

## ORIGINAL RESEARCH ARTICLE

# Challenges to ethical integration of reproductive health education in schools of Tshwane District, South Africa

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## Abstract

The Integrated School Health Policy was set to ensure the incorporation of a multi-disciplinary approach to health care in South African schools. However, the implementation of sexuality and reproductive health teaching and learning has not been without problems. Central to sexuality and reproductive health education is the common ethical application of the subject in teaching. School sexuality and reproductive health education have proved to be a sensitive issue across a socio-cultural environment. Compliance with ISHP programs in sexuality and gender orientation is related to the inclusion of a more comprehensive education for learners to cover human rights and sexual diversity. This paper aims to reflect on the ethical challenges related to the integration of reproductive health education and teaching in schools in the City of Tshwane. This study applied a descriptive exploratory quantitative research design. Data was collected using a survey questionnaire and a checklist, and applied stratified random sampling to select schools that participated in the study. Data were analysed using descriptive statistics which included frequencies and percentages (%). The results show that the absence of health care values in organisational strategies will challenge the ethical dimension relating to sexuality and reproductive health education. The ethical dilemma of teaching sexual and reproductive health in schools can prove to be a challenging exercise since it's a sensitive issue in most societies. Sexuality and reproductive health education is compounded by a lack of clear guidelines in the ISHP programs and the diversity of stakeholders that do not hold a common or standardised ethical framework. Furthermore, lack of sufficient teacher preparation adds to the ethical dilemma in managing school ethical issues in general. (*Afr J Reprod Health* 2022; 26[4]: 75-81).

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**Keywords:** Integrated school health policy, sex education, reproductive health, ethics, school health

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## Résumé

La politique intégrée de santé scolaire a été établie pour assurer l'incorporation d'une approche multidisciplinaire des soins de santé dans les écoles sud-africaines. Cependant, la mise en œuvre de l'enseignement et de l'apprentissage de la sexualité et de la santé reproductive n'a pas été sans problèmes. L'application éthique commune du sujet dans l'enseignement est au cœur de l'éducation à la sexualité et à la santé reproductive. L'éducation à la sexualité et à la santé reproductive à l'école s'est révélée être une question sensible dans un environnement socioculturel. La conformité aux programmes de l'ISHP en matière de sexualité et d'orientation de genre est liée à l'inclusion d'une éducation plus complète pour les apprenants afin de couvrir les droits humains et la diversité sexuelle. Cet article vise à réfléchir sur les défis éthiques liés à l'intégration de l'éducation et de l'enseignement de la santé reproductive dans les écoles de la ville de Tshwane. Cette étude a appliqué une conception de recherche quantitative exploratoire descriptive. Les données ont été recueillies à l'aide d'un questionnaire d'enquête et d'une liste de contrôle, et ont appliqué un échantillonnage aléatoire stratifié pour sélectionner les écoles qui ont participé à l'étude. Les données ont été analysées à l'aide de statistiques descriptives qui comprenaient des fréquences et des pourcentages (%). Les résultats montrent que l'absence de valeurs de santé dans les stratégies organisationnelles remettra en question la dimension éthique relative à l'éducation à la sexualité et à la santé reproductive. Le dilemme éthique de l'enseignement de la santé sexuelle et reproductive dans les écoles peut s'avérer être un exercice difficile car il s'agit d'une question sensible dans la plupart des sociétés. L'éducation à la sexualité et à la santé reproductive est aggravée par le manque de directives claires dans les programmes de l'ISHP et la diversité des parties prenantes qui ne possèdent pas de cadre éthique commun ou standardisé. En outre, le manque de préparation suffisante des enseignants ajoute au dilemme éthique dans la gestion des questions éthiques scolaires en général. (*Afr J Reprod Health* 2022; 26[4]: 74-81).

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**Mots-clés:** Politique intégrée de santé scolaire, éducation sexuelle, santé reproductive, éthique, santé scolaire

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## Introduction

This paper is aimed at informing the South African literature on ethics and reproductive health education of the Integrated School Health Policy

(ISHP) framework challenges. Francis and DePalma<sup>1</sup> stated that sexuality and sex education has become a necessary response to the HIV pandemic and should be integrated in the school curricula. The study by DePalma<sup>1</sup> was partly

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supported by Barr *et al.*<sup>2</sup>, who suggested that teacher training in sexual education should be integrated into the overall teacher curriculum and institutional developmental strategy. This approach has inherently included multi-disciplinary ethical consolidation to address challenges presently expressed in the South African school health domain. In their earlier article, Francis and DePalma<sup>1</sup> reflected on the absence of key components of reproductive health teaching and education. Lack of diversity teaching in sexuality orientation by teachers could contribute to ethical challenges to the overall development of school-going children. This argument is supported by the absence of ethical expression of dimensions in teaching reproductive health in schools as reflected in the ISHP<sup>3</sup>. The same challenge is faced by Zambian schools because delivery of ethical expression of reproductive health and sexuality education is limited because of issue pertaining to culture norms and what is deemed to be acceptable within the cultural framework<sup>4</sup>.

The Integrated School Health Policy in South Africa was introduced to effect comprehensive and efficient health education for all school-going children<sup>3</sup>. However, there have been challenges in implementing some of the complex policy programs such as reproductive health education. Reproductive health will require sex education in the curriculum and syllabus content across basic education, from lower to higher primary levels. Ethics in the context of public health will reflect on the principles that cover biomedical ethics that would balance society's need with the rights of the individual. Such principles are inherent in public health ethical frameworks such as autonomy, beneficence, non-maleficence, and justice.

The World Health Organisation (WHO)<sup>5</sup> published an outline document No. 8 on Family Life, Reproductive Health and Population Development to create an international framework that would inform multi-stakeholder ethical dimensions to reproductive health. The ethical framework for reproductive health education for school-going children was expanded to cover exemplary ethical principles about adult and the development of teaching officials' code of conduct in a general societal context. Barr *et al.*<sup>2</sup>, on a comprehensive reproductive health ethical conscience went further to reflect on the

improvement of sexuality education by developing teacher-preparation standards for a start. The authors also stressed that teacher preparation must emphasise ethics associated with confidentiality relating to reproductive health, sex and sexuality, and the law. Suleiman *et al.*<sup>6</sup> suggested that to capture a good ethical foundation; reproductive health should include what the society should know about sex, romance, marriage, and adolescent brain development. Foloyan *et al.*<sup>7</sup> reflected the ethical challenges that find expression in legislation and the age of consent by the learner. The authors outlined fundamental challenges on traditional rites of passage, prevention of school-based pregnancies prevention, and sexual violence prevention<sup>7</sup>. Furthermore, the growing number of young people in the population means that more and more sexuality and reproductive health is needed for the age group poses an ethical challenge to reach out to mass education programs. Fonquier<sup>8</sup> identified ethical challenges of confidentiality, teen abortions, pre-national care, sexually transmitted infections and contraception for learners.

In the South African public health framework, school health should be driven intensely by a multi-disciplinary approach to the health promotion and teaching component of the practice to meet the whole-child-whole school-whole community objectives. Therefore, the situation has an overbearing need to synergise ethical code of practice for health promotion professionals across the ranks in this quest for quality of this specialised service. Ethics can paint a grim and complex picture in this sensitive and unfamiliar multi-disciplinary and cross socio-cultural environment. Therefore, this paper aims to highlight basic ethical frameworks that would ensure synergised reproductive health education/teaching and promotion in schools that were accessed in the City of Tshwane in Gauteng Province. Based on the reflection of the of available literature and anecdotes of public discourse on the subject of reproductive and sex education in schools raise the question "What are the ethical challenges facing the integration of reproductive health education in schools".

## Methods

A quantitative research design was used to explore and describe the ethical challenges facing the

integration of reproductive health education in schools. Quantitative studies focus on collecting and analysing numerical data and can be used to find patterns and averages, make predictions and test causal relationships to generalize findings to broader populations<sup>9</sup>. The study was conducted in schools in the City of Tshwane (CoT), Gauteng province, South Africa. The City of Tshwane is located on the northern side of Gauteng province, with an estimated population of more than 2.2 million people. There are 598 schools, accommodating 448 720 learners and 16 258 teachers in the City of Tshwane<sup>10</sup>. The sample for this study was school principals and deputy principals of schools in the City of Tshwane. The schools were sampled using stratified random sampling method. The technique was used to select strata according to quintile classification, this included special schools and schools that were not classified. There were 149 schools in quintile 1 and 2, 77 schools in quintile 3, 113 schools in quintile 4 and 122 in quintile 5. Furthermore, there were 25 special schools and 122 schools which were not classified. Based on the advice of a statistician, stratified simple random sampling of 30% for each classification according to quintile categorisation of the schools was done to ensure representation and generalisability of results<sup>11</sup>. The quintile classification was based on the government funding of the schools, quintile one to three were declared no-fee schools and quintile four and five schools receive minimal government funding and are therefore allowed to charge school fees. Sampling was based on the sample size of 179 schools in the City of Tshwane. The principals and/or their deputies were selected to be participants or on behalf of the school. A total of 66 schools were assessed compared to 179 schools that were initially projected.

Data gathering method was done through a self-administered questionnaire and a checklist, the two items were used to collect data related to compliance to ISHP in the CoT. The questionnaire consisted of thirteen ISHP items. The checklists addressed the health, safety, and security risk baseline by the National School Nutrition Programme Safety Directory and was completed by the researcher. Data was collected for six months. The principals and/or their deputies responded to a series of questions regarding the ISHP programme compliance including element of reproductive

health integration. Data were analysed using inferential statistics to make generalisations about compliance or non-compliance for ISHP in the schools of CoT. The services of a statistician were used during data analysis<sup>12</sup>. Data analysis was based on the responses of the Integrated School Health Policy programmes related to multi-disciplinary requirements for reproductive health education and teaching in schools.

## Results

The study's results reflected that the majority of the 66 schools accessed for the study schools were not compliant with the principles of ISHP concerning key indicators of ethical harmony between stakeholders in sexuality and reproductive health education in schools. The ethical challenges that emerged from this study were the absence of reproductive health strategies in the vision and mission statement of the ISHP. The strategies would go a long way to inform articulation of ethical dimensions to ISHP programs on collaborations, capacity building, HIV & AIDS prevention, more on sexuality and gender orientation teaching/education compliance. The schools' collaboration with multi-sectoral stakeholders recorded 58% (n=38). Table 1 presents schools' multi-disciplinary and multi-sectoral collaborative efforts in Tshwane.

The study results yielded that of the 66 schools, 8% (n=5) reflected a statement with clear strategic goals that embraced a combination of core values as part of their academic strategies. The core values reflect strategic goals towards the ISHP governance in schools. Although, the ISHP is the basis for all schools to run the ISHP programme, only a few schools reflected their commitment towards the program by integrating the core values into their academic strategies. The general strategy found in schools focused on academic issues. The study found that in the majority of schools there were no other programs that were running. Although, 40% (n=26) reflected values that are concerned with their academic business operations, with the remaining 60% not having values as part of their key strategies to run the school. Concerning school philosophies, the majority of the schools (60%) had their school philosophy drafted and made available. Table 2 presents the ISHP vision and mission integration in schools of Tshwane.

**Table 1:** ISHP multi-disciplinary and multi-sectoral collaboration

| ISHP collaboration elements                          | Yes | No  | Total (N) |
|------------------------------------------------------|-----|-----|-----------|
| School administrators                                | 52% | 48% | 66        |
| Parents or families of learners                      | 30% | 70% | 66        |
| Community members                                    | 30% | 70% | 66        |
| Local health departments, agencies, or organisations | 58% | 42% | 66        |
| Faith-based organisations                            | 60% | 40% | 66        |
| Local government agencies                            | 30% | 70% | 66        |
| Student/learner bodies                               | 13% | 87% | 66        |
| Media Centre staff                                   | 12% | 88% | 66        |
| Mental health/social services staff                  | 13% | 87% | 66        |
| Health services staff (e.g. school nurses)           | 35% | 65% | 66        |
| Family/parents information about ISHP                | 35% | 65% | 66        |

**Table 2:** ISHP vision and mission integration

| ISHP vision and mission elements | Yes (%) | No (%) | Total (N) |
|----------------------------------|---------|--------|-----------|
| Strategic goals                  | 8%      | 92%    | 66        |
| Values                           | 30%     | 70%    | 66        |
| Philosophy                       | 60%     | 40%    | 66        |
| Reflected in mission and         |         | 10%    | 66        |

**Table 3:** Basic ISHP sexuality and gender orientation

| ISHP sexuality and gender orientation elements                  | Yes (%) | No (%) | Total (N) |
|-----------------------------------------------------------------|---------|--------|-----------|
| LGBT curricular and awareness                                   | 90%     | 10%    | 66        |
| Collaboration with external psycho-social agencies on sexuality | 53%     | 47%    | 66        |
| Collaboration with external and STIs agencies                   | 53%     | 47%    | 66        |
| Staff gender diversity development programmes                   |         | 10%    | 66        |
| Prohibition of gender-based violence                            | 53%     | 47%    | 66        |
| Learner-led sexuality orientation structures                    | 62%     |        |           |

With regard to compliance with the basic sexual and gender orientation of school learners, 90.0% (n=59) of schools responded positively towards compliance with ISHP programmes relating to lesbian, gay, bisexual and transgender awareness and staff gender diversity orientation development programmes. This reflects that majority of schools complied with the guidelines to integrate school

gender and sexuality health orientation as stipulate in the ISHP. However, the findings further revealed that learners from 62% (n=41) of schools were involved or engaged in sexuality orientation programmes. This programmes were identified as learner-led sexuality orientation structures within the schools. Table 3 presents the basic ISHP sexuality and gender orientation in schools of Tshwane.

Integration of HIV/AIDS prevention and management components in school programmes is one of the most important components of the ISHP. This was assessed through schools HIV/AIDS confidentiality policy, staff training, HIV policy programmes and learner HIV/AIDS management and anti-stigmatization programmes. Schools showed a positive response 100% (n=66) towards schools HIV & AIDS confidentiality policy guidelines and HIV policy programmes. Although they registered only a low 38% (n=25) of learner HIV & AIDS management and anti-stigmatization programmes. This is a concern considering that HIV programs should focus more on learners as they are a vulnerable group, stigmatization of learners is a major ethical issue which should be addressed through sound HIV management and anti-stigmatization programmes that will protect the vulnerability of affected learners. The study's findings further revealed that 70% (n=46) of schools included and covered sexually transmitted infections in their teachings. Teaching learners about sexually transmitted infections promotes health education as part of the ISHP guidelines. This also promotes autonomy and informed consent amongst school learners when they make reproductive health decisions. Although it is a concern that 30% of schools were not teaching learners about sexually transmitted infections, this can be considered as a missed opportunity for such learners. Table 4 presents the ISHP HIV prevention and management in schools of Tshwane.

The study revealed that schools' capacity building that addresses reproductive health education was significantly high. However, there is still a need for further coverage. Results also revealed that schools' capacity building programs on gender identity teaching and cultural diversity was recorded at 60% (n=40 each). Significantly capacity-building strategies would empower stakeholders or community of practice in school sexuality and reproductive health education and underlying

**Table 4:** Integrated School Health Policy HIV prevention and management

| ISHP HIV prevention and management elements       | Yes (%) | No (%) | Total (N) |
|---------------------------------------------------|---------|--------|-----------|
| 12 month summative risk behaviour change teaching | 91%     | 9%     | 66        |
| 12 month whole school sexuality and STI teaching  | 70%     | 30%    | 66        |
| HIV policy programmes                             | 64%     | 36%    | 66        |
| Staff training                                    |         | 36%    | 66        |
| HIV policy communication                          | 64%     |        |           |
| Universal precaution awareness                    | 91%     |        |           |
| HIV confidentiality clause                        | 100%    |        |           |
| HIV anti-stigmatization policy                    | 38%     |        |           |
| Learner HIV management                            | 64%     |        |           |
| Infectious diseases awareness policy              | 90%     |        |           |

ethical principles of autonomy, beneficence, non-maleficence and justice within the school environment.

## Discussion

Community participation in school matters creates a healthy learning environment that integrates health, including reproductive health, emotional well-being, and academic development. However, there are challenges in media reports pertaining to school-going child reproductive health and safety education. Mehta and Seeley<sup>13</sup> reported that in many countries, the main challenge on school-going children is attributable to lack of access to reproductive care and education, and addressing gender norms that assist teenagers in managing the gender role and transition to adulthood. In South Africa, poor documentation of evidence-based practice related to school health reproductive health programs and policies has yielded similar challenges to those in Africa and other parts of the world. The principle of autonomy regarding sexual and reproductive health practices amongst school-going children needs to be supported by provision of sufficient information.

The diversity of stakeholders in school management has also proven problematic in creating a common ethical to school health and reproductive health education issues. The ethical dilemma of teaching sexual and reproductive health in schools can prove to be a challenging exercise because of its sensitivity in most societies. Sexuality and reproductive health education is also compounded by lack of clear guidelines in the ISHP programmes and the multiplicity of stakeholders

that do not necessarily hold common or standardised ethical framework. The international community enables stakeholders to develop a standardised ethical framework to address reproductive health in schools. To protect the rights of teenagers in schools, the ISHP should develop programs that have been acknowledged in the Sustainable Development Goals (SDG) agenda<sup>14</sup>.

In our study, many of the topics that are advised to be covered by the ISHP were not included. This led to lack of sufficient teacher preparation which adds to the ethical dilemma in managing ethical reproductive health issues in schools. Josheph *et al.*<sup>14</sup> reported that in India, most teachers do not address reproductive health issues in their teaching content because they often feel embarrassed. Moreover, they feel that reproductive health is not part of their curriculum. Mehta and Seeley<sup>13</sup> found that to avoid intentional harm towards school learners, some teachers resort to unsubstantiated assumptions such as providing sexual and reproductive health content to learners might have adverse outcomes. To reduce potential harm, teachers are often faced by parental consent issues<sup>13</sup>. Although this study highlighted high school and teacher capacity development and training, there is still a need for further coverage and training regarding the delivery of sexual and reproductive health education within the school environment.

The diversity of stakeholders in school management has also proven problematic in creating a common ethical to school health and reproductive health education issues. Briggs, Kim, Wilson and Wildsmith<sup>15</sup> further argued that the solution to these challenges can be addressed by

creating a professional community of practice in school sexuality and reproductive health education, which focuses on strategies that improves access and quality of services that are youth friendly. The initiative will be able to combine efforts to a seamless academic/curricula integration of quality practice for both learners and teachers. For this to be effective, teachers need to be equipped with sufficient training, knowledge and skills to address reproductive health education in schools<sup>14</sup>. The value of diverse stakeholder collaborative efforts should be based on the context, particularly looking at the needs of the learners of each school and community<sup>15</sup>. Furthermore, the multi-disciplinary community of practice will address and resolve any inherent ethical contradictions that have rendered ISHP programmes ineffective.

## Limitations

The limitation of the study was low response, therefore the results may not be representative of the entire school system in CoT. There was also an impression that the study was intrusive, and it was not a core business of the school, and completion of the questionnaire was not prioritised. Lastly the primary study was misconstrued as an audit and would therefore compromise the school's "good standing". Some principals responded by adding that health care is not the school's core business and cannot waste time with none core issues.

## Ethical considerations

The study was subjected to research protocol review and approval by the Tshwane University of Technology Research Ethics Committee and the City of Tshwane Research Ethics Committee. Permission to conduct the study was obtained from the Department of Basic Education regional office in Tshwane and the district directorate in the province. Local schools participants and their deputies were consulted before participating in the study. Anonymity and confidentiality were ensured by concealing participants' names and the names of the schools. The right to privacy and anonymity of the participants were observed in the letter. Informed consent was obtained from participants, and school representatives were asked to sign informed consent on behalf of the schools. The right to self-determination was observed and participation was voluntary.

## Conclusion

The findings of this article provide evidence of challenges in the ethical integration of reproductive health education in South African schools. The ineffectiveness of the ISHP causes this challenges in providing an enabling environment for reproductive health education to be promoted in schools. Schools need to be provided with resources that will effectively implement reproductive health education<sup>14</sup>. Provision of ethically sound reproductive health education emanates from clear and practical policy guidelines, sufficient teacher capacity development and training, as well improvement of the integration of reproductive health into the school curriculum. Furthermore, multi-disciplinary stakeholders involved in the provision of sexual and reproductive health education within the school environment need to function within a common standardised ethical framework. Fragmentation within the ISHP can be avoided by this stakeholder common ethical framework for policy implementation in schools.

## Recommendations

The following recommendations are made based on the findings of the study:

- Further research should be engaged in to ensure implementation of all the 13 items of the ISHP. Furthermore, research into the role and participation of all stakeholders in school health should be conducted.
- Research in intersectoral and multi-sectoral collaboration for implementation of ISHP programmes should be explored.
- Promotion of multisectoral collaboration of reproductive health education and health promotion in schools across the country.
- Develop an ethical dimension to reproductive health in implementation of school health strategies.
- Promote good inter-professional ethical decision-making in terms of principles relating to learner curriculum development and education with regard to reproductive health.

## Contribution of authors

Matshoge GP conceived and designed the the study, collected and analysed the data. Ramalepa TN

prepared, drafted and edited the manuscript. Ramukumba TS contributed to the design of the study and drafted the manuscript. All authors approved the manuscript.

## References

1. Francis DA and Depalma R. 'You need to have some guts to teach': teacher preparation and characteristics for the teaching of sexuality and HIV/AIDS education in South African schools. *Sahara-J* 2015, 12(1):30-38.
2. Barr EM, Goldfarb ES, Russell S, Seabert D, Wallen M and Wilson KL. Improving sexuality education: the development of teacher-preparation standards. *Journal of School Health* 2014; 84(6): 396-415.
3. South Africa. Departments of Health and Basic Education: Integrated school health policy, 2012. [http://www.hst.org.za/sites/default/files/Integrated\\_School\\_Health\\_Policy.pdf](http://www.hst.org.za/sites/default/files/Integrated_School_Health_Policy.pdf) [accessed: 04 April 2017]. url: [http://www.hst.org.za/sites/default/files/Integrated\\_School\\_Health\\_Policy.pdf](http://www.hst.org.za/sites/default/files/Integrated_School_Health_Policy.pdf)
4. Zulu JM, Blystad A, Haaland MES, Michelo C, Haukans H and Moland KR. Why teach sexuality education in school? Teacher discretion in implementing comprehensive sexuality education in rural Zambia. *Int J Equity Health* 2019; **18**, 116. <https://doi.org/10.1186/s12939-019-1023-1>
5. World Health Organization. Family life, reproductive health, and population education: key elements of a health-promoting school. [http://www.who.int/school\\_youth\\_health/media/en/family\\_life.pdf](http://www.who.int/school_youth_health/media/en/family_life.pdf) [accessed: 21 April 2017]. [http://www.who.int/school\\_youth\\_health/media/en/family\\_life.pdf](http://www.who.int/school_youth_health/media/en/family_life.pdf)
6. Suleiman AB, Johnson M, Shirtcliff EA and Galvan A. School-based sex education and neuroscience: what we know about sex, romance, marriage, and adolescent brain development. *Journal of School Health* 2015, 85(8):567-574.
7. Folayan MO, Kolawole KA, Oziegbe EO, Oyedele T, Oshomiji OV, Chukwumah NM and Onyejaka N. Prevalence, and early childhood caries risk indicators in preschool children in suburban Nigeria. *BMC Oral Health* 2015, 30: 15-72. doi: 10.1186/s12903-015-0058-y. PMID: 26123713; PMCID: PMC4486704.
8. Fouquier K. Legal and Ethical Issues in the Provision of Adolescent Reproductive Health in the United States. *Online Journal of Health Ethics* 2017, 13(1). <http://dx.doi.org/10.18785/ojhe.1301.03>
9. Bhandari P. An introduction to qualitative research. <https://www.scribbr.com/methodology/quantitative-research> [accessed: 10 August 2020]. url: <https://www.scribbr.com/methodology/quantitative-research>
10. Gauteng Province Education. S.a. Schools. <http://www.education.gpg.gov.za/Schools/Pages/default.aspx> [accessed: 19 April 2017]. url: <http://www.education.gpg.gov.za/Schools/Pages/default.aspx>
11. Botma Y, Greeff M, Mulaudzi FM and Wright SCD. Research in health sciences. Cape Town: Pearson, 2010.
12. Brink H, Van Der Walt C and Van Rensburg G. 2012. Fundamentals of research methodology for health professionals. (3<sup>rd</sup> ed). Cape Town: Juta, 2012.
13. Mehta SD and Seeley J. Grand challenges in adolescent sexual and reproductive health. *Frontiers in reproductive health* 2020, 2(2): 1-4.
14. Joseph N, Mahato V, Pandey A, Mishra S, Prakash G and Gandhi R. Experiences and perception towards reproductive health education among secondary school teachers in South India. *Reproductive health* 2021,18(175). <https://doi.org/10.1186/s12978-021-01224-6>
15. Briggs S, Kim L, Wilson E and Wildsmith E. School-based strategies to support adolescent sexual and reproductive health. <https://www.childtrends.org/publications/school-based-strategies-support-adolescent-sexual-reproductive-health> [accessed 02 January 2022]. url: <https://www.childtrends.org/publications/school-based-strategies-support-adolescent-sexual-reproductive-health>