International Journal of Africa Nursing Sciences 14 (2021) 100306

Contents lists available at ScienceDirect

International Journal of Africa Nursing Sciences

journal homepage: www.elsevier.com/locate/ijans

Promoting sustainable health and wellbeing for pregnant adolescents in Uganda – A qualitative case study among health workers

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ARTICLE INFO

Keywords:
Adolescent
Pregnancy
Health workers
Empowerment
NGO
Uganda

ABSTRACT

Background: Adolescent pregnancy is a global health problem. In Uganda, the rate of teenage pregnancies is approximately 25% and these are associated with both poor maternal- and perinatal health outcome.
Objective: This qualitative case study aimed to examine health workers' experiences of promoting sustainable health and well-being for pregnant adolescent girls in Uganda.
Method: A qualitative study design was used. Data was collected through semi-structured interviews of four health workers working for a Non-Government Organization (NGO) based in Uganda. Data was inductively analyzed by content analysis.
Result: Three categories emerged: *social structure, organization's work – rehabilitation and therapy,* and *outcome*. Healthcare workers worked with health promotion using a person-centered approach, emphasizing therapies and empowerment strategies and an overall faith-based approach. Furthermore, the result showed that girls were abandoned by their families when entering the center, but with help from the NGO they increased their understanding of the girls situation, due to resettlement of plan and follow up made by the health workers.
Conclusion: Health workers can promote health and well-being among pregnant adolescent by applying person-centered care, including therapies and empowerment strategies by a faith-based approach. Social structures and families should be encouraged to provide support to pregnant adolescent girls.

1. Introduction

Adolescent pregnancy has become a global health problem that is more likely to occur in low socio-economic contexts. It is estimated that 21 million girls aged 15 to 19 years and 2 million girls under the age of 15 become pregnant each year in developing countries. About half of these pregnancies are unintended (Darroch, Woog, Bankole, Ashford, & Points, 2016; UNESCO, 2017). Pregnant adolescents are often confronted with denial and discriminatory attitudes by their family and their communities (Atuyambe, Mirembe, Johansson, Kirumira, & Faxelid, 2005). Furthermore, the lack of a functional public structure which should provide security and support to pregnant adolescents, instead reinforces existing stigmas, leading to further physically and psychological vulnerability (Atuyambe et al., 2005; Kemigisha et al., 2018). Stigma and discrimination against pregnant adolescents often occur in schools, resulting in school abandonment and lost career opportunities. Unmarried pregnant adolescents are more likely to live with feelings of shame and guilt (Atuyambe et al., 2005; Loaiza & Liang, 2013). Negative attitudes towards young pregnant adolescents require urgent attention, to meet optimal sustainable health and well-being for pregnant adolescent girls.

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https://doi.org/10.1016/j.ijans.2021.100306
Received 30 October 2020; Received in revised form 14 March 2021; Accepted 25 March 2021
Available online 1 April 2021

2. Background

Adolescent pregnancies create major health problems for girls in terms of adverse maternal and perinatal health outcomes. Several studies have shown that pregnant adolescents are more likely to have high rates of spontaneous abortion and more often undergo unsafe abortions, contributing to high maternal mortality and permanent health problems. Premature deliveries are more likely, and these infants more often have low birth weight, which increases the risk for long-term adverse health outcomes (Darroch et al., 2016; Mombo-Ngoma et al., 2016; Williamson, 2013). In the Sub-Saharan Africa region, Uganda is one of the countries with high rates of teenage pregnancies. Approximately 25% of women aged 15–19 have begun childbearing (Uganda Bureau of Statistics (UBOS) 2016). To protect young girls against sexual abuse and to improve sexual and reproductive health, the Government of Uganda has enacted policies to strengthen young girls' position in society (Neema, Musisi, & Kibombo, 2004). Wallerstein (2006) highlights the importance of effective empowerment strategies which strengthens genuine participation that guarantees autonomy in decision-making, in community engagement and in the local context of the community members. However, important social actors of Uganda's society, such as politicians, religious, and cultural leaders have failed in this concern (Kemigisha et al., 2018). Consequently, early marriages, sexual violence and coerced first sexual experience have resulted in a high rate of unwanted adolescent pregnancies (Loaiza & Liang, 2013). Another important factor, which contributes to sexual abuse against adolescents, is that Uganda is a patriarchal society where social norms, that stigmatize girls in relation to boys, increasing their social vulnerability (Bantebya, Muhanguzi, & Watson, 2014). For example, an intervention study about psychological and social well-being of unmarried adolescent mothers in Uganda, found that stigmatization of adolescent pregnancy was associated with poor quality of life, low self-esteem, and social exclusion (Leerlooijer et al., 2013)

2.1. Health care and health promotion for pregnant adolescents in Uganda

The health professional's responsibility, when caring for pregnant adolescents, includes appropriate assessment, counselling, provision or referral to desired services and coordination of care (Simmonds & Likis, 2011). Therefore, the role of nursing requires a multidisciplinary approach in order to integrate multiple interconnected health related areas, such as prevention of sexually transmitted diseases, childbirth preparation, prevention premature birth and low-birthweight, promotion of mental health and nutrition and reintegration into the community (Atuyambe et al., 2005). For example, research indicates that poor nutrition can result in poorer pregnancy outcomes, which include low birth weight (Imdad & Bhutta, 2012). Furthermore, adequate prenatal care and health promotion activities are the best predictors of both prematurity birth and low birth weight (Mombo-Ngoma et al., 2016). Uganda, as many developing countries, faces different challenges in the quality of health care delivery due to the shortage of health workers. This shortage is associated with poor leadership and in management of human resources and insufficient training capacity, as well as unattractive remuneration. The public sector is, therefore, unable to provide treatment to meet the overall population's health needs, including the nor the requirements that are fundamental to promote sustainable health and well-being for pregnant adolescent girls (Atuyambe et al., 2005). The private sector, (NGOs), contribute to about 50% of the healthcare delivery according to The Republic of Uganda Ministry-of-Health (2010). The Woman of Purpose International (W.O.P.I): The Fortress, is an organization that empowers abandoned pregnant adolescent, who come from poor and destructive social contexts and are in need of protection, health assistance, housing and social support during their pregnancy. Since adequate prenatal care and health promotion activities can lower complications, it is critical to study how sustainable health care can be provided to this vulnerable group.

3. Objective

The aim of this qualitative case study was to examine health workers' experiences of promoting sustainable health and well-being for pregnant adolescent girls in Uganda.

4. Methods

An interview study using a qualitative descriptive design with an inductive approach to describe experiences of health care staff working with adolescent pregnant girls in an NGO center, in Uganda, was carried out during 2019 spring. A qualitative case study does not require a larger sample as it aims to target in-depth knowledge of one person, group, or event, according to Polit and Beck (2008).

4.1. Study population and setting

This case study was done at an NGO in Uganda: The W.O.P.I: The Fortress, in order to retrieve first-hand information and experience from healthcare workers. The respondents in the present case study consisted of four female health workers, aged between 20 and 40 years, whereof one was a volunteer with extensive experience from healthcare work with pregnant adolescents and worked daily at the centre. The healthcare workers had at least two years of experience in the field. The inclusion criteria were being a health worker, work daily with pregnant adolescent girls within the organization, and ability to speak and understand English. At the NGO, there are only female healthcare workers employed, therefore, no men were interviewed in the present study. Due to the small size of the organization, which only had eight employees, and the rich material that the interviews provided, we decided that four interviews were sufficient. The demographic data of the participants are presented in Table 1.

4.2. Data collection

The data collection consisted of semi-structured interviews, collected with the support of an interview guide to achieve a certain structure, but also encouraged the respondents to talk freely, based on their experiences (Polit & Beck, 2008). The interview guide was divided into different areas to cover the research questions. The interviews were conducted at X in a secluded location, to avoid being overheard or interrupted. Initially, the respondents received an orientation, background information and information about the importance of using an audio recorder. The same starting questions were posed to all respondents and included an explanation of the study aim: This study examines health workers' experiences of promoting sustainable health and well-being for pregnant adolescent girls in Uganda, and we would like to know how you get in touch with these girls? The interview followed the interview guide with probing questions that varied depending on the conversation. Each interview lasted around 30 min. All interviews were conducted in English and all respondents were fluent in

Table 1
Demographic data.

Participants	Professional title	Years working at the organization	Gender	Age
Respondent 1	Social worker, counselor	3 years	Female	20–30 years
Respondent 2	Nurse, midwife and counselor	7 years	Female	30–40 years
Respondent 3	Assistent nurse	3 years	Female	20–30 years
Respondent 4	Social worker, counselor	2 years as a volunteer	Female	20–30 years

English. The respondents received the interview guide one day in advance, to get acquainted to the questions and to allow time for reflection over the topic, the questions, and their own experiences. The interviews were confidential, and all respondents received a letter of consent, which they signed. They were also informed about the possibility to withdraw from participation in the study, at any time.

4.3. Data analysis

During the analysis process, the authors used qualitative content analysis (Graneheim & Lundman, 2004). The interview content was systematically coded and categorized. The first step of the analysis process was done through transcription of the interviews. The authors transcribed the interviews separately, listened and read the interviews repeatedly to gain an understanding and overall picture of the content. The second step consisted of sorting the text into meaning bearing units: the constellation of words or sentences with same central significance. The process involved shortening the text while retaining the core meaning. In the third step, the meaningful units were made into condensed meaning units, where the text was reduced to its extent, while the core and the quality of data remain. The authors could sort out the material that was not relevant to the aim of the study.

4.4. Ethical considerations

The study was carried out according to the Code of Ethics of the World Medical Association (Declaration of Helsinki). Ethical clearance and approval were obtained from the head of the organization where data was collected. Since all participants were adults and no patient or sensitive data was collected, an ethical clearance and approval from the NGO were sufficient to perform the study. The interpretation of data retrieved were done solely by the persons involved in the study and no information was handed out to third parties. The interviews were designed to ensure confidentiality.

5. Results

Through the analysis three main categories emerged, describing the health workers' experiences of promoting sustainable health and well-being for pregnant adolescent girls in Uganda in diverse and complex ways. The first category, *social stigmatization*, highlights society's view of adolescent pregnancy. Within this category, three subcategories unfold in the context of the pregnant adolescent girls. The second category, *organization's work (rehabilitation and therapy)*, highlights the organization's work directed towards the girls, and the third category, *outcome*, describes the outcome of the organization's work and how it prevents unintended adolescent pregnancies. The main categories and subcategories are displayed in Table 2.

Table 2
Categories in the results.

Main category	Sub-category
Social stigmatization	Families' cultural stigmatization
	Girls' vulnerability
	Fathers to the unborn children
Organization's work (rehabilitation and therapy)	Approach
	Start-up
	Care plan
	Health challenges (*emotional status, sexual and reproductive health, physical health/nutrition*)
	Empowerment
	Resettlement plan and follow-up
Outcome	Sustainable health
	Increasing awareness and sensibility
	Future health promotion

5.1. Social stigmatization

This category highlights the health workers' perceptions regarding the society's view of adolescent pregnancy. Within this category there were three subcategories conveying different variations of the pregnant adolescent girls' stigmatization: Families' cultural stigmatization, girls' vulnerability, and fathers to the unborn children.

5.1.1. Families' cultural stigmatization

In the interviews the health workers expressed that families lost hope when adolescent girls became pregnant. In addition, the families felt ashamed and considered the pregnancy as a bad example and poor behavior, shaming both the family and the community. Subsequently, most of the families refused to take care of them. Families who broke the cultural stigmatization and let their daughters stay at home during the pregnancy, at the same time stressed that the pregnant girl is no longer valued by them.

> *"You've ashamed them…You're a cast now. You are the bad example to the family. Therefore, they chase you out of the family and they just leave you… They do not want to see you again".*

5.1.2. Girls' vulnerability

Throughout the interviews the respondents emphasized that the pregnant adolescent girls are in utmost social and health vulnerability. They are excluded from important areas in the society, resulting in poor psychological and emotional wellbeing. Furthermore, many pregnant girls are traumatized due to different types of violence. Pregnant adolescents also have a high risk for other health problems, i.e. malaria, malnutrition and sexually transmitted diseases, i.e. HIV. Some of pregnant girls are already infected with sexually transmitted diseases without knowing it.

> *"… Still they are not very accepted. Many of them are laughed at, many of them are abandoned…actually, all of them are thrown out of school… imagine a young girl; she is vulnerable in every way. And health wise, being a medical person, you know, that is a risk mother, so she is at risk of death, she is at risk of malnutrition, at risk of malaria, she is at risk of everything basically…they have not even had support".*

5.1.3. Fathers to the unborn children

The fathers could be i.e., relatives, classmates, or taxi drivers, who had taken advantage of the girls. In some cases, the fathers themselves were underaged (under 18 years of age). The respondents expressed that most of the fathers to the unborn children denied their paternity. Many times, they had taken sexual advantage of the girls, and in some cases even raped them. Many parents of the girls wanted to imprison the fathers, which added to denial of paternity or fathers who simply disappeared. There were only few cases where the fathers accepted paternity. For fathers who accept their paternity, the center offers them counselling and support about parenthood.

> *"But most of them they always say: - I have nothing to do with that pregnancy, it is not mine. I want the DNA only when the child is born. Sometimes they even go to the extreme of saying: - if that child is not one in this part of the month that means the child is not mine. So, most of them always deny their pregnancies".*

5.2. Organization's work (rehabilitation and therapy)

This category explains the daily work of the health workers within the organization. Within this category, six subcategories were identified: Approach, Start-up, Care plan, Health challenges (emotional status, sexual and reproductive health, physical health/nutrition), Empowerment, Resettlement plan and follow-up.

5.2.1. Approach

Throughout the interviews, the health workers emphasized that they work alongside with the pregnant girl starting from the first day the girl arrives at the center. The health workers welcome the girl to the organization, and they use careful language to make the girl feel conformable and welcome. This strengthen the girls' self- confidence and motivation towards her health and well-being.

> *"The words we speak strengthens them, make them to feel like they're strong again, they're valued again"*.

5.2.2. Start-up

All respondents stated that the center cooperates with other community actors to reach out to the girls who need their help. Both community leaders (women's representatives in slum areas), police and other organizations are aware of The W.O.P.I: The Fortress and can refer girls to them. Importantly, pregnant girls who have previously stayed at the center can recommend them to other girls who they spot need help.

> *"…sometimes through the police…the community leaders refer them to center. And sometimes maybe a girl has been through here, if they see some other girl out that needs help sometimes, they just call…"*.

5.2.3. Care plan

When new girls arrive at the center a health worker fills a profile form with detailed information about the girls. The health worker listens to the stories and develop and appropriate intervention plan for them. The respondents also stated that every girl receives a care plan according to her general needs upon arrival. The staff provide prenatal care, food, a place to stay and emotional support. The respondents also expressed the importance of understanding that every girl is unique, all have different backgrounds and may have been exposed to different traumatic experiences. Therefore, every month, the center organizes individual meetings, where the health workers give feedback about the ongoing care to each pregnant girl and they can share their thoughts about their care in general.

> *"Generally, every girl that comes here needs help for a pregnant person. General needs, they need food, they need a place to stay, they need counselling. There is no girl we've had that don't need counselling. Individual counselling. They need love, support, you know the emotional health. So, we plan the general help, which is set in our care plan"*.

5.2.4. Health challenges

This category includes the subheadings: emotional status, sexual- and reproductive health, and physical health/nutrition, to visualize the results better.

5.2.4.1. Emotional status. The respondents described that they use different approaches to promote the emotional health of the pregnant adolescent. One of the health workers mentioned that they sometimes let the girls watching movies related to motherhood and childbearing. Respondents also stated that the health workers often provide individual and group counselling about emotional health and motherhood. In addition, the respondents expressed that some girls find it hard to develop an emotional bond with their babies, especially when the pregnancy was the result of abuse or rape. Through counselling, the health workers encourage the girls about the importance of accepting the pregnancy and developing a loving bond with their unborn child. It was also stated that the health workers provide counselling to the girls' family members in order to foster reconciliation and forgiveness.

> *".. So, we begin to negotiate with the family and encourage their family too, you know, encourage them to reconcile to forgive the girl and to work on their issues"*.

5.2.4.2. Sexual- and reproductive health. The health workers expressed that they provide education on sexual and reproductive health, even though this topic is not openly discussed in Ugandan society. The health workers also stated that all girls protected by the organization receive education about family planning and different types of sexually transmitted diseases. One of the main objectives with these trainings is to encourage the use of contraceptives and mentally prepare them for childbearing and motherhood.

> "*So, we open and discuss. We open, we give information for example contraceptives. By the time a girl leaves the center, they know all the types of contraception"*.

5.2.4.3. Physical health/nutrition. The health workers stressed that nutrition and physical health are two focus areas in the at the center, as a balanced diet during the pregnancy is necessary for the health and wellbeing of the new-born. Therefore, the organization provides a healthy breakfast, lunch, and dinner. If a pregnant girl arrives malnourished, the organization provides an intervention aimed to increase the nutritional intake. The health workers also work to prevent malaria, by providing mosquito nets.

> *"… good nutrition is one of the things we do here. Every day we have to eat foods in addition to balance diet, so that these girls can be strong and can have a good nutrition for themselves and for their babies"*.

5.2.5. Empowerment

The respondents underscored that a person who is empowered can thrive anywhere. The center uses "*Christian values*" to empower the girls by sharing different stories from the Bible. The respondents also mentioned that the girls are also empowered through making their own decisions and the health workers always help to raise options for the girls to promote self-determination.

A crucial challenge, faced by the health workers, is to help pregnant girls to regain the self-esteem that was lost as the consequence of the pregnancy. The organization always encourages the girls to participate in different activities within the organization. The respondents described how the center empowers the girls by teaching them different hand skills, like sewing and jewelry making. All respondents agreed that hand skills bring empowerment. The center also provides career guidance and help some girls to go back to school, as educational achievement gives the opportunity to future financial security and independence. In this regard, the girls are encouraged through inspirational stories and shares stories of people who have gone through hard times but have managed to succeed. The center also empowers girls by giving them correct information about self-care, parenting, nutrition and self-care.

> *"… So when you're empowering them and give them knowledge, wisdom and then they are able to decide for themselves…These girls have talents, these girls have desires, these girls have goals, so we work through all those things…we do career guidance so that, after having the baby it's not the end of life"*.

5.2.6. Resettlement plan and follow-up

The respondents relayed that as soon as a girl arrives at the center a resettlement plan is formed. The center is a transitional center where the girls cannot stay forever; all pregnant girls are informed about this on arrival. The health workers put additional efforts to ensure that the place where the young mothers and the newborn baby will live is a safe and where they will not be abandoned again. Different resettlement possibilities that are suggested are either the reunification with the parents, or resettlements with other family members, such as grandmother or an aunt. The respondents described that they perform follow-ups of the girls after they have left the center, through telephone contact, home

visits and visits to community leaders. They do regular check-ups of the girls and their babies to check their health status. The health workers also get feedback from the families and the girls themselves. One of the respondents mentioned that the girls sometimes need continuous counselling after the resettlement. The respondents described that they also do follow-ups through a homecoming party that is organized once a year. At these parties, the girls who have stayed at the center meet their friends and their babies who previously resided in the organization.

> *"… So, homecomings. We set a date, we let everyone know and as many as can come back on that day, they come. So, it's an event from morning until evening, and on that day, we eat, we laugh, we talk. But also, we have a session whereby the staff are seated in a place and girls can come and freely talk to them what's happening".*

5.3. Outcome

5.3.1. Sustainable health

The respondents pointed out that they could identify different signs of health progress through the information and knowledge that the girls received during their stay. The health workers explained that many pregnant girls, who arrived in the organization, often lacked the knowledge and information about sexual reproductive health. However, when they get in touch with the organization, they get informed about these issues. Consequently, they started questioning, sharing experiences and opinions about sexuality and reproductive health and good practices related to health-related behaviors.

The health workers also expressed that they witnessed positive changes in the way pregnant girls perceived the state of their health and wellbeing, such as openness in relation to emotions, sexuality, motherhood, and mutual support. The health workers emphasized that these positive outcomes occur due to the work done by The W.O.P.I: The Fortress. One of the health workers also mentioned that the girls, after leaving the center, can take care of both themselves and their children.

> *"… But as we go through different counselling sessions you see them brightening up, you see them starting to open up, starting to even crack jokes. They start to heal. They tell" I feel better, I feel peaceful, I feel I'm changing".*

5.3.2. Increasing awareness and sensibility

A problem, described by the respondents, was the parents' attitude towards adolescent pregnancies. One respondent described that parents need to be taught in how to accept their children, even though their children make mistakes. They also expressed that most parents have a mindset of never apologizing when doing something wrong and they, therefore, need to be taught how to listen so they can reconcile with their children. The respondents expressed that some of the girls have coerced into sex and did not choose in their current situation. The center helps to raise the girl's voices through advocacy to reach the influential people of the society. Furthermore, the healthcare workers stated that although the laws cannot change and the schools still expel pregnant adolescent girls, however, there are reasons to believe that centers like the X can influence individual family members, who can in turn, have an impact on other sectors of society.

> *"Reaching out to individuals because we can talk as a general, but then when you go and impact individual family members, one will impact the other, one like in a community. The few you impact will impact the rest".*

5.3.3. Future health promotion

The respondents stated that the center has limited rooms and finances and there are a lot of girls in need of their services. The organization has eight beds, but sometimes they squeeze in more girls due to need. The respondents expressed a hope of being able to reach out to more regions of the country. There are outreach projects, where they go to schools and talk to girls about sexual reproductive health and other health aspects. The organization also distributes sanitary towels and written materials related to reproductive health.

The health workers also stated that there are other unmet needs of regarding the future health promotion for the pregnant adolescent girls. For example, there is a need for increased outreach to adolescent girls and boys in order to provide about sexual and reproductive health education. Access to information is an important tool that may help teenagers to make better decisions about their health and future. The respondents pointed out the importance of empowerment for future health promotion. Empowerment should start at very young age as it brings positive outcomes in different stages of the life course.

> *"…as we start on from the young ones, because the young ones are the future generation. So, when we impact the young generation, we impact on what is coming ahead. And if this generation is worked on, empowered, family therapies, communal reach-outs. If they are changed, then we believe that even the children they will have, will have a better society and it will be improved at the end of the day for the girl child".*

6. Discussion

This case study used a qualitative approach to explore the experiences of health workers in promoting sustainable health and well-being for pregnant adolescent girls in Uganda. In all studies there are complex factors to consider. As this study was performed in Uganda and the number of participants were few due to the small size of the organization, there might have been fewer perspectives discussed than if we had interviewed participants from diverse health centers. On the other hand, the information gathered from the informants were very rich and it conveyed several perspectives. The analyzing method, used in the present study, was content analysis as described by Graneheim and Lundman (2004). Therefore, despite the low number of participants, they can be considered as contributing with new knowledge to the field of health workers' experiences of promoting sustainable health and well-being for pregnant adolescent girls in Uganda. The study design has been stringent and data collection systematically performed which strengthens the reliability and validity, but a larger number of participants might have confirmed the results more.

In this study, main themes with sub-themes emerged as presented in the results section. In general, the health workers promoted health and well-being among pregnant adolescent using a person-cantered approach, through therapies and empowerment strategies, with an overall faith-oriented approach. Less stigmatizing norms toward pregnant adolescents and their families are needed in the Ugandan society to promote sustainable health for pregnant girls and their children.

6.1. Social stigmatization

The findings revealed that the health workers acknowledged the existence of different social stigmatizing structures within the Ugandan society that reinforce the vulnerability faced by pregnant adolescent. In this case study, it was also evident that these girls are more likely to face different forms of violence, condemnation, rejection from family members and social structures, leading to low self-esteem, school dropout, feelings of shame, lack of support and homelessness, which is in alignment with earlier research (Loaiza & Liang, 2013). Also, the girl's families were forced to abandon or place shame on their children to rescue their own position as a family. This was perhaps an attempt to care for their daughters as well as protect younger daughters from social stigmatization. Similar findings about the importance of including parents and other social actors in promoting positive changes in social norms regarding adolescent pregnancy have been reported in a previous study (Simmonds & Likis, 2011). The social stigma is driven by

organizations, schools, functional public structures, families etc (Atuyambe et al., 2005; Kemigisha et al., 2018), which also our study confirms.

In this regard, The W.O.P.I: The Fortress has worked to influence part of these social stigmatizing structures, by promoting supportive social norms toward girls and pregnant adolescents. According to the health workers, this has been successfully done through different forms of advocacy, training and counselling targeting influential people in society, including community leaders, schools, parents, and other family member of pregnant adolescent.

6.2. Organization's work (rehabilitation and therapy)

Another important finding from the present study, was that the health workers were positive about the effectiveness of the person-cantered approach when promoting health and wellbeing for pregnant teenagers. Through this approach, every pregnant girl who arrived at the center received a care-plan according to her specific needs and vulnerability. In most of the cases, the care-plan guided the process of rehabilitation and included different forms of interventions to address the girls' emotional status, sexual and reproductive health, physical health/nutrition, and empowerment. To ensure the effectiveness of such interventions, the health workers organize individual or group counselling, as well as workshops where the pregnant girls can openly discuss sexuality, reproductive health, sexual transmitted diseases, and the use of contraceptives. The organization also organizes physical activity and promotion of balanced diet, to maintain a healthy pregnancy and care for the unborn child. The healthcare workers also rely on existing literature which describes effective health interventions for improving adolescent health and health-related behaviors in relation to reproductive health, which is supported by finding from a review by Oringanje et al. (2016). The results in our study emphasize the importance of empowerment as a prerequisite for success of the rehabilitation process. This is also stated in research by Leerlooijer et al. (2013) and Wallerstein (2006), who highlighted the importance of empowerment to strengthen self-determination, sense of self and healthy decision-making in relation to sexual and reproductive health, self-care, etc. (Leerlooijer et al., 2013; Wallerstein, 2006). Since the X is a Christian based organization, the health workers use a faith-oriented approach to empower the pregnant adolescent by encouraging and sharing different stories and ideals from the bible. Faith-oriented organizations have driven different empowerment related programs in Africa (Musevenzo, Majekwana, & Maganga, 2017), including entrepreneurial inspiration (Shumba, 2015) and health-related programs (DeHaven, Hunter, Wilder, Walton, & Berry, 2004).

6.3. Outcome

One of the most important challenges of the health workers is to secure positive health outcomes for the pregnant adolescent and the newborn after leaving the center. The health workers accomplish this by developing health programs through workshops, advertisement, group meetings to spread health related behaviors and health promotion oriented to the needs of the pregnant adolescent during their stay. Previous studies have highlighted the importance of health literacy in health promotion, including change in adolescent sexual and reproductive health behavior (Kalembo, Zgambo, & Yukai, 2013). Another important finding of this study was that the health workers stressed that empowerment was indispensable for the health promotion and sustainable health, which is in line with a report from WHO by Wallerstein (2006). However, stigmatizing social norms within the Ugandan society might oppress girls' rights, especially among pregnant adolescents (Bantebya et al., 2014). Thus, the health workers have put significant effort in promoting supportive social norms and gender equality by increasing awareness to stakeholders, including school staff, family members and community leaders.

6.4. Conclusion

The present study has shown that dedicated health workers can play a key role in promoting health and well-being among pregnant adolescents. Each pregnant adolescent at the studied NGO-center, received a person-cantered care through therapies and empowerment strategies, with an overall Christian faith-oriented approach. This NGO has a vital role in caring for and promoting the health of adolescent pregnant girls. Family members, community leaders, school personnel and other stakeholders were also involved in the process of rehabilitation and in the promotion of supportive norms toward adolescent girls. Larger studies are needed to confirm the results of this case-study.

CRediT authorship contribution statement

Hélio Manhica: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Supervision, Validation, Visualization, Writing - original draft, Writing - review & editing. **Paulo Kidayi:** Conceptualization, Formal analysis, Investigation, Methodology, Supervision, Validation, Visualization, Writing - original draft, Writing - review & editing. **Isabella Carelli:** Conceptualization, Methodology, Investigation, Writing - review & editing. **Anna Gränsmark:** Conceptualization, Methodology, Investigation, Writing - review & editing. **Josephine Nsubuga:** Conceptualization, Investigation. **Lisa George-Svahn:** Writing - review & editing, Formal analysis. **Janet Mattson:** Formal analysis, Writing - review & editing. **Gunilla Björling:** Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Project administration, Resources, Supervision, Validation, Visualization, Writing - original draft, Writing - review & editing.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Acknowledgement

The authors thank the W.O.P.I: The Fortress Center gratefully, as well as the participants in the study.

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