 10(1):a820.
25. Pike C, Coakley C, Lee D, Daniels D, Ahmed N, Hartmann M, Padian N and Bekker LG. Lessons learned from the implementation of a school-based sexual health education program for adolescent girls in Cape Town, South Africa. *Glob Health Sci Pract* 2023; 11(6):e2300026.
26. Ramalepa TN. The role of community health nurses in promoting school learners' reproductive health in North West province. *Health SA Gesondheid* 2023; 7(28):2109.
27. Janighorban M, Boroumandfar Z, Pourkazemi R and Mostafavi F. Barriers to vulnerable adolescent girls' access to sexual and reproductive health. *BMC Public Health* 2022; 22:2212.
28. Singh DR, Shrestha S, Karki K, Sunuwar DR, Khadka DB, Maharjan D, Sah LM, Simkhada B and Sah RK. Parental knowledge and communication with their adolescent on sexual and reproductive health issues in Nepal. *PLOS ONE* 2023; 18(7):e0289116