ORIGINAL ARTICLE

Exploring experiences of pregnancy among adolescent girls in adolescent programs: A Case of the RISE Study in Chisamba and Chibombo districts, Zambia

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ABSTRACT

Background: Adolescent pregnancy poses significant global health challenges, particularly in regions with weak healthcare systems, and is linked to the third Sustainable Development Goal on health. It is associated with high rates of maternal and child morbidity and mortality, with hypertensive disorders, haemorrhage, infections, low birth weight, and preterm delivery being common issues. In Sub-Saharan Africa, adolescent pregnancy accounts for 10-30% of maternal deaths.

The Research Initiative to Support the Empowerment of Girls (RISE) project in rural Zambia aimed to reduce early childbearing by providing economic support to girls and their families, along with community interventions to enhance sexual and reproductive health knowledge.

Objective: This study explored the experiences of adolescent pregnant girls who participated in the RISE project in Chibombo and Chisamba districts, Zambia.

Methods: A qualitative phenomenological approach was used, involving 20 girls aged 15-19 years who had experienced pregnancy and received support from the RISE project. The study was conducted in schools within Chibombo and Chisamba districts, including Kampekete, Chombela, Kalala, and Kapopo.

Results: Most participants were 18 years old, in their 9th grade, and from Chibombo district. They became pregnant at the age of 16. Participants reported adverse social and health consequences of early pregnancy, such as social and family neglect, fistula, school dropout, depression, low self-esteem, and forced marriage. The RISE project was viewed positively for its financial support, education on re-entry policy, awareness on the dangers of early marriage, contraceptive knowledge, and life skills training. Contributing factors to adolescent pregnancy included poverty, peer pressure,

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traditional practices, and lack of sexual education. Barriers to contraceptive access included prejudice, inaccessibility, and cultural factors.

Conclusion: Adolescent pregnancy in rural Zambia poses severe health and social challenges. The RISE project demonstrates the importance of targeted interventions in reducing early childbearing and supporting affected girls' reintegration into education and society.

INTRODUCTION

In Zambia, teenage birth rates remain high according to the Zambia Demographic Health Survey reports: 24% had had a live birth, and 5% were pregnant with their first child at the time of the interview. Six percent of women have already begun childbearing at age 15, but the proportion having children increases rapidly with age, reaching 53% among women age 19.[1] Rural teenagers tend to start childbearing earlier than other teenagers.[1] Early childbearing among teenagers is more common in Southern Province (43%) than in other areas, especially Lusaka (15%).[1] Teenagers with no education or only primary schooling (42% and 36%, respectively) are more likely to have started childbearing compared with the 29% national average or 23% among teenagers with a secondary education. Childbearing is also most common among women in the lowest wealth quintile (46%).[1] In trends at the national level, there is a decline in overall adolescent fertility, particularly between the 2001- 2018. However, this decline was less than the decline of the total fertility. In Zambia most of the adolescent girls drop out of school when they are pregnant, which compromises their future; furthermore, some girls will have unsafe abortions that lead to injuries, disabilities and sometimes death. Many adolescent girls do not complete primary school because of pregnancy and other economic factors.[2] Adolescent pregnancy and child marriage are prevalent in Zambia and are complexity interrelated issues with common causes and effects.[3,4]

The Research Initiative to Support the Empowerment of Girls project (RISE) is a research study that aims to measure the effect on early childbearing rates in a rural Zambian context of economic support to girls and their families, alone or in combination with a community intervention to enhance knowledge about sexual and reproductive health and supportive community norms.

METHODOLOGY

Research Reflexivity

To promote reflexivity and research rigor, a reflexive journal was maintained throughout the study to record assumptions, positionality, and any perceived power dynamics between researchers and participants. This practice helped minimize the influence of researcher bias during data collection and interpretation. Regular debriefing sessions among team members were conducted to critically reflect on emerging data, validate interpretations, and ensure that findings were grounded in the participants' lived experiences. Professor Zulu provided overall supervision and critical oversight throughout the research process, helping to ensure methodological coherence, ethical rigor, and academic quality.

Study Design

This study employed a qualitative phenomenological design to explore the lived experiences of adolescent girls who participated in the Research Initiative to Support the Empowerment of Girls (RISE) project in Zambia. Phenomenology was selected to understand the shared experiences of pregnancy among girls who received both economic and community-based interventions. The research addressed two main questions: (1) What did the adolescent girls experience in relation to pregnancy during or after the RISE project? and (2) What circumstances or contexts influenced these experiences? Semi-structured, in-depth interviews were conducted to gather rich, contextual data on participants lived experiences, enabling the development of a composite description reflecting both the essence (“what”) and the process (“how”) of their pregnancy experiences within the RISE intervention framework.

Study Setting

This study was conducted in schools of Chibombo and Chisamba districts. The schools included, Kampekete, Chombela, Kalala and Kapopo. The schools participated in the RISE project and received a combined economic support with a community intervention.

Approximately 4900 girls who enrolled in grade 7 in 2016 were recruited from 157 schools in 12 districts in Zambia: Kalomo, Choma, Pemba, Monze, Mazabuka, Chikankanta, Chisamba, Chibombo, Kabwe, Kapiri Mposhi, Mkushi and Luano. These districts were selected as they had medium school dropout rates and adolescent marriage and childbearing were common[5]. All girls in grade 7 including anyone who was already married or had children were eligible to participate. Girls who dropped out of school after they were recruited were followed up and continued to receive the interventions [5]

In one intervention participating girls and their guardian were offered cash transfers and payment of school fees. In the second intervention there were both economic and community support and a community intervention. The RISE project had run from 2016 to 2020, in 2016 there was a recruitment of participants, the intervention was implemented for approximately two years 2017 and 2018. 2019 and 2020 follow-up interviews were conducted [5]. The primary objectives of the RISE study was to measure the effectiveness of a combined economic and community intervention on child bearing within 8 months of the intervention period, to measure the effectiveness of economic support alone and of a combined economic and community intervention on child bearing before the 18th birthday among girls and to measure the effectiveness of economic support alone and of a combined economic and community intervention on the proportion of girls who sit for grade 9 exams[6–8].

The actions of the RISE project were targeted to reduce early marriages, teenage pregnancies and school dropout [9] . Sandoy and colleagues further record that adolescent pregnancies pose a risk to the young mothers and their babies. In Zambia, 35% of young girls in rural areas have given birth at the age of 18 years. Pregnancy rates are particularly high among out-of-school girls. The findings of the RISE program study are relevant for adolescent reproductive health programs in Zambia [5].

Study Population

The research participants were adolescent girls who had been pregnant before and were between the ages of 15 and 19 when they received support from the RISE project.

Sampling Techniques

A purposive sampling technique was used to select participants for this study. A total of 20 adolescent girls, aged between 15 and 19 years, were interviewed until data saturation was reached. The participants were drawn from four schools; two peri-urban schools (Kampekete and Kapopo) and two rural schools (Kalala and Chombela). The selection criteria focused on adolescent girls who had received the combined interventions under the RISE project and who had become pregnant during or after their participation in the program. Five girls were purposively selected and interviewed from each school, based on their relevance to the study objectives and their lived experiences within the intervention framework.

Data Collection Method

After the identification of potential participants, they were approached and an explanation about the purpose of the study was done and all those who gave consent had made an appointment with the researcher, the appointment dates were respected. In-depth interviews were conducted in safe spaces; there was privacy and confidentiality to the participants. Semi-structured interview questions were used to collect data on the experiences and perceptions of pregnancies among adolescents. In-depth interviews facilitated direct, face-to-face interaction between the researcher and the respondents, enabling a deeper exploration of their personal experiences and perspectives. This approach allowed the researcher to gain detailed

insights into the participants' thoughts, emotions, and challenges in a more open and interactive manner.

Data Analysis

All the individual interviews with adolescents were audiotaped after agreeing with the participants to do so. A digital audio recorder was used to record the interviews. All transcripts were imported into Nvivo software for analysis and transcribed the information into a verbatim which was reviewed by my supervisors. Data was coded in phases in order to create recognized, meaningful patterns. These phases were: familiarization with data, generating initial codes, searching for themes among codes, reviewing themes, defining and naming themes, and finally producing the final report.

Ethical considerations

Ethical clearance to conduct the study was granted by the Biomedical Research Ethics Committee reference number 20352021 and the National Health Research Authority reference number NHRA000012/28/01/22. Written Assent and consent were obtained from the participants.

RESULTS

Table 1: Summary of Major themes and Sub-themes

Major Themes	Sub-Themes
Perceptions and experiences of pregnancy among adolescent girls.	? Social neglect ? Family neglect ? Health effect ? Personal/psychological effect ? Education ? Forced marriage ? Coping strategy
Drivers of Early Pregnancy among Adolescents	? Poverty ? Peer pressure ? Initiation ceremony ? Lack of sexual reproductive health education ? Mistreatment from guardians
Effects of RISE Projects intervention on the perception and experiences of adolescent pregnancy	? Financial Support ? Gaining knowledge on Re -entry policy and education ? Increased awareness on dangers of early marriage. ? Learning about contraceptives and family planning.
Barriers to adoption of RISE early pregnancy prevention messages	? Unfriendly health workers ? Traditional practices ? Peer pressure ? Inaccessibility and unavailability of contraceptives
Programs to be added to the youth clubs	? Child care lessons ? Distribution of contraceptives in youth clubs
Expanding the scope and increased duration of intervention	Demand for support to tertiary level.

Perceptions and Experiences of Pregnancy Among Adolescent Girls

Adolescent pregnancy was perceived as overwhelmingly disadvantageous due to the social stigma and familial rejection participants encountered. The girls reported experiencing exclusion from their communities, discrimination from friends, and changes in their family dynamics, which negatively affected their well-being.

Social Exclusion and Stigma

Many participants described feeling isolated after becoming pregnant, as friends distanced themselves due to community pressures. Parents in the neighbourhood discouraged their children from interacting with them, reinforcing the stigma. The church also played a role in their exclusion, with some participants being suspended from church activities. One participant recounted how her ex-communication from church further deepened her isolation:

"At church, the elders banned me from participating in any programs. Later, my parents told me it was announced that I was ex-communicated, and after that, everyone avoided me." (Participant 8)

Family Neglect and Increased Responsibilities

In addition to community rejection, some girls reported feeling abandoned by their families. Many were expected to take on adult responsibilities, including house chores and childcare, with limited support. One participant shared how her mother's attitude changed after her pregnancy:

"My mother told me I was no longer a child and had to start acting like a woman. I had to clean more than before, and after giving birth, I did most of the nursing myself." (Participant 14)

Other participants reported financial neglect, where parents stopped providing personal necessities, such as clothing and toiletries, reinforcing the perception that they had to fend for themselves.

Mistreatment from Guardians

Some participants blamed early pregnancies on mistreatment from their guardians. They reported being forced to do excessive manual labour, cleaning, fetching water, and firewood. Some felt neglected, shouted at, or beaten for minor mistakes, leading them to run away from home and fall prey to men who took advantage of them.

"I was never happy at home; I was always doing all the work there—cleaning the house, collecting water from the well, cooking. It felt like I was always being punished. So I decided to run away from home and started staying with a man who promised to marry me. But after I got pregnant, he said that he couldn't take care of me and forced me to go back home." (Participant 15)

Family Rejection and Forced Marriage

Some participants faced extreme rejection from their families upon disclosing their pregnancies. In certain cases, this rejection resulted in being disowned or forced into early marriage. Decisions about their future were often made without their consent, leaving them with limited agency over their own lives. One participant recalled:

"My father was so angry when he found out that I was pregnant, he chased me away and told me to go live with the person who impregnated me. During family meetings, my future was decided for me, and I was forced to marry the man responsible for my pregnancy." (Participant 19)

For those who entered forced marriages, the transition was particularly distressing, as they were neither emotionally nor psychologically prepared for the responsibilities of marriage and motherhood.

Health Consequences

The majority of participants reported experiencing various health complications due to pregnancy and childbirth. Common issues included general body weakness, constant headaches, anaemia, low blood pressure, excessive bleeding during childbirth,

obstetric fistula, and postnatal infections. Some participants feared long-term health consequences resulting from their pregnancy. One participant shared her experience with childbirth complications:

"My delivery took too long, and I bled a lot. Since the baby did not come out, they had to operate on me. I developed an infection on my stomach where the operation was done and had to be readmitted for 10 days. I was told to keep the wound clean to prevent further infection." (Participant 10)

These health challenges often exacerbated their struggles, particularly when compounded by a lack of family or medical support.

Educational Disruptions

Many participants acknowledged that their pregnancy significantly hindered their education. Some had to miss classes due to health issues, while others struggled with concentration, leading to poor academic performance and eventual school dropout.

"My education was affected because I had to miss class when I was feeling sick or needed to go to the clinic. I missed some tests, and my performance declined. I was advised to stop attending school until after I had the baby." (Participant 11)

For some, the overwhelming stress and physical toll of pregnancy made it impossible to continue their education:

"I decided to drop out of school because I was vomiting a lot and always tired. I wasn't focusing in class—my mind was always on the pregnancy and wondering how I was going to manage being a mother." (Participant 9)

Psychological and Emotional Impact

Nearly all participants reported experiencing psychological distress both during and after their pregnancies. Common emotional challenges included depression, isolation, low self-esteem, humiliation, and chronic stress. Many felt abandoned by their families and excluded from social circles.

"My family did not allow me to participate in decision-making at home. They became hostile towards me. My friends were not allowed to play with me anymore. I felt rejected and alone. My mood was low the whole time I was pregnant." (Participant 12)

The emotional strain was further amplified by social stigma, lack of support, and the overwhelming responsibility of motherhood.

"At school, I had low confidence because no one wanted to associate with me. I felt embarrassed to go out of the house after I was told that I had been suspended. It felt like everyone in the community was talking about me. After delivering, I didn't receive support from my family or my partner. Taking care of a baby is very stressful." (Participant 16)

Coping Mechanisms

Participants employed different coping mechanisms to deal with the psychological and emotional distress associated with early pregnancy. Many turned to spirituality, finding comfort in listening to gospel music and prayer, while others sought support from their grandmothers.

"I had no one to help me… my partner abandoned me. He never even accompanied me for antenatal visits. I found some peace and comfort whenever I listened to gospel music and prayed to God for help." (Participant 3)

For some, the biggest emotional challenge was dealing with hostility from their parents. This led them to seek emotional support from their grandmothers, who played a crucial role in offering reassurance and protection.

"The hardest part was my parents, who were always angry with me. They shouted at me for no reason at times and for simple mistakes. My grandmother became my best friend; she defended me at times and comforted me whenever I was sad and depressed." (Participant 5)

Drivers of Early Pregnancy Among Adolescents

The participants identified key factors contributing to early pregnancy, including poverty, peer pressure, and cultural initiation ceremonies.

Poverty

Many participants cited poverty as a major driver of early pregnancy. Financial difficulties prevented them from accessing education, as their families could not afford school materials, uniforms, or fees. As a result, they spent more time at home, increasing their vulnerability to risky sexual behaviours.

"Initially, I was attending school, but after my father died, my mother could not afford to buy me school things like books, pencils, or a new uniform. That is why I stopped going to school. I found myself spending more time with boys and doing things we were not supposed to do." (Participant 4)

Some participants also mentioned that financial struggles at home made their living situations unbearable. In some cases, they were lured into transactional sex as a way of meeting their basic needs.

"There was no extra money in the house, just enough for food. I wanted some lotion, sanitary pads, and other things like my friends had. The man at the shop would give me things on credit, but later he started inviting me to get things from his house instead of the shop. Whenever I went to his house, we would have sex, and he impregnated me." (Participant 3)

Peer Pressure

Peer influence was another major contributing factor to early pregnancy. Some participants shared that they were pressured into having sex by their boyfriends, while others were influenced by their female friends who flaunted gifts and money received from men in exchange for sexual favours.

"My boyfriend would invite me to his house whenever his parents were away so that we could be alone. He would always ask me for sex, and I would refuse because I knew it was wrong. He would get upset with me. I finally accepted to have sex with him one time because he said I didn't like him and that he would break up with me and find another girlfriend. That was the time I got pregnant." (Participant 9)

"All my friends had boyfriends, but I didn't want one myself. They would show me the gifts and money they got from their boyfriends and told me I was missing out. They encouraged me to find someone who could get me these things too. Finally, they convinced me, and they even organized someone for me. Every time he gave me money or gifts, he wanted sex in return. Eventually, I got pregnant by him." (Participant 7)

Initiation Ceremonies

Cultural practices, particularly initiation ceremonies, were also highlighted as a factor contributing to early sexual activity and pregnancy. Participants cited *chibelebele*, a traditional rite of passage, as a practice that influenced their decision to engage in sex.

"I went through the initiation ceremony chibelebele after my periods started. At the ceremony, we were told that we were being prepared for sex and that a girl needed to be ready even before she got married. Because they said I was ready for sex, I wanted to try it out myself and find out what they meant. I decided to have sex with a boy from school, and he impregnated me." (Participant 1)

Lack of Sexual Reproductive Health Education

The participants reported that their community lacked guidance and education on sexual reproductive health. Many girls were victims of misleading traditional teachings and misinformation among their peers.

"I knew of girls that got pregnant in my community, and we talked amongst us girls about how one could become pregnant and how to avoid pregnancy. I was told I needed to eat the leaves of a certain plant after sleeping with a boy to prevent pregnancy. All the stories were just lies because even after doing all that, I still became pregnant." (Participant 1)

"I knew that sleeping with boys was how a girl got pregnant, but I didn't know much about how to avoid

pregnancy apart from staying away from boys. The boy who impregnated me assured me that he knew a technique to prevent pregnancy and that I should trust him. Because he was older than me, I thought he had more knowledge. That is how I slept with him." (Participant 16)

DISCUSSION

The study found that the Reaching Impact, Saturation, and Epidemic Control (RISE) Project had a positive effect on the perceptions and experiences of the participants. The project was perceived as a source of financial freedom, as it provided financial support that empowered adolescent girls to acquire their basic needs such as soap, lotion, and sanitary pads. For some, the cash transfers were used to support their families. The financial support also played a crucial role in helping the girls pay for their school fees, thereby encouraging them to continue their education. This aligns with suggestions from the World Bank, which states that effective interventions aimed at reducing teenage pregnancies include well-targeted incentives such as cash transfers, which alleviate barriers to education and keep girls in school[10]. Our study also found that the girls perceived the RISE Project as instrumental in educating them through clubs about the dangers of early marriages and adolescent pregnancies, as well as the importance of formal education. Some girls reported applying this knowledge, such as the re-entry policy, and returning to school despite having dropped out due to pregnancy[11].

A similar study found that youth empowerment was facilitated through activities such as film screenings and interactive teachings, including group discussions and role-playing, These methods helped adolescents understand the dangers of risky sexual behaviours, such as engaging in sex at an early age, and the responsibilities of caring for and regularly breastfeeding a baby. Such interactive teaching methods appear to be more effective than traditional approaches, as they enhance engagement and information retention[12].

The study recommends that the Ministry of Education (MoE) should invest more in teaching Comprehensive Sexuality and Reproductive Health Education (CSRHE) through alternative methods, such as short films, to effectively reach youths with essential messages[12]. In Ghana, the Educational Services initiated a "Back to School" program supported by a "Re-entry Policy" for girls. Key strategies to facilitate the re-entry of pregnant girls and adolescent mothers into public basic and secondary schools included awareness-raising and psychosocial support. Over three years, 10,869 of 22,147 pregnant females successfully re-enrolled in school[13].

The study found that girls attributed early pregnancies to several social factors, including a lack of parental care and guidance. This lack of support made them vulnerable to men who exploited their situation in exchange for sexual favours. Peer pressure from friends, particularly boys, was another contributing factor, as some girls were coerced into sexual activities. Traditional ceremonies, such as initiation rituals, also played a role. These ceremonies taught girls about sexual practices intended for marriage but, in reality, encouraged them to engage in sexual activity, leading to pregnancy[14]. Another key factor was a lack of sexual and reproductive health (SRH) education among adolescents[15]. Discussions on these topics were absent both at home and in schools, leaving many girls uninformed and vulnerable to early pregnancies.

These findings are consistent with a study conducted in Zambia, which reported that a lack of SRH education, low literacy in contraceptive use, peer pressure, and risky sexual behaviours were directly linked to teenage pregnancies[16,17,18]. A study in Mozambique also found that traditional and cultural teachings contributed to teenage pregnancies and early marriages. Cultural beliefs discouraged contraceptive use and emphasized procreation within the community[19].

A study conducted in Zambia, Malawi, and Mozambique explored young people's agency in relation to sex, relationships, and marriage. This study found that child marriages were driven by early pregnancy and were common across the three countries[20]. Additionally, initiation ceremonies acted as endorsements for risky sexual behaviors[20]. Socioeconomic constraints also forced families to marry off their daughters early as a means of alleviating financial burdens[21,22]. Some girls deliberately became pregnant, believing that marriage would provide an escape from poverty[23,24].

The study found that a major barrier to adopting early pregnancy prevention messages was poor reception at healthcare centres. Healthcare workers reportedly treated adolescent girls seeking contraceptives with judgment, viewing them as promiscuous and often denying them access to services. This negative treatment discouraged girls from seeking contraceptives from the only available sources. Another significant barrier was the lack of Sexual Reproductive Health (SRH) education, which was not openly discussed in communities.

Similarly, research by other scholars indicates that insufficient parental guidance leads teenage girls to neglect their SRH needs due to unanswered questions about sexuality[25]. Threats to the SRH of vulnerable adolescent girls include ineffective health services and a lack of knowledge about risky sexual behaviours[25]. According to the United Nations Educational, Scientific and Cultural Organization (UNESCO), barriers to SRH education manifest in various ways; Social and institutional opposition can result in an absence of supportive policy frameworks, leaving teachers without comprehensive training and lacking a structured curriculum. Furthermore, community barriers often stem from misconceptions that SRH education promotes promiscuity, conflicts with cultural and religious teachings, and fosters gender confusion[2,26].

In Zambia, studies have reported that barriers to implementing SRH education among adolescents include stigma faced by girls who have experienced early pregnancies, child marriages, or sexual abuse[27,28,29]. Another significant challenge is cultural influence; many girls feel uncomfortable discussing sexual health issues, as such discussions are culturally considered inappropriate[29]. Among teachers, those who have not received training in SRH education find it difficult to address sensitive topics with young people[30].

These findings highlight the need for strengthened policies and training programs that support adolescent access to SRH education and services, ensuring they are equipped with knowledge to make informed decisions about their reproductive health.

CONCLUSION

Adolescent pregnancy in rural Zambia poses severe health and social challenges. The RISE project demonstrates the importance of targeted interventions in reducing early childbearing and supporting affected girls' reintegration into education and society.

The RISE project was a positive intervention not only in prevention of early marriages, adolescent pregnancies but also in promoting the sexual and reproductive health of girls and their education. The project helped girls overcome their vulnerabilities through financial support and basic life skill knowledge. As a consequence, some girls were reported to be supporting their families and others were encouraged to continue with their education in pursuit of a better future.

Social and economic factors were linked to unplanned teenage pregnancy. Socially, traditional practices such as initiation ceremonies promoted risky sexual behaviours amongst girls. A lack of sex educators in the communities and peer pressure are the other social factors responsible for increased early pregnancies. Economically, pervasive poverty in the rural communities resulted into a lack of support towards the girls from their parents. This made them vulnerable to men taking advantage of them in offering sexual favours in exchange for financial support.

Barriers to utilizing preventative measures to early pregnancies included prejudice attitudes from health centres and absence of sexual and reproductive health education in the community. The prejudicious responses received by girls seeking contraceptives from health centres deterred them from continuing with this preventative measure. Meanwhile, cultural misconceptions that equated contraceptive use with promiscuity were perpetuated in the absence of sex education among adolescents, further limiting their access to accurate information and services essential for informed sexual and reproductive health decision-making.

ABBREVIATIONS

CISMAC: Centre for Intervention Science in Maternal and Child Health

MOE: Ministry of Education

RISE: Research Initiative to Support the Empowerment of Girls project

WHO: World Health Organization

UNFPA: United Nations Population Fund

SRH: Sexual and Reproductive Health

ZDHS: Zambia Demographic and Health Survey

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Statement on data availability

Data generated or analysed during this study are available from the corresponding author upon reasonable request.

Consent for Publication

Consent to publish the study findings were obtained from the participants during the interviews consenting process.

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