

ORIGINAL RESEARCH ARTICLE

Lessons learned from a sexual and reproductive health and rights peer education program to prevent adolescent pregnancies in high schools in Rwanda

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Abstract

Adolescent pregnancies that occur in schools remain a major public concern in Rwanda. Sexual and Reproductive Health and Rights (SRHR) school based programs are less effective and discussing sexual health with adolescents is considered as taboo in Rwandan societies. Yet, adolescents still seek information about SRHR from their peers and research shows that peers are often incorrectly informed about SRHR topics. One of the effective strategies to reduce adolescent pregnancies in secondary schools is equipping adolescents with accurate and reliable knowledge. In 2019, we conducted our first network event with different stakeholders. The stakeholders included: school directors, head teachers, biology teachers, local political delegates, religious people among others to help gain insights into SRHR. A survey was conducted and administered to in-school adolescents in Kirehe district (S3 – S6 level, n=563) with the aim of examining adolescents' level of knowledge and attitudes regarding SRHR. In addition, six focus group discussions (FGDs) were conducted to obtain a deeper understanding of the SRHR needs and the possible contributions and content of a peer-to-peer education program (PEP). The lessons learned included: a) engaging parents in the network event and development of PEP; b) constant communication utilizing the different social media platforms, c) enhanced collaboration between the project implementers and stakeholders a facet of bottom-up approaches to expedite this project; and d) the project should have better anticipated on possible and unforeseen external barriers. Implementing a PEP in Kirehe secondary schools resulted in substantive changes such as positively transforming peer educators (PEs) and the elimination of teenage pregnancies in the selected schools. Overall, the number of PEs was not adequate to cover the number of students and anti-bullying training should have been provided to all students before the project implementation. (*Afr J Reprod Health 2023; 27 [4]: 16-23*).

Keywords: Adolescent, Sexual and Reproductive Health Rights, peer education, Rwanda

Résumé

Les grossesses chez les adolescentes qui surviennent dans les écoles restent une préoccupation publique majeure au Rwanda. Les programmes scolaires sur les droits en matière de santé sexuelle et reproductive (SDSR) sont moins efficaces et discuter de la santé sexuelle avec les adolescents est considéré comme un tabou dans les sociétés rwandaises. Pourtant, les adolescents recherchent toujours des informations sur la SDSR auprès de leurs pairs, la recherche montre que les pairs sont souvent mal informés sur les sujets liés à la SDSR. L'une des stratégies efficaces pour réduire les grossesses chez les adolescentes dans les écoles secondaires consiste à doter les adolescentes de connaissances précises et fiables. En 2019, nous avons organisé notre premier événement de réseau avec différentes parties prenantes. Les parties prenantes comprenaient : des directeurs d'école, des chefs d'établissement, des professeurs de biologie, des délégués politiques locaux, des religieux, entre autres, pour aider à mieux comprendre les SDSR. Une enquête a été menée et administrée aux adolescents scolarisés dans le district de Kirehe (niveau S3 - S6, n = 563) dans le but d'examiner le niveau de connaissances et les attitudes des adolescents en matière de SDSR. En outre, six discussions de groupe (FGD) ont été menées pour obtenir une meilleure compréhension des besoins en matière de SDSR et des contributions possibles et du contenu d'un programme d'éducation par les pairs (PEP). Les leçons apprises comprenaient : a) la participation des parents à l'événement de réseau et au développement du PEP ; b) une communication constante utilisant les différentes plateformes de médias sociaux, c) une collaboration renforcée entre les exécutants du projet et les parties prenantes, une facette des approches ascendantes pour accélérer ce projet ; et d) le projet aurait dû mieux anticiper les obstacles externes possibles et imprévus. La mise en œuvre d'un PEP dans les écoles secondaires de Kirehe a entraîné des changements substantiels tels que la transformation positive des éducateurs pairs (EP) et l'élimination des grossesses chez les adolescentes dans les écoles sélectionnées. Dans l'ensemble, le nombre d'EP n'était pas suffisant pour couvrir le nombre d'étudiants et une formation anti-intimidation aurait dû être dispensée à tous les étudiants avant la mise en œuvre du projet. (*Afr J Reprod Health 2023; 27 [4]: 16-23*).

Mots-clés: Droits des adolescents, droits à la santé sexuelle et reproductive, éducation par les pairs, Rwanda

Introduction

Adolescent pregnancy continues to be a major challenge in low and middle income countries with an estimated number of 12 million girls aged 12-15 years¹. Sub-Saharan Africa (SSA) remains the hot spot of teenage pregnancies compared to other parts of the world²⁻⁶. Before the initiation of our peer-to-peer education manual in high schools, adolescent pregnancies were increasing drastically from 6.3% in 2010 up to 7.3% in 2015⁷. It was reported that 85% of adolescent pregnancies in Kirehe were from schools⁸. For this reason, the Rwandan government decided to strategically implement interventions aimed to educate in-school adolescents about sexual health. The Ministry of Health has also established youth-friendly health centers that continue to provide confidential services such as sexually transmitted infections (STIs) testing, screening, and treatment as well as information on sexual health and safe sexual practices to the adolescents seeking these services. Various non-governmental organizations (NGOs) also work collaboratively with the government of Rwanda to deal with the taboos while promoting sexual health education in schools and communities. For example, the Rwanda Education Board (REB), has incorporated a comprehensive sexual education (CSE) content into the school curriculum specifically in biological courses⁹. The purpose is to equip young people with adequate knowledge and skills needed to make informed choices regarding SRHR. However, it seemed that these programs have been less effective than anticipated over time^{10,11}. In Rwanda, due to cultural and traditional norms, it is contended that discussing sexual health with adolescents is often regarded as a taboo¹². As a result, research shows that adolescents seeking information on SRHR from their peers, often are incorrectly informed about SRHR topics, thus posing firstly problems of information exchange¹³. Secondly, some adolescents don't always have access to their peers, so their needs are not always met. Furthermore, Rwandan secondary students continue to lack knowledge about SRHR. Additionally, social influence, context, and interactions among peers play a big role in influence risky sexual decision-making¹⁴. It is against this background that we developed a PEP under the project entitled "breaking barriers in the

prevention of adolescent pregnancies for in-school children in Kirehe district –Rwanda" in 2019. This program aimed at equipping school adolescents with accurate and reliable information, enabling them to make tough decisions in SRHR. The project involved staff of the University Rwanda (UR)/Rwanda and University Colleges Leuven-Limburg (UCLL), Belgium and it was funded by VLIR-UOS¹⁵.

Methods

Development of the program

The project implementation followed an empowerment model of peer education strategy established by the project team (Figure 1)¹⁵. To examine the needs regarding SRHR education, a profound local needs assessment was conducted at different levels by the research team. A first network event and needs assessment was conducted in Kirehe district. This provided the necessary insights into the available SRHR services, place of SRHR education and adolescent pregnancy in the Kirehe schools and community context. Relevant stakeholders including school directors, head teachers, biology teachers, local political delegates, religious people among others were invited to participate in the network event. The event was rigorous and intense in order to bring together many enthusiastic stakeholders who were significant in providing very meaningful and necessary information regarding SRHR. Ultimately, these connections optimally reassured the sustainability of the PEP within the Rwandan context.

Secondly, a survey was then conducted and administered among the in-school adolescents (S3 – S6 level, n=563) with the aim of examining adolescents' level of knowledge and attitudes regarding SRHR services. In addition, six focus group discussions (FGDs) were also conducted among Kirehe in-school adolescents to obtain a deeper understanding of their SRHR needs as well as the possible contributions to and content of a peer-to-peer education program (PEP). An equal number of male and female students were included in the focus group interviews. While the University of Rwanda team members visited that of Belgium, knowledge about communication in regard to SRHR issues and outreach programs were shared.

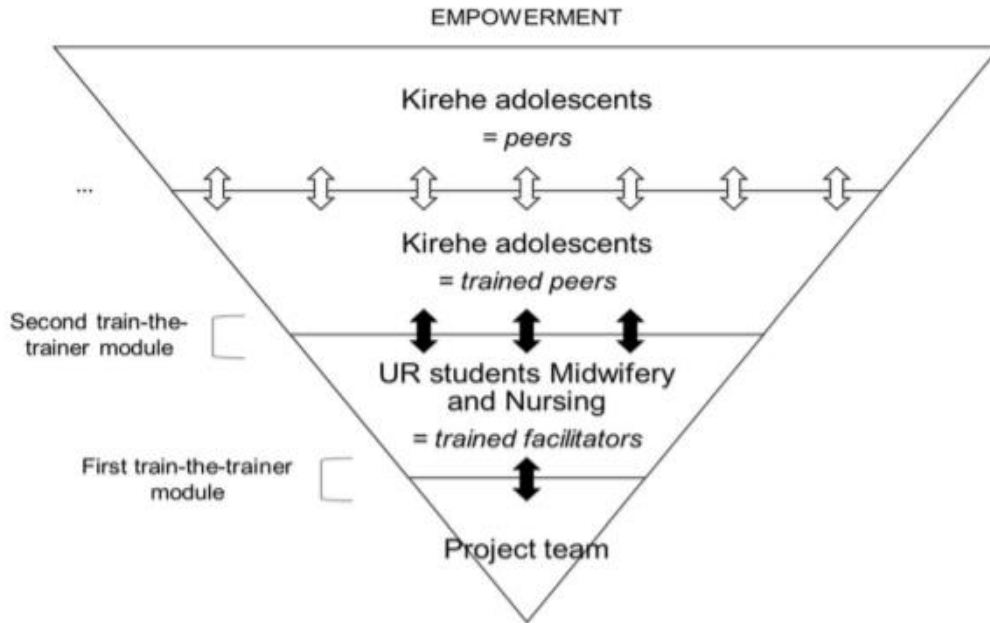


Figure 1: Concept of the PEP in Rwanda. Source¹⁵

The shared information and insights together with the available scientific evidences resulted in a practice- and evidence-based PEP supported by the PEP-manual.

Didactic motivation of PEP: The guide was developed with the aim of teaching young adults (age 15-19) about SRHR and train them to become peer educators. After this six-day workshop, participants were expected to be competent and confident enough to be PEs and teach their peers to be responsible for their own sexual health. All activities were based on experimental learning and the use of interactive methodologies, which are the most important strategies for teaching SRHR. Active learning methods were also used so that the trainees could discover new information themselves. The participants were to be encouraged to participate actively, so that they get to be more involved and retain more information. Role plays, educational games and statement games are the methods that needed to be used. The general objectives were to increase knowledge on SRHR and improve personal development and group communication skills.

Implementation of the program

Two different trainings were conducted (Training module A for midwifery students as facilitators and train-the-trainer module B for peer educators). Six

of the trained facilitators (midwifery students) and three staff members of the University of Rwanda midwifery department went to Kirehe district for 2 weekends (April 24-25, 2019 and May 1-2, 2019) to train the selected students at the three secondary schools (Nyakarambi, Rusumo and Paysannat L). In each school, 12 students were selected from year three to year six and trained as peers (6 males and 6 females). During the training of the students at the schools, some of their teachers showed interest in learning and by so doing, also participated in the training. This was not foreseen in the initial project implementation plan, but became an added value on the project and a necessary ingredient for success and continuation of SRHR teachings in schools. These teachers then served as mentors of the students during the implementation.

After train-the-trainer module B, students of the secondary schools together with their teachers and the directors shared their contacts with the team of the project (UR-staff). At least twice a month contact by phone as a follow up plan between the teachers, trained peers, director and the project team was realized and significant. This facilitated the implementation of the project and whenever possible, encountered challenges were addressed, mitigated while documenting lessons learned. After six months of implementing a train-the-trainer module B, the research team undertook

an evaluation in each school. The research team went ahead to interview the trained peers by listening to them about their experiences and difficulties encountered during these activities but also, how the research team could help them further as trained peers. The trained peers kept notebooks and kept track of the contacts and different questions they received during their interaction with their peers. Purposively, the research team made sure that the schools were left with some extra training materials to serve as reference resources for continuity and sustainability of the peer-to-peer programme. In Rusumo and Nyakarambi high school, the research team also trained the peers proactively who later took the initiative to start teaching in their peers and supervised by their teachers.

Data collection and analysis

This quasi-experimental project used both quantitative and qualitative approaches to evaluate the effectiveness of the PEP in Kirehe district selected schools. In the quantitative phase, students from two selected secondary schools (Rusumo and Nyakarambi high schools) participated in the study. Pre-intervention data were collected two weeks before PEP implementation, and post-intervention data at the end of the project. The study participants completed a self-administered questionnaire of 34 items grouped into two sections. The first section comprised of 23 knowledge questions, including four questions on reproductive health, 11 questions on contraceptive methods, and eight questions on HIV/AIDS and STDs. The second section consisted of 13 items regarding attitudes toward SRHR. The data were organized and analyzed using Statistical Package for Social Sciences (SPSS) Version 25 (SPSS Inc., Chicago, IL, USA). Frequencies and percentages in descriptive statistics, McNemar, analysis of variance (ANOVA), and paired t-test were used for inferential statistics. A p-value of less than 0.05 was considered statistically significant.

In the qualitative phase, a qualitative exploratory study design was used to explore PEs' experiences during the PEP implementation. Data were collected among three FGDs. In addition, five in-depth interviews with key informants (teachers and directors) were conducted. Data were organized using Dedoose software and analyzed using thematic analysis. The ethical approval was

obtained from the University of Rwanda, College of Medicine and Health Sciences, Institutional Review Board, Approval No 158/CMHS IRB/2019.

Results

Summary of the findings from the implementation of PEP

In the quantitative phase, 508 students aged between 13-24 years participated in the pre- and post-interventions. Slightly more than half of the respondents (53.7%) were between 16-18 years old. The study level and gender had a nearly equal distribution of participants and protestants had the highest proportion (49.0%). Nine percent (9%) of the participants consumed alcohol with more for males than their female counterparts, while smoking was only 0.4%. Almost half (48.9%) had never discussed SRHR issues with their fathers, while 30.5% of the participants had discussed SRHR issues with their mothers. Those who self-reported that they had ever practiced sexual intercourse were 13.8%, and of this, majority, 70.6% reported to have used contraceptives. The participants' knowledge had significantly improved ($p=0.001$) for all statements in the knowledge domain except for two questions under the subscale of HIV/AIDS & STDs, which were cure of HIV/AIDS and availability of simple tests for HIV. The overall mean scores on the knowledge and attitudes questionnaires showed a significant increase after the intervention ($p=0.001$).

After implementing the PEP, the study participants demonstrated a significantly increase on attitude test ($p=0.001$) to all statements. Males demonstrated positive attitudes toward contraception more than females. However, there was no significant difference after the intervention. Students from upper years (years 5 and 6) had significantly higher knowledge scores than those in years 3 and 4 pre-and post-intervention. After the intervention, the overall knowledge score was significantly higher among adolescents aged 22 to 24 ($p=0.022$). However, there were no significant differences before the intervention ($p=0.461$).

In qualitative, 22 PEs aged between 15-20 years participated in three FGDs. Five key informants (one director of school, one director of studies, one students' patron, and two teachers) were also interviewed. Four main themes were

identified such as benefits of this program, facilitators and challenges of being a PE, and needs to improve and sustain the program. The benefits of being a PE include improved competencies and a better understanding of SRHR topics, strengthened relationships with colleagues, and knowledge transfer to their family members and the society. Several facilitators identified were: peer support (between PEs themselves), school and administrative support, and frequent monitoring of the project. However, PEs confronted some challenges, including being bullied by their colleagues at the beginning of the project, limited resources such as contextualized materials and enough PEs compared to the number of students. Key informants (teachers, mentors, head teachers, school patrons and matrons, and directors) confirmed that this program had changed many things for PEs and the schools in general. They reported that PEs had changed dramatically regarding their confidence, knowledge and skills, discipline, and a sense of accountability. They added that this project had attempted to eliminate to some extent the teenage pregnancy evidenced in Kirehe district. It was reported that before 2019, annually, they had at least five pregnancies, but from the beginning of the project, there had not reported any single case of teenage pregnancy up to 2022.

Challenges encountered during the project implementation

Due to the COVID-19 pandemic in Rwanda, especially in the period of Mid-March 2020, the imposed lockdowns to prevent COVID-19 spread presented a lot of challenges and threats to the project. An alternative strategy for assessing the students using technology was undertaken. Progress in the training of PEs was halted due to limitation in peoples' movements. However, after the COVID-19 related restrictions were lessened (April 2021) and travel between districts was again accepted, the team of trained facilitators from the UR resumed the peer educator program as planned earlier.

Specifically, at Paysannat L secondary school, there were changes in the management and teaching staff of the school in which the Directors and teachers who had been actively involved in the project activities were relocated to other schools. Moreover, Paysannat's school majority students'

population were refugees from Burundi, so at the time of resumption of the PEP, the majority of the school's population had voluntarily repatriated to their country, Burundi.

Also, the remaining few trained peers had relocated to other schools as well. These changes created a significant challenge of tracking the trained peers, as most relocated to schools beyond the catchment of this project. This ultimately, meant that the team was unable to conduct a post-test at Paysannat secondary school. Therefore, post-test conducted in May 2022 was only at the two remaining schools (Rusumo high school and Nyakarambi). The pretest about SRHR knowledge, skills and attitudes had been done in February 2020 within senior 3 to 6 and the posttest which was planned within the same school year but due to COVID-19 could only take place in May 2022. By the time of posttest evaluation, students who were in senior 5 and 6 had graduated already. This made it impossible to compare the results from pretest and posttest year on year. Nonetheless, findings of these posttests revealed that there has been an increased knowledge, skills and attitude and communication on subjects of SRHR among the peers although these were not statistically significant.

Lessons learned

From the network event where we provided feedback from the surveys and continued exchange with school administrations, we learned that convincingly school based SRHR education is imperative, highly rated by all the stakeholders, including adolescents. Therefore, involving and engaging stakeholders in SRHR interventions enhances ownership and sustainability^{16,17}. Surprisingly, we also learned that adolescents preferred to include their parents as the preferred source of information on SRHR issues. This is consistent with findings that suggest that In SSA, parents are the primary sources of SRHR information^{18,19}. Moreover, it is well documented that for a successful PEP, it requires the involvement of parents and other community members²⁰. It is, therefore, very imperative to consider parents' input when designing and developing a SRHR program tailored to adolescents' needs.

Similarly, a constant and effective communication with key stakeholders using

WhatsApp enhanced the collaboration between the Rwandan team and Kirehe beneficiaries. This collaboration resulted in bottom-up approaches to expedite the project. For instance, schools advised that the trainers and their supervisors come to their school when they were COVID-19 negative or even stay in one location. These arrangements had been approved by the district mayor once movements allowed again between the district. Even though it takes time and involves many iterations, project implementers should ensure collaboration to co-produce strategies for delivering adolescent SRHR interventions, to facilitate quick ownership and adoption of the interventions and tracking of challenges¹⁷. It is clear that enhanced communication plays a crucial role in harnessing prospects of success. Since the project was designed on the basis of local needs, it can be inferred that it resonated well with local stakeholders who in the end all wanted to participate in the project that meets their needs.

It seems the country's education system is reliant on other aspects: financing, infrastructure upgrading or adding new ones, hiring of teachers etc. With such challenges and pitfalls, it was nearly impossible to plan activities with certainty in the current project. The impact of the COVID-19 pandemic on educational institutions further exposed the weaknesses of the current educational systems in Africa²¹. In addition, teenagers were forced to keep close contact with their families and to limit their interactions with peers as a result of containment measures²². We also learned that the project should have better anticipated on possible and unforeseen external barriers. A review of 36 case studies from 16 countries showed that it was possible to continue providing SRHR education during COVID-19 using innovative efforts such as online modules²³. According to one example, the project implementers in South Africa adapted to the pandemic context and continued to implement the project remotely via social media platforms and telephone²⁴. Switch quickly in approach and implementation is necessary for continuing project activities.

A number of PEs compared to the number of students at each school was not well investigated before planning the project. The stakeholders highlighted that they needed more PEs due to the capacity of the schools. We trained 12 PEs at each school, and all schools have more than 800

students. From the closing event, every director and the district authorities wished to have the continuation of the program in their schools with more PEs trained. Generally, the project was successful despite the challenges. A collaborative approach in a consortium between the global north and south is a winning strategy for developing interventions to prevent adolescent pregnancies in Rwanda and beyond²⁵.

Conclusion

Training of PEs in secondary schools is possible and increased students' SRHR knowledge and skills. Furthermore, this has contributed to the reduction of teenage pregnancies in the selected three secondary schools. Thus, PEP is a "best buy" for countries wishing to eliminate adolescent pregnancies in schools and communities. Before the implementation of the similar project, contextual factors should be well explored to ensure that the project is meeting the adolescent needs. PEP can be rolled out to other schools in Rwanda and beyond.

Findings dissemination

The findings from the FGDs with trained peers and the post-test were shared and validated with key stakeholders in the district. Best practices of SRHR were elucidated and these came from different schools this project worked-in. Trained peers were given the opportunity to provide feedback to the key stakeholders about the need for making any resources available in the community for the success of the project. Overall, the stakeholders wished for the project to continue. Furthermore, findings were later presented in different international conferences. The project development and implementation phases were presented at the 32nd International Confederation of Midwives Congress -Indonesia. The PEs experiences were also presented at the Center of International and Reproductive Health Training (CIRHT) Conference-Rwanda.

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