International Health Trends and Perspectives

Evaluating a sexual and reproductive health education program in Mozambique: A mixed method study

Research

Paulo Pires[1], Ronald Siemens[2], Jaibo Mucufo[1], Celina Bernardo Mualeite[1], Martins dos Santos Abudo Mupueleque[3], Ha T T Le [4]

[1]Faculty of Health Sciences, Universidade Lúrio, Nampula, Moçambique, Africa; [2]College of Medicine, University of Saskatchewan, Saskatoon, Canada; [3]Universidade Mussa Bin Bique, Nampula, Moçambique, Africa; [4]Clinical Research Support Unit, College of Medicine, University of Saskatchewan, Saskatoon, Canada

Corresponding author: R. Siemens (ron.siemens@usask.ca)

ABSTRACT

Background: Early and inappropriate messages regarding sexuality and marriage taught during adolescent initiation rituals teachings in Mozambique are considered a determinant of high rates of early marriage, adolescent pregnancy, and maternal mortality. The Alert Community for a Prepared Hospital implementation research project in Natikiri, Nampula, Mozambique (2016-2020) identified adolescent initiation rituals counsellors and traditional authorities as pertinent agents to provide sexual and reproductive health education to adolescents during the initiation rituals. **Objective**: Develop, apply, evaluate, and disseminate a modern, transformative education tool, about sexual and reproductive health and rights, for counselors to use with adolescents during initiation rituals in Northern Mozambique. **Methods**: This is an exploratory descriptive and intervention study, using mixed method approaches. **Findings**: Results suggest, the education tool was well accepted by rituals counsellors, community leaders and the adolescents who attended the initiation rituals. It was shown to improve adolescent's knowledge and lead to a positive behaviour change in sexual and reproductive health and rights. **Conclusions**: This intervention may be replicated at a national level with a low cost and significantly contribute to reducing adolescent pregnancy and early marriages and improving maternal and child health.

KEYWORDS

Adolescent Behaviour; Initiation Rituals; Reproductive Health Education; Reproductive Rights

FUNDING SOURCE

This research is supported by Grand Challenges Canada. Grand Challenges Canada is funded by the Government of Canada and is dedicated to supporting Bold Ideas with Big Impact.

INTRODUCTION

Adolescence is a period of growth and development, during which life experiences can have significant and lasting impacts, both positive and negative. For example, a supportive classroom teacher or coach can help an adolescent learn strong interpersonal skills while an unwanted pregnancy can lead to an adolescent leaving school early and losing opportunities for future employment. As a result, adolescence is a time of vulnerability. Issues that threaten adolescents during this period of vulnerability include gender-based violence, child marriage and sexually-based initiation rituals (Schroeder et al., 2022). These issues lead to increased sexually transmitted infections, loss of education, loss of job opportunity and increased maternal mortality. Yet, adolescents seemed to be overlooked in policy development until the UN Secretary-General's 2015 Global Strategy for Women's, Children's and Adolscents' Health was initiated (Global Strategy for Women's, Children's and

  ISSN 2563-9269

Adolscents' Health (2016-2030), 2015). Under this strategy Mozambique is seen as a multi-burden country where there are high levels of all types of adolescent health problems including diseases of poverty (eg. HIV, other infectious diseases, undernutrition and poor sexual reproductive health) (Patton et al., 2016).

In Mozambique, where adolescents aged 10-19 years make up 24% of the total population (United Nations Population Fund, 2023), 46% of adolescent women have started childbearing (Kok et al., 2022), only 14% of whom are using any contraception method. There is a high unmet need for family planning with nearly half (46%) of women that express a desire to limit or space pregnancy not using any form of contraception. The median age of first marriage in Mozambique is 18.1 years (United States Agency for International Development, n.d.). Adolescent pregnancy and early marriage expose young women to the negative consequences of sexually transmitted infections (STIs) and threaten their health and wellbeing including their education and economic potential (Bearinger et al., 2007). Two factors mentioned in the literature that affect teenage pregnancy and child marriage are low education levels and limited comprehensive sexuality education (Yakubu & Salisu, 2018).

Unfortunately, sexual education is limited in Northern Mozambique. Intergenerational communication (between young people and parents, but also between young people and health workers) on these topics is limited because it is considered disrespectful and taboo (Kok et al., 2022).

One situation where sex and reproductive issues are discussed is during adolescent initiation rituals (Schroeder et al., 2022). Almost all adolescents in Northern Mozambique attend initiation rituals. A person is not accepted into the community as an adult until they have completed the rituals. To be pregnant before attending the rituals is considered an abomination. 88% of adolescents attending the rituals state they will follow the teachings they learn during the rituals. Yet there are many difficulties attributed to traditional initiation rituals. Initiation ceremonies symbolize the transition to adulthood and will give social endorsement to young people to start engaging in (often unprotected) sexual activity (Kok et al., 2022). Studies assessing initiation rituals in four Eastern and South African countries characterized them in the following ways:

- Adolescents receive strong pressure to participate, with serious social consequences for those who do not (Girls Empowerment Network Malawi, 2018).

- Rites of passage are deeply rooted in a cisgender (when a person's gender identity matches the sex they were assigned at birth) gender binary and centred in heterosexuality (Siweya et al., 2018).

- Initiates are separated by gender and stereotypical gender roles are emphasized and reinforced (Girls Empowerment Network Malawi, 2018; Siweya et al., 2018).

- Initiates are secluded from the rest of the community (Girls Empowerment Network Malawi, 2018; Siweya et al., 2018).

- Lessons about sex and sexuality are an important part, including, for girls, how to please their future husbands (Sotewu, 2016).

- Either a single adult or group of adults is/are charged with the initiation ceremony to maintain cultural traditions. Individuals filling these roles are sometimes called counsellors, traditional teachers and initiation ritual teachers. (For the sake of consistency, we refer to them as counsellors or traditional teachers, which are the terms favoured in Northern Mozambique.)

- Secrecy is encouraged and expected: it is considered taboo/inappropriate to discuss the ceremonies (Hauchard, 2017).

- Boys are circumcised, but girls do not undergo female genital mutilation. Male circumcision is done partly because of cultural values and as a HIV reduction strategy (Banwari, 2015).

Despite these commonalities, it is difficult to categorize the rites as exclusively positive or negative, as some practices have both positive as well as negative aspects. For example, teaching about sexuality can give an adolescent important knowledge, but if not taught in contex, can lead to early experimentation without appropriate protection or understanding of its implications. It is

  ISSN 2563-9269

important to remember that many adolescent rites of passage are valued deeply by the communities practicing them. Not every rite of passage has negative impacts, and in some cases, organizations are emerging with programmes and plans for supporting gender equality through the rites.

While it is generally regarded as positive that young people are receiving sexuality information as part of their initiations, the extent of the lessons is limited. With the secrecy around what is taught, it is not known how accurate the information is – as well as whether it is delivered in a way that builds positive self-esteem and self-efficacy, rather than using fear or shame or reinforcing role stereotypes. Far too many cultural rites of passage violate adolescents' rights, even as their intentions are firmly rooted in history and tradition. The core values – helping adolescents learn about their cultures and prepare for adulthood – are sound ones. At the same time, however, the physical, social, emotional and psychological harm of too many of these practices requires serious review at the national and local levels. The movement towards change needs to be a collaboration between local spiritual, community and political leaders working in together with country-level legislators (Schroeder et al., 2022).

RESEARCH QUESTION

Does teaching basic modern SRHR information to adolescents by traditional teachers during initiation rituals lead to an improved awareness of SRHR principles and increased use of family planning and modern contraception by the intervention group compared to a control group?

METHODS

Project Background

In this study, researchers from the University of Saskatchewan, Canada and Universidade Lúrio, Nampula, Mozambique collaborated with local spiritual, traditional, community and political leaders to develop a method to integrate basic sexual and reproductive health and rights (SRHR) information into the initiation rituals .

OBJECTIVES

This proof-of-concept project had five main objectives.

Objective 1

To describe the number of Community Initiation rituals teachers that use the toolbox

Objective 2

To identify the number of community traditional healers and members of local health committees that support the use of the SRHR, family planning, sexual/gender-based violence teaching toolbox during adolescent initiation rituals.

Objective 3

To determine the number of adolescent participants, exposed to the teaching toolbox, who demonstrate improved understanding of diversity, SRHR principles and sexual/gender-based violence issues following the initiation rituals training sessions.

Objective 4

To categorize the number of adolescents, who, after exposure to the teaching toolbox, report plans to delay marriage and pregnancy until after the age of 18.

Objective 5

To identify the number of adolescents, who, after exposure to the teaching toolbox, report accessing health services to meet their contraception needs.

Study Design

This was a participatory action research study where we had both quantitative and qualitative components. We had an intervention group and a control group to determine changes in adolescent knowledge, attitudes and behaviour with regards to SRHR. The study design also included a repeated measures (pre and post) approach.

Intervention

The intervention development progressed through four steps (Figure 1).

  ISSN 2563-9269

Step 1. Toolbox development

The first step entailed developing a toolbox consisting of the content and approach for integrating SRHR education in the rituals. Preliminary background reading was conducted by the research group, including a literature search to determine key topics within SRHR to be included in the toolbox for adolescents.

Six topics applicable to adolescents were identified from the United Nations Population Fund article 'SRHR: an essential element of universal health coverage' (United Nations Population Fund, 2019) which summarized main aspects of SRHR for the whole community over a person's life cycle:

- comprehensive sexuality and education
- counseling services for modern contraceptives
- prevention of human immunodeficiency virus (HIV) and treatment for other STIs
- safe abortion services and treatment of unsafe abortion
- detecting and preventing sexual and gender-based violence
- counseling and services for sexual health and well-being.

The research team wrote a summary of each topic area and circulated it among our group for other alterations or ideas. We talked with the community to get their input and incorporated their suggestions.

Advisors at the Gwenna Moss Center for Teaching at the University of Saskatchewan were consulted to determine an appropriate educational method to share SRHR information with adolescents in Mozambique. They suggested a type of Jigsaw method (Karacop, 2017) where question and answer cards were created for all topics. These cards, printed and laminated, were given to the initiation rituals teacher, and then distributed to the participants. Each person or small group would read their question card, review and discuss the answer, and then share the information with the group so that a lot of information could be shared efficiently with less need for high levels of teaching expertise on the part of initiation rituals counsellor.

Across all topics, there were 46 question cards (see Appendix A). The questions were reviewed by a gender expert at Universidade Lúrio, and by a content expert in obstetrics and gynecology at the University of Saskatchewan. We tested the questions with adolescents in Mozambique to ensure clarity and comprehension, and as well as with traditional and community leader to ensure cultural sensitivity. We made minor revisions.

Finally, we created one-page laminated handouts for the adolescents consisting of key messages and contacts (see Appendix B). We placed a four-page summary of our literature search in each topic in case the counsellors wanted to research further (see Appendix C).

Step 2: Community feedback and endorsement

We met with the local traditional leaders, the administrative leaders, the hospital/community oversight committee, the rituals organizers, and the rituals counsellors both male and female. We discussed the toolbox and the ideas we would be encouraging the counsellors to teach. We asked for suggestions and whether they were supportive. All the groups agreed that we should go forward with the plan.

Step 3: Counsellor and organizer training

We held a two-day training session on using the toolbox. These were held separately for male and female counsellors. We trained 37 counsellors, 20 women and 17 men. We then provided each of the counsellors with their own copy of the toolbox to use during the rituals.

Step 4: Survey development and implementation

Working with community and stakeholders, we developed interviewer led surveys. Both the intervention and control groups were surveyed before the initiation rituals, immediately after the rituals and five months later, to see if there was any change in SRHR knowledge, attitudes and behavior. During the first meeting at the initiation rituals, the participants were told by the counselors that a study was being done. If they wanted to participate, a participant could talk to the interview team after the meeting. When approached, the interview team explained the study to the participant and obtained informed consent. The intervention group consists of individuals who received their initiation rituals from a

  ISSN 2563-9269

counsellor who had been trained and used our toolbox. The control group would be adolescents from a neighboring area who went through the initiation rituals at the same period but did not receive teaching from a toolbox trained counsellor. We surveyed 300 people from the intervention group and 300 from the control group. The survey design was developed in consultation with the Department of Health and Epidemiology at the University of Saskatchewan.

To develop the survey, we reviewed all the card questions and answers and the six main topics we were covering. Then using Survey Monkey, we developed an interviewer led survey on SHRH issues. It was translated to Portuguese and back translated to ensure we had an appropriate translation (see Appendix D).

Data Management

We developed a proof-of-concept document for this project consisting of five objectives, and we tailored our survey questions to help answer the proof-of-concept questions corresponding to the objectives. The local language is Makua and all the interviewers involved spoke Makua in case someone did not feel comfortable in the national language of Portuguese. We field tested the questionnaire with both male and female adolescents and made some minor necessary changes. For surveyors we used 20 people, 10 students from the research interest group at University Lurio and 10 people who worked with Girl Move, a Portuguese non-governmental organization that specialized in mentoring adolescent women and keeping them in school. The surveyors were each trained in the use of the questionnaire, and they did all three surveys. They then uploaded the data in RedCap digital program, and it was amalgamated into a spreadsheet by a statistician at Universidade Lúrio and sent to the University of Saskatchewan epidemiology department for final analysis. Surveyors were paid a stiped plus travel costs and the people answering the surveys received a small food stipend in thanks for their participation.

We also surveyed the initiation rituals teachers to see if they in fact did teach the toolbox information and we surveyed local leaders, and health committee members to see if they agreed with what was being taught in the toolbox.

Names were anonymized and data was sent only by number. All original data was kept at Universidade Lúrio in a locked office in a locked cupboard.

Ethics and Informed Consent

The project was carried out according to the dictates of the Helsinki Convention on Human Research and we received ethics approval from both Universidade Lúrio (Comité Institucional deBioética para Saúde da Universidade Lúrio Ref# 16/Maio CBISUL/22) and the University of Saskatchewan (Biomedical Research Ethics Board Ref.# Bio-REB 3212).

During the initiation ritual, before any of the toolbox teaching occurred the counsellors informed the attendees that our surveyors were on site and the attendees were free to talk with the surveyors or not. If the attendee elected to meet with a surveyor, they were told about the project and what it entailed and then they were asked to sign an informed consent form. If they were under the age of 18, they would give assent and the godparent who brought the child to the rituals would sign as well. The consent form was approved by the ethics committees at Universidade Lúrio and the University of Saskatchewan.

RESULTS

Survey findings are presented for five proof-of-concept objectives. We note some challenges with following data collection protocols. Surveyors were unable to reliably follow up with the same people during the survey conducted five months after the intervention as a significant number of individuals relocated to other surrounding areas. We were unable to have the same people for all three surveys, so we treated the results as independent variables.

Objective 1:

The first objective for the project focused the uptake of training on the toolbox by the counsellors and achieving high use of the toolbox by the end of the project by trained counsellors (by at least 90% of community initiation rituals teachers trained by the program).

Overall, 20 female and 17 male initiation rituals counsellors finished the two-day training sessions on

  ISSN 2563-9269

how to use the teaching toolbox to provide modern SRHR information to the adolescents attending the initiation rituals. After the training we polled all 37 counsellors to first see if they taught the toolbox. All counsellors (100%) stated they had taught the toolbox during the rituals. Comments from these individuals made evident that the toolbox was well-received by both counsellors as well as adolescent participants:

"The adolescents greatly enjoyed the teaching."

"My colleagues want to be taught to use the toolbox."

"We would like another training this fall to improve our skills."

Objective 2:

Objective 2 pertained to community support for the program. Specifically, the program aimed for 80% of the local traditional healers and local health committee members to support the SRHR, family planning and sexual/gender-based violence toolbox teaching during initiation rituals.

To assess this objective, we polled a variety of types of community leaders who had different levels of influence in the program catchment area (as the community leadership structure in Mozambique has several levels). We began by meeting with the traditional community leaders who inherit their positions and are seen by the community as leaders who enshrine tradition and are held in high esteem by the community. The male head leader is called the Regulo. In our test and control areas there were 13 Regulos. They were all polled and they all agreed that teaching SRHR principles in the initiation rituals was a good idea, and they supported our toolbox development. We also polled the 10 Rainhas – female 'queen' leaders – in the area and they all agreed also that it was a good idea to enshrine the SRHR training in the initiation rituals.

The second level of leadership is the government appointed administrative leaders in the municipality and leaders of schools and the local hospital. There were 19 such leaders in this group, who were polled. All 19 agreed with and supported the toolbox development and teaching.

Another influential group in the community are the health committees, groups of people whose mission is to share good health information and principles with the community. The leader of each health committee sits on the Co-Management committee of the local hospital. This committee is made up of hospital representatives and health committee representatives. Issues the community has with health care are shared at these meetings as well as new information the hospital regarding health care. We polled the health committee members at the Co-Management committee meeting and 9 out of the 10 community members present agreed that teaching SRHR was vital. The one person who disagreed stated that he thought it was important, but raised a concern that the teachings may not be age appropriate, as some of the people attending the initiation rituals were as young as 8 years old. (The wider community has also acknowledged this issue and has proposed a minimum age of 10 years or older before a child is allowed to attend initiation rituals.)

Across these levels, there was strong community support among the leaders for SRHR teaching to be included in initiation rituals. All but one of the 42 leaders polled (41/42 or 97.6%) agreed with the inclusion of SRHR.

Objective 3:

The third objective was for at least half of participants (150 of the 300 in the intervention group) to demonstrate improved understanding of diversity, SRHR and sexual- and gender-based violence following the initiation rituals training sessions and ceremonies.

Eight questions on our immediate post initiation rituals survey results looked at exposure to SRHR principles during the rituals (Table 1). We limited our analysis to women in intervention versus control groups as our control group was 92% women.

Two of the questions (#1 and #2) were control questions as menstruation and physical changes of adolescence were expected to be part of the traditional and modern teaching, so both groups should have had about equal exposure to these (as shown by the results). For the remaining six questions, there was greater exposure to SRHR principles in the intervention group than the control group; exposure was significantly higher for questions

  ISSN 2563-9269

#3-6. For questions #7 and #8, the results were higher in the intervention group, though the difference was not significant. (Home abortions and sexually transmitted diseases are common problems in Mozambique, and are thus likely to have been mentioned, even if superficially, in some of the traditional initiation rituals.)

Six survey questions addressed improvement in knowledge pre and post initiation ritual (Table 2). Given our survey constraints, we wanted to ensure people we put in the intervention group had truly been taught using the toolbox, so we added a question to our third survey done five months post initiation ritual asking if the adolescent had received a key messages handout (and thus received the toolbox training). 170 out of 300 adolescents replied that they had received the handout; therefore, we compared this subset of the group pre and post initiation ritual and compared them to the control group.

We found a marked improvement in all areas of knowledge within the intervention group. The control group started at a higher level of knowledge before the intervention. We hypothesized that this was because they were better educated and came from a more urban setting. Despite the higher starting level of knowledge, they had minimal increase in knowledge in four of the six questions (that is, questions #3-#6). In the final survey at five months post initiation ritual, the intervention group showed similar or better knowledge levels as the control group for most of the questions.

Objective 4:

Objective four pertains to improved community transformative actions among local adolescents around SRHR, family planning, sexual- and gender-based violence and diversity. The project aims for 25% more adolescents in the intervention group (as compared to the control group) reporting plans to delay marriage and pregnancy until after age 18.

Participants in both intervention and control groups were asked if they planned to delay marriage because of what they learned at the initiation rituals. Whereas 29% of the intervention group wanted to delay the timing of marriage after the rituals, this was reported by 18.7% of the control group (p=0.005). This represents an 11-percentage point difference between the two groups. Participants were also asked if they planned to delay pregnancy because of what they learned at the initiation rituals. The survey found that 27.9% of the intervention group planned to delay pregnancy, compared to 22.6% of the control group (p=0.186), a difference of 5.3 percentage points.

Objective 5:

Building on objective four, the fifth objective aimed for 25% more adolescents in the test group (as compared to the control group) to report having accessed health services to meet their contraception needs.

Three questions were used to assess this objective (Table 3). We first asked all participants if they had heard of the Adolescent Friendly health service (SAAJ) in Mozambique. The intervention group showed marked improvement at five months post initiation ritual, surpassing the control group. Next, we asked if participants had searched for information on contraception or family planning, and then whether participants were using contraception. The intervention group had marked increases in accessing and using these health services between the pre intervention and five months post initiation ritual surveys.

DISCUSSION

This was one of the first studies to delve into the effects of including modern SRHR teaching during adolescent initiation rituals. Initiation rituals have always been sacred rites of passage for the community, and it has been difficult to delve into what is taught there given the veil of secrecy that has surround the rituals. As others have acknowledged, providing training on accurate SRHR messaging to the counselors who lead these rituals is a way to leverage an existing channel to reach adolescents (Nash et al., 2019).

In this study, we found that when a trusting relationship was established between researchers and communities, the members and leaders, including teachers and organizers of traditional initiation rituals, strongly supported the inclusion of basic SRHR and diversity teaching during adolescent initiation rituals.

IHTP, *3*(3), 387-399, 2023 ISSN 2563-9269

Our literature review found that adolescents across different settings felt that instructors at traditional ceremonies lacked adequate training, so they did not trust information received from them (Usonwu et al., 2021). We addressed this concern by ensuring instructors were well informed. They were provided with teaching materials that were easy to present and could be easily understood by all. The use of a jig-saw approaches the emphasized basic language was a key to success.

Context plays a central role in implementation research (Peters et al., 2013), whereby importance is placed on understanding the context and developing a trusting relationship between community and researchers. This study was successful first because of consistency. The same researchers have been working in the community for the last ten years and leaders and community members were familiar with them. Second, community involvement was written into the curriculum of the local University and students were regularly involved in the community in teaching and learning from families. We also found that it was important to involve all types of community leaders in the Project, including government appointed leaders, traditional leaders and informal community leaders. The process was further facilitated by involving local University health science students to conduct in -person surveys with adolescents. These students were able to speak the local language and were seen as role models for local adolescents.

Our study also adds to the literature by looking beyond change in knowledge to also assess change in behaviour (where initial indications of behavioural change were evident). We saw positive responses to all five of our proof-of-concept objectives. Based on the short-term results of this study, the toolbox teaching plan showed statistically significant improvements in several measures of the adolescents' knowledge and behavior regarding diversity, sexual/gender-based violence and SRHR.

We found that providing a teaching toolbox to initiation rituals teachers that includes an easily implemented jigsaw learning approach was effective in giving adolescents a better understanding of SRHR principles and leads to increased use of family planning and contraception among adolescents. The toolbox provided the community with a resource to supplement their traditional rituals with fuller, more complete health information. If the teaching toolbox is used regularly, the clear SRHR messaging can lead to decreases in teenage pregnancy, early marriage, STIs and the social problems that accompany these problems.

LIMITATIONS AND CONSIDERATION

We had several limitations regarding the survey. Adolescents were mobile and hard to contact so each surveyor did not end up surveying the same 30 adolescents over each of the three surveys. We thus compared general trends.

The initiation rituals for males and females are held at different times and the rituals for males were harder for surveyors to attend as they were often in very rural areas. By the time our surveyors were able to get out to the community, many of the control group's male rituals had been completed so our surveyors surveyed mainly females in the control group.

When we did our third survey at five months post rituals, we wanted to confirm that the intervention group had received teaching on SRHR principles using our toolbox approach. To do this we added on a survey question that asked if the respondent had received a key messages handout because these were only given to people who had had the toolbox training. 170 people said yes to this question, so, for the sake of accuracy, we elected to use these 170 people as the intervention group for the third survey and we compared them to the control group.

We broke down the data according to gender and reviewed the data comparing women in the intervention group to women in the control group. We did this because the control group was 92% women, and we felt this comparison would be more accurate.

In our reporting we use data comparing the 170 people who we confirmed received toolbox teaching to the control group when we talk about change in behavior five months post rituals, but we use the female only data when talking about exposure to SRHR immediately post rituals.

We found that our control group was overall more knowledgeable than the intervention group in all SRHR areas when first surveyed. The control group

  ISSN 2563-9269

demographic data showed they were better educated and came from a more urban area. We felt this was the reason they began with higher levels of SRHR knowledge. Given this finding we compared the intervention group pre and post initiation ritual to see if there were significant changes from before the rituals to five months later. We then also compared the intervention group rate of improvement to the change in the control group.

CONCLUSION

Despite challenges with data collection noted above, the results of this study provide promising support for the increased integration of SRHR educational components into traditional initiation rituals in Mozambique. We reported marked improvements overall in the knowledge and behavior of the intervention group pre versus post initiation ritual, in several domains, catching up to or surpassing the more urban, more educated control group.

The results of this research were shared and discussed with participants, local partners and provincial and national stakeholders. Moving forward, a study report will be delivered to Nampula province health authorities, aiming to have the toolbox replicated and scaled up across the province of Nampula. A further next step will be to scale up the teaching toolbox so it can be used during initiation rituals in other provinces of Mozambique. Ongoing evaluation of scale up efforts is planned.

ACKNOWLEDGEMENT

The authors would like to thank the following people who were integral to the success of this project: adolescents, who avidly shared their thoughts and opinions during our study; rituals counselors, who gave of their time to be trained in the use of our toolbox and shared these ideas with rituals participants; Natikiri leadership and community members, who provided ongoing and unfailing support of the project; Dr. Alarquia Saide, Head of the Faculty of Health Sciences, University Lurio, Mozambique, who was always welcoming and interested in all our findings; Dr. Hyun J. “June” Lim, Clinical research support unit, College of Medicine, University of Saskatchewan, Canada, who helped organize the plan for analysis of our findings; and Dr. Jocelyn Martel, Clinical Professor Obstetrics & Gynecology, University of Saskatchewan, Canada, who was our content expert and fact checked all our SRHR information.

We also acknowledge the following student interviewers from University Lurio and Girl Move NGO, Nampula, Mozambique who worked very hard to apply the survey and upload results: Alvido Muaviraca, Anaguelda Rosário, Beatriz Jaime, Catarina Ribeiro, Cleide Sande, Dilchade Abdul Amide, Dulce Chale, Felizardo Eusébio Cabral, Helena Jorge, Idalina Mainato, Joel Choveque, Júlia Rapce, Lorey Manuel Chicoche, Meri Barnete Elias Camilo, Messias Sebastião David, Palmira Roberto, Quitéria Beatriz Paposseco, Samira Ossufo, Tomás António, and Vânia das Dores E. Saguate.

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  ISSN 2563-9269

Table 1. Responses to post initiation rituals surveys to measure exposure to SRHR themes

Question	Intervention group % 'yes'	Control group % 'yes'	p-value
1. During the initiation ritual did your group talk about menstruation? *	92.6	96.6	0.085
2. During the initiation ritual did your group talk about physical changes during adolescence? *	87.6	80.2	0.074
3. During the initiation ritual did your group talk about modern contraception?	58.3	25.3	<0.0001
4. During the initiation ritual did your group talk about family planning?	70.2	34.0	<0.0001
5. During the initiation ritual did your group talk about homosexuality and diversity?	38.8	13.0	<0.0001
6. During the initiation ritual did your group talk about domestic, gender-based violence?	45.8	20.6	<0.001
7. During the initiation ritual did your group talk about home abortions?	41.3	36.8	0.396
8. During the initiation ritual did your group talk about sexually transmitted diseases?	40.5	31.8	0.096

  ISSN 2563-9269

Table 2. Responses to pre and post initiation rituals surveys to measure knowledge related to SRHR themes

Question	Intervention group		Control group	
	Pre initiation ritual **% 'yes'**	5 months post initiation ritual **% 'yes'**	Pre initiation ritual **% 'yes'**	5 months post initiation ritual **% 'yes'**
1. Do you know the word contraception?	14.4	54.4	45.7	65.6
2. Do you know the word abortion?	26.2	64.5	59.9	66.5
3. Do you know the term gay or lesbian?	32.9	64.1	64.6	67.6
4. Do you know the term domestic violence?	41.8	72.4	68.9	74.4
5. Do you know the term sexual violence?	36.0	70.4	71.5	73.4
6. Can you name three sexually transmitted infections?	3.7	27.6	10.9	13.5

  ISSN 2563-9269

Table 3. Responses to pre and post initiation ritual surveys to measure awareness of and access to health services

Question	Intervention group		Control group	
	Pre initiation ritual **% 'yes'**	5 months post initiation ritual **% 'yes'**	Pre initiation ritual **% 'yes'**	5 months post initiation ritual **% 'yes'**
1. Have you heard of the Adolescent Friendly health service (SAAJ)?*	18.3	63.5	15.0	25.6
2. Have you searched for information on contraception or family planning?	15.7	44.7	32.0	52.5
3. Are you using contraception?	7.4	25.6	27.2	40.0

*** Rate of increase in the intervention group was significantly faster than the rate of increase in the control group (p-value: <0.0001)**

IHTP, *3*(3), 387-399, 2023 ISSN 2563-9269