Adolescent pregnancy and young motherhood in rural Zimbabwe: Findings from a baseline study

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Abstract

Pregnant adolescents and young mothers comprise a vulnerable group, particularly in low and middle income countries, yet there is limited research describing this population, particularly in rural Zimbabwe. Using tablet-administered questionnaires concerning maternal and child health, sexual and reproductive health, psychosocial well-being and parenting, we recruited 442 pregnant and young mothers (14–24 years) with the support of social workers from health facilities. We found high levels of poverty amidst increased rates of marriage, including child marriage (almost 20%). Participants had poor sexual and reproductive health knowledge and uptake of contraception was low (only 35% respondents reported current use). Although almost 60% girls had completed Form 2, 24% had only completed Grade 1 and just 4% were still engaged in schooling. Girls reported inadequate social support amidst high caretaking responsibilities and change in relocation for marriage, compromising mental health. Most of the pregnancies were unintended (approximately 60%) which had consequences on attachment and parenting where roughly 40% of our sample reported difficulties and lack of enjoyment in caring for their babies. Investments in interventions that address these vulnerabilities for pregnant adolescents and young mothers, and capitalise on available resources, are critical to improve health and interrupt cycles of risk for the next generation.

Keywords: child marriage; pregnant adolescent; sexual reproductive health; young mother; Zimbabwe

What is known about this topic?

- Adolescent pregnancy and young motherhood have poor outcomes for mothers and their children; the vast majority of these mothers live in low and middle-income countries (LMICs).
- There is limited research on this population in Zimbabwe and few documented effective interventions for them; especially in rural contexts characterised by poverty and compromised infrastructure.

What this paper adds?

- Our study contributes to understanding pregnant adolescent and young mothers in rural Zimbabwe by describing their risk profile and providing contextually meaningful suggestions for intervention design and implementation.

1 INTRODUCTION

Globally, there are 1.2 billion adolescents experiencing a developmental stage characterised by increased flux, moving towards autonomy but still needing protection and oversight, and the vast majority live in low and middle income countries (LMICs; Sheehan et al., 2017). During adolescence, an individual acquires the physical, cognitive, social and economic resources that become the basis for later-life health and well-being (Patton et al., 2016). These same resources set individual trajectories that affect the next generation, thus investments in this critical phase of life yield gains in the present and well into the future (Patton et al., 2016).

Adolescents have healthcare needs that are distinct from those of adults, particularly in the area of sexual and reproductive health and rights (SRHR) (Hallfors et al., 2011; Zulu et al., 2018). Neglect of their specific health needs advances negative consequences such as unwanted pregnancies, child marriage, sexually transmitted infections (including HIV) and intimate partner violence (IPV) (Dupas, 2011). Although adolescent birth rates are generally declining globally, the increase in the population of adolescents means that the overall numbers of pregnancies and childbirths are increasing, especially in sub-Saharan Africa (Chandra-Mouli et al., 2020). One in every three girls recently married before the age of 18 years are now in sub-Saharan Africa with poorer girls and girls in rural areas more likely to be married as children than wealthier girls and urban girls (Chandra-Mouli et al., 2020). Young age, child marriage, poverty and compromised parenting are some of the most important considerations for pregnant adolescents and adolescent mothers in Zimbabwe, and a clearer understanding of these issues in rural areas is required to more fully comprehend risk in order to help this important group.

Pregnancy and childbirth places adolescents at higher risk of poor maternal and neonatal health outcomes (Nash et al., 2019). In fact, childbirth is the primary cause of death among young adolescent girls aged 15–19 years globally (Le Roux et al., 2019). High adolescent pregnancy rates compound economic burdens and perpetuate trajectories of poverty as adolescent mothers are inclined to have poor structural resources available to them (Nash et al., 2019). In Zimbabwe, the adolescent pregnancy rate is 21% for age 15–19 and adolescent fertility 120 per 1,000 girls and 70 per 1,000 girls for rural and urban areas, respectively (Chikovore et al., 2013).

Adolescent parenthood is a significant global social and health difficulty (UNICEF, 2016) and is significantly higher in sub-Saharan Africa (229/1,000), compared to other regions (47/1,000) (Le Roux et al., 2019). Globally, adolescent parenthood is approximately three times more likely in rural compared to urban contexts (Le Roux et al., 2019). Yet, there are few data describing this parenthood from rural Africa, the continent with the highest overall occurence of adolescent motherhood.

Child marriage, defined as marriage before the age of 18, is a prevalent health and human rights concern affecting adolescents (UNICEF, 2016). It is associated with severe adverse health and social outcomes, including compromised sexual, reproductive, and maternal health, increased risk of depression and suicidality, greater risk of IPV, decreased social and physical mobility, and decreased autonomy in decision-making within and outside of the household (Raj et al., 2019). In addition, child marriage jeopardises girls' capacity to remain in school post-marriage, exposing them to a host of adverse social and health outcomes associated with incomplete schooling (Delprato et al., 2017).

Young age and poverty are also consistently associated with IPV globally (Abramsky et al., 2011). In a recent demographic survey in Zimbabwe, among females aged 18–24 years, a third experienced sexual violence before reaching the age of 18 (ZNSA, 2013). Of those aged 18–24 who had their sexual debut prior to age 18, nearly 41% of females had unwanted first sexual intercourse and boyfriends (77%) were the main perpetrators of the first incident (ZNSA, 2013). Sexual violence puts girls at risk for unwanted pregnancy, unwanted marriage, mental health concerns, and in a country like Zimbabwe with high HIV prevalence rates in female adolescents, significant risk for HIV infection (Chiweshe and Chiweshe, 2017; Stoebenau et al., 2016).

Adolescent pregnancy, child marriage and motherhood, compromise rural girls' health, education and social outcomes, and increases poverty and deprivation. This trajectory is also typically passed on to the next generation through significant structural inequalities and lack of access to services and resources. A community based NGO, called REPSSI (Regional Psychosocial Support Initiative), undertook a baseline study in partnership with UNICEF Zimbabwe and the Zimbabwe Ministry of Health and Child Care to understand the profile of pregnant adolescents and young mothers (defined as mothers 14–24 years) in rural communities in Zimbabwe in an effort to inform an intervention to strengthen their health and resilience.

2 METHODS

2.1 Participants and procedures

Participants were voluntarily recruited from waiting mother shelters (hospital based dormitories for heavily pregnant women awaiting delivery) and community management of acute malnutrition (CMAM) centers after the research was introduced to them. Waiting mother shelters are normally intended for prima gravida or women with histories of pregnancy complications who are unable to deliver at local clinics. As adolescents are considered higher risk, they are generally referred to these shelters. CMAM centres provide feeding programmes at hospitals and health clinics in Zimbabwe, frequently attached to post natal care units, for women and infants at high risk of acute malnutrition. These facilities were targeted as they accommodated high numbers of pregnant adolescents and young mothers living in poverty. The ten districts recruited from were chosen in accordance to the

Zimbabwe Vulnerability Assessment Committee (ZimVAC, 2016) findings of the most affected areas for drought related vulnerability. Rural clinics and hospitals were purposively sampled as they would most likely represent some of the most vulnerable patients in the country.

Following written informed consent, data were collected from participants utilising a self-administered questionnaire via computer assisted self-interview on tablets. Social workers were the data collectors and prior to the research were trained in good clinical practices and research ethics with minors. They administered informed consent in local languages and were available if participants needed assistance, especially if there were questions they were unsure of, and needed phrasing translation. Literacy levels were generally poor and social workers spent time helping participants complete the questionnaires when necessary. All social workers were trained in managing vulnerable adolescents and young mothers and were familiar with all referral procedures. In addition, social workers were available for any questions or support after the questionnaire was completed. Adolescents who are pregnant or are mothers are considered emancipated and completed research procedures on their own. The questionnaire reported on demographic information, maternal and child health concerns, sexual and reproductive health knowledge, psychosocial (PSS) well-being and parenting skills of participants. These data were collected to inform an intervention for young mothers and their children who are affected by drought induced emergency in Zimbabwe.

A total of 442 responses were collected by 10 social workers at 160 health facilities in 24 rural districts in 10 provinces of Zimbabwe. Recruitment was undertaken at two time periods over the course of 11 months (October 2017–September 2018). Participants were all female and ranged in age from 14 to 24 years.

Data from questionnaires were imported into STATA v14 for statistical analysis. Data was cleaned and entries with missing data were excluded from the analysis. Both descriptive and bivariate statistics were conducted to examine the distribution of all variables and assess relationships between variables. Significance testing was undertaken using a 95% confidence interval. Frequency distributions were run on all variables. Measures of central tendency and spread were completed using various statistics, including the mode, median, mean, minimum, maximum and standard deviation. Normality was assessed using the Kolmogorov–Smirnov and Shapiro–Wild tests and histograms were generated for graphical confirmation.

2.2 Ethical considerations

All participation in this study was sought on the basis of informed consent and good clinical practice guidelines. Ethical clearance was obtained from University of Pretoria (EDU103/19) and the study was approved by the Zimbabwe Ministry of Health and Child Care. In addition, tablet computers were used to collect data, a method that has been shown to increase confidentiality and reporting bias to sensitive questions (Gorbach et al., 2013). It is also documented to be an effective means of engaging vulnerable adolescents in sensitive research (Woollett et al., 2017). Any participants deemed to be at high risk for mental health problems were actively referred to social services for treatment and care.

2.3 Measures

The questionnaire collected information on demographics (gender, age, highest grade completed, school attendance, reason for drop-out, number of children, marital status, living

status, support from father of child), psychosocial well-being, SRHR knowledge, access to SRHR related talks in the last 6 months (both formal and informal, at school, in clinics, via adults or peers), reasons for no access to SRHR related talks in the last 6 months (for those that reported no access), access to SRHR related services in the last 6 months, reasons for no access to SRHR related services in the last 6 months (for those that reported no access), rating of parenting skills and engagement with child, and assessment of youth friendliness of the local clinic. The questionnaire was developed specifically for this target group. We were unable to identify existing tools appropriate for measuring these different aspects with young mothers with limited educational levels. As such the questions for most of the sections in the tool were developed collaboratively with the team. For SRHR knowledge, five basic knowledge questions were identified. Access to talks and services included a comprehensive list of topics and services in relation to SRHR. The tool included a number of questions developed to explore how the mothers rated their own parenting skills, what they identified as things that 'good mothers' do with their babies, and how often they spoke to their unborn child (for those who were pregnant). Psychosocial well-being was assessed through a tool that REPSSI developed to measure different aspects of psychological and social well-being. This tool has been used in other, similar contexts such as Lesotho and Malawi (Bandeira et al., 2019) and now in Zimbabwe. The tool includes questions assessing different aspects of psychosocial well-being such as self-esteem, feelings of safety, social relationships and connections, hope for the future, isolation and feelings of sadness. The questionnaire used a 4-point likert scale from *always* (4) to *never* (1) that was combined into a total score with a possible range of between 20 and 80. A higher score indicated better psychosocial well-being. The range was 20–80 with a standard deviation of 10.47.

3 RESULTS

Just under half or $n = 194$ (44%) of the pregnant respondents had never given birth before and 61% were pregnant at the time of the baseline. Of those that had already given birth, 77% ($n = 188$) had one child, 21% ($n = 51$) had given birth twice before, while $n = 8$ (0.32%), had given birth to three or more children. Of those who were pregnant at the time of the baseline, 56% ($n = 144$) reported that the pregnancy was not planned. Most of the young women in the sample ($n = 220$, 89%) were looking after all the children they had given birth to, $n = 10$ (4%) were only looking after half of the children they gave birth to, and $n = 15$ (6%) were not looking after any of the children they had given birth to. More than half (58%) of the respondents were married at the time of the baseline. Of these, $n = 44$ (17%) were under the age of 18. Respondents indicated that they primarily lived with their husbands (51%), followed by their mothers/fathers in law (27%), or with a sibling (24%). Table 1 indicates the age of respondents.

TABLE 1. Age of respondents

Age	*n*	%
14	1	1
15	16	4
16	37	9
17	52	13
18	65	16
19	58	15
20	43	11
21	49	12
22	29	7
23	26	7
24	22	5

Table 2 describes outcomes of the psychosocial well-being questionnaire. Most respondents scored in the mid-range in terms of psychosocial well-being ($M = 52$), with a higher score indicating a higher rating of psychosocial well-being. There were, however, some areas of psychosocial well-being that should be noted. Twenty-four percent adolescents reported that they often or always feel like they do not have much to be proud of. Sixty-nine percent of children reported that they never or only sometimes count on their friends when they need help. Forty percent reported never having lots of friends, while 16% reported that they are often or always very sad. It is positive to note that 64% of respondents felt that they always or often had at least one adult that loved them and that 63% always or often felt safe at home.

The father of the respondent's children provided different kinds of support. For most (69%), this was financial (monetary) and material support (65%) such as food, clothing and shelter. Just under a quarter of respondents (24%) indicated that the fathers provided no support to them. Almost half of the respondents (45%) reported that their parents/caregivers were often or always supportive and most of the girls (64%) felt that they always (40%) or often (24%) had at least one adult that loved them. A slightly higher number said that their parents/caregivers were only sometimes supportive, while 10% reported that they were never supportive.

The majority of participants were no longer attending school. Table 3 indicates the highest grade achieved by participants. Only $n = 16$ (4%) were still in school. Of those not in school, the reasons included financial constraints (49%), dropping out because they got pregnant (12%), and dropping out because they got married (9%). Over half of the respondents (59%), only completed up to Form 2 (year two of secondary school, generally 16 years old in Form 2). In fact, 24% had only completed Grade 1 indicating low rates of education and literacy

TABLE 2. Outcomes of PSS well-being questionnaire

PSS well-being questionnaire				
Question	**Never**	**Sometimes**	**Often**	**Always**
I am able to do things as well as most other people my age	*n* = 23 5.20%	*n* = 241 54.52%	*n* = 71 16.06%	*n* = 107 24.21%
I think I am no good at all	*n* = 89 20.14%	*n* = 259 58.60%	*n* = 59 13.35%	*n* = 35 7.92%
I feel that I have a number of good qualities	*n* = 28 6.33%	*n* = 250 56.56%	*n* = 104 23.53%	*n* = 60 13.57%
I feel I do not have much to be proud of	*n* = 91 20.59%	*n* = 245 55.43%	*n* = 73 16.52%	*n* = 33 7.47%
I feel safe at home	*n* = 20 4.52%	*n* = 145 32.81%	*n* = 115 26.02%	*n* = 162 36.65%
I feel safe in my community	*n* = 23 5.20%	*n* = 158 35.75%	*n* = 113 25.57%	*n* = 148 33.48%
I don't feel safe	*n* = 196 44.34%	*n* = 191 43.21%	*n* = 40 9.05%	*n* = 15 3.39%
I am very sad	*n* = 128 28.96%	*n* = 244 55.20%	*n* = 48 10.86%	*n* = 22 4.98%
I feel like my future will be good	*n* = 36 8.14%	*n* = 235 53.17%	*n* = 85 19.23%	*n* = 86 19.46%
I have at least one adult who loves me	*n* = 15 3.39%	*n* = 144 32.58%	*n* = 105 23.76%	*n* = 178 40.27%
There is someone I can talk to if I have a problem	*n* = 25 5.66%	*n* = 176 39.82%	*n* = 93 21.04%	*n* = 148 33.48%
I feel alone	*n* = 156 35.29%	*n* = 216 48.87%	*n* = 45 10.18%	*n* = 25 5.66%
I can count on my friends when I need help	*n* = 104 23.53%	*n* = 201 45.48%	*n* = 76 17.19%	*n* = 61 13.80%
There is someone I can talk to when I feel sad	*n* = 41 9.28%	*n* = 190 42.99%	*n* = 78 17.65%	*n* = 133 30.09%
I have lots of friends	*n* = 178 40.27%	*n* = 158 35.75%	*n* = 61 13.80%	*n* = 45 10.18%
I take part of activities in the community (e.g. going to church)	*n* = 25 5.66%	*n* = 148 33.48%	*n* = 132 29.86%	*n* = 137 31.00%
I can tell another child to stop doing something I don't like	*n* = 41 9.28%	*n* = 241 54.52%	*n* = 64 14.48%	*n* = 96 21.72%
I can tell people when I do not agree with them	*n* = 49 11.09%	*n* = 241 54.52%	*n* = 67 15.16%	*n* = 85 19.23%
When I have a problem I can always find a solution	*n* = 39 8.82%	*n* = 281 63.57%	*n* = 72 16.29%	*n* = 50 11.31%
I ask for help when I can't do something	*n* = 32 7.24%	*n* = 231 52.26%	*n* = 79 17.87%	*n* = 100 22.62%

Abbreviation: PSS, psychosocial support.

TABLE 3. Highest grade achieved

Grade	*n*	%
1	4	24
2	1	5
3	1	5
Form 2	4	24
Form 3	3	18
Form 4	4	24

With respect to the questions on SRHR knowledge and HIV knowledge, the accuracy of responses varied substantially. When asked if having sex with fewer men/women reduces the risk of being infected with HIV, 45% answered incorrectly.

Twenty two percent answered incorrectly when asked if it is possible for a girl/woman to become pregnant the first time she has sex, and 9% answered incorrectly when asked if using condoms can prevent you from being infected with HIV (Figure 1).

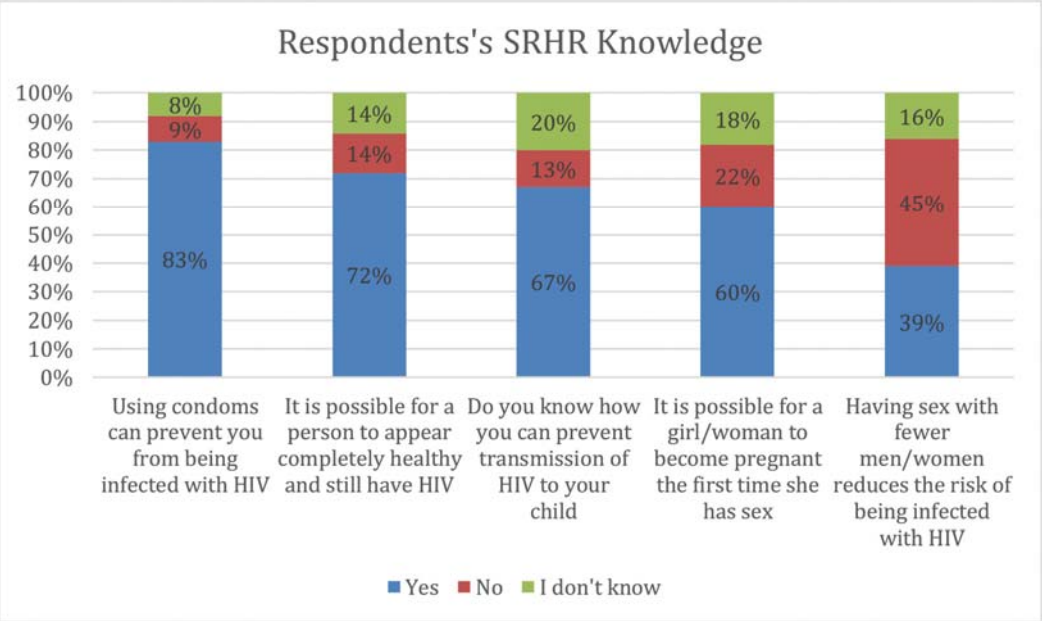

FIGURE 1. ASRHR and HIV knowledge. ASRHR, adolescent sexual and reproductive health and right

Eighty-two percent of respondents reported having been tested for HIV in the last 6 months. Sixty-five percent of the whole sample went for an antenatal check-up, while 58% had been tested for other STIs. Only 35% reported currently using contraceptives. A small number of respondents reported not receiving any SRHR related services (20, 5%). When asked the reasons for this, the main reasons provided included not needing them (65%), adults in the community not wanting children to talk about these matters (18%) and no services in their community (20%). Figure 2 describes access to adolescent SRHR services.

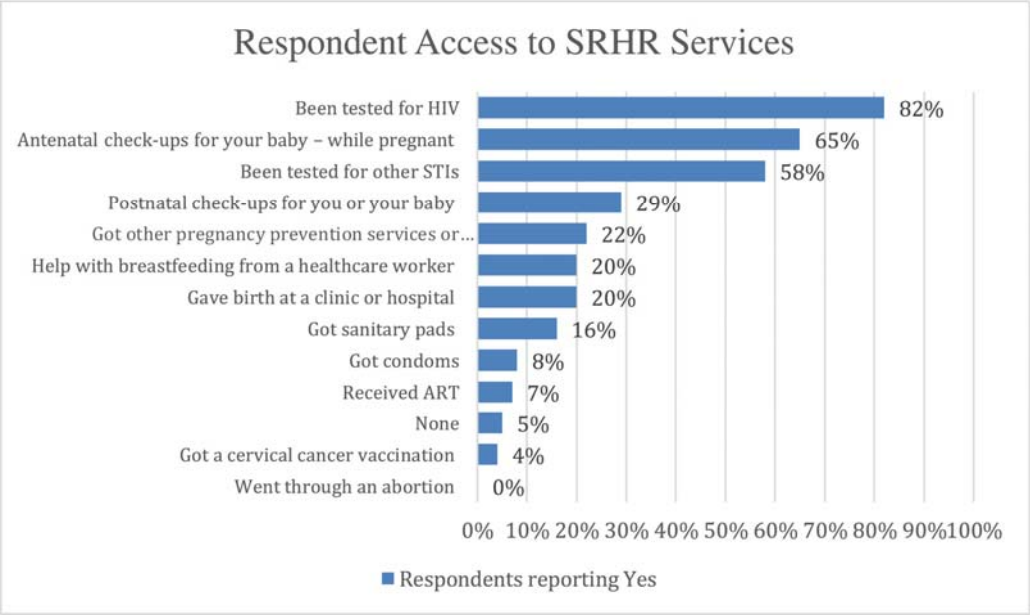

FIGURE 2. Respondent Access to SRHR Services. SRHR, sexual and reproductive health and right

When asked if they felt that they had parenting skills, most (78%) said yes. When they were asked to rate their parenting skills, 47% reported them as average, while 23% rated them as poor or very poor. Respondents were asked what they think 'good mothers' do with their children. Most focused on the basic needs of the child such as feeding the baby (90%) and bathing the baby (80%). Only 38% and 36% of respondents felt that singing to the baby or listening to their baby, respectively, was something that a 'good mother' does. Forty-one percent of respondents reported that they never or only sometimes feel like they can or will be able to take care of their baby. Over a quarter (26%) often or always wished that they were not pregnant or did not have a child. Sixty-two percent of respondents said that they often or always enjoy taking care of their child. On the other hand, 37% said that they never (4%) or only sometimes (33%) enjoy taking care of their child. When asked if they enjoy playing with their child, 34% said they never or only sometimes enjoy it. In addition, 41% of pregnant respondents said that they never (5%) or only sometimes (36%) look forward to having this child.

4 DISCUSSION

Baseline findings suggest that pregnant adolescents and young mothers in rural Zimbabwe present with significant vulnerabilities amidst few enabling resources that significantly impact on their current circumstances and those of their children.

Marriage was common in this sample (58%) with almost 20% of girls being under 18 (this is likely an underestimate as many girls were reluctant to disclose their real age). The age of consent to sex in Zimbabwe is 16. From discussion with participants, one way for families to manage adolescent pregnancy, especially for youth under the age of sexual consent, is for the girls' family to insist on marriage and in return the family not place criminal charges on the father. This is a situation documented in other African contexts (Nkwemu et al., 2019). Most girls in this sample lived either with their husbands or in-laws (80%) and 37% reported they

did not feel safe at home. It is unclear if they felt unsafe on account of the relationship they had with their husbands, their in-laws, or the community they were living in, but this is concerning nonetheless.

Unintended pregnancy is noted to lead to poor outcomes including lower-quality parental behaviours and outcomes in the pre-natal phase, such as late access to prenatal care, poorer post-natal and childhood outcomes, and is a significant predictor of child maltreatment (Guterman, 2015; Hulsey et al., 2000). In our sample, 56% reported unintended pregnancy. In addition, unintended pregnancy is related to gender power and inequality; both significantly associated with gender-based violence (Christofides et al., 2014). Recent studies in Zimbabwe indicate that one in three girls experiences sexual violence before they turn 18 (Rumble et al., 2015; Shamu et al., 2018). The intergenerational effects of violence cannot be underestimated and the transmission of this violence needs to be intentionally addressed with vulnerable populations (Woollett & Thomson, 2016). Our sample is arguably a population with this vulnerable profile and would benefit from gender sensitive programming. There is also scarce literature on unintended pregnancy in developing contexts to which our study contributes (Gipson et al., 2008).

With regards to social support both barriers and buffers were present to support the health and well-being of the girls. Concerning *implicit* social support (or the benefits social connectedness bring; Taylor, 2011), most of the girls (64%) felt that they always (40%) or often (24%) had at least one adult that loved them. In addition nearly half of the girls (45%) reported that their parents/caregivers were often or always supportive. The fathers of the respondent's children provided different kinds of support. In most cases, this encompassed financial (monetary) support (69%) and material support such as food, clothing and shelter (65%). This can be highlighted as *explicit* social support (instances of actively drawing on social networks for support to provide concrete resources; Taylor, 2011). Explicit social support was also evident in girls forming part of households of their husbands (51%), their mothers/fathers in law (27%) or with a sibling (24%). It is hoped that these forms of social support were valuably accessible to the girls and their infants. Girls, however, reported poor peer social support with few feeling that they could rely on friends for help and almost 25% reported that there was no support from the fathers of their children. Interventions that help girls connect with their peers meaningfully, particularly in environments young people frequent together such as health settings, could increase an important source of support for them.

The psychosocial well-being of most respondents scored in the mid-range ($M = 52$). Most of the young women (89%) were the primary caregivers of their children and most (62%) indicated that they often or always enjoy taking care of their child. However, approximately a quarter (26%) often or always wished they were not pregnant or did not have a child. About 40% of the participants reported they felt they had difficulty caring for their babies, and of the pregnant participants, about the same percentage reported they were not looking forward to having their babies. In addition, almost 20% participants reported to often or always feeling sad. A recent systematic review indicates that approximately 16% of women experience antenatal depression and 20% postnatal depression in LMICs (Fisher et al., 2012), a finding consistent with our sample. Unwanted pregnancies amidst high caretaking responsibilities and poor social support arguably leads to increased stress. Parental stress and compromised mental health also have obvious negative effects on attachment and parenting leading to negative outcomes for infants and children (Bartlett et al., 2014; Corcoran, 2016; Guterman, 2015). Young mothers require additional recognition and support in managing the

stressors of early motherhood as well as the rapid transition to marriage and new living arrangements. Including pregnant adolescents and young mothers as part of mainstream child protection efforts is imperative, as unfortunately, most interventions targeting adolescents and youth tend to exclude them.

Although the majority of young mothers in our study felt that they had parenting skills (78%), they felt ill-prepared for adequate parenting – reporting average (47%) to poor or very poor parenting skills. Investing in parenting programmes that have been shown to be effective in LMICs for adolescents would be wise and prudent (Cluver et al., 2018; Lachman et al., 2016). In addition, focusing on the early child development needs of infants and young children of adolescent and young mothers would ensure secure mother-infant attachment and increased positive parenting skills, which would lead to enduring health advantages of young children and improve human capital, particularly in LMICs where these benefits are immensely undermined in the face of structural inequalities (Cooper et al., 2009; Richter et al., 2017).

The onset of pregnancy and marriage weakened participants' opportunities for continued schooling, with only 16% of girls still in school at the baseline. Future initiatives to enable young mothers to return to a variety of secondary levels of education can leverage on the strong educational grounding of over half of the respondents (59%) who completed up to Form 2. It is important to recognise the benefits Zimbabwe has made regarding secondary schooling and it is vital to continue this achievement to further adolescent SRH gains (Chandra-Mouli et al., 2020). Studies have found that increased access particularly to secondary schooling has multiple impacts on mothers in terms of poverty alleviation and employment, but also on child mortality (Grépin and Bharadwaj, 2015; Rosenberg, Pettifor, Nguyen, et al., 2015). Grépin and Bharadwaj (2015) found that in Zimbabwe, children born to mothers who attended some secondary schooling were 12 percentage points less likely to die, and an additional year of schooling decreased the probability of a child dying by about 21%. The effects were much stronger in rural areas and among less wealthy mothers. In addition, girls who drop out of school are probably at higher risk for adolescent pregnancy and could possibly benefit from receipt of accessible and high quality sexual and reproductive health services. Preventive interventions created to assist young women to remain in school or addressing the principal reasons for dropout may also support the reduction in incidence of adolescent pregnancy (Rosenberg, Pettifor, Miller, et al., 2015).

Investment by countries in expanding access to secondary education guarantees health benefits of a similar or greater impact than those realised with primary education. Secondary education has the potential to be a 'social vaccine' with far-reaching efficacy for various health outcomes in LMICs (Viner et al., 2017). It is also recommended that educational systems themselves intentionally encourage young mothers to resume their schooling and promote environments that support their reentry into education. This may necessitate that social norms be challenged to accommodate mothers in secondary schooling (Nkwemu et al., 2019). In addition, there is heartening evidence for the effectiveness of cash transfer programmes in keeping girls in schools (Ellsberg et al., 2015; Robertson et al., 2013) and may be a particularly effective support to participants in our sample who reported not going back to school on account of financial strain (49%). Evidence also suggests that programmes offering incentives and endeavouring to empower girls can be effective in preventing child marriage (Hallfors et al., 2011; Lee-Rife et al., 2012).

The participants in this study demonstrated poor SRHR knowledge, with only 35% currently using contraception. Almost a quarter of the sample (22%) believed a girl/woman could not become pregnant at first sex. Adolescents have limited and, in some places, no access to sexual and reproductive health education and contraception, making adolescent girls more prone to early and unintended pregnancies (Williamson, 2013), a finding substantiated by this study. Adolescents have distinct sexual and reproductive health needs that remain unmet, mainly as a result of lack of knowledge, social stigma, laws and policies preventing delivery of contraception and abortion to unmarried (or any) adolescents, and judgmental attitudes amidst service providers (Salam et al., 2016). In SSA, up to 68% of adolescents have an unmet need for contraception (Denno et al., 2015). In addition, our sample revealed a trend towards increased gravidity and poor birth spacing. Although literature on rapid repeat pregnancies in LMICs is scant, data suggest that this is a risk for infant and child mortality and other adverse child outcomes such as low birth weight, and preterm infants (Hindin et al., 2016). This is compounded by the reality of lack of secure basic resources and increased poverty as well as the stress of rearing additional young children. Again, there is evidence that receipt of cash transfers may result in longer spacing between pregnancies in youth women and is recommended (Rosenberg, Pettifor, Miller, et al., 2015).

To preserve sexual and reproductive health, adolescents must have access to accurate information and to the safe, effective, affordable and acceptable contraception method they choose. Support and counselling regarding these methods, both their use and effectiveness, is concurrently vital for utilization (Sedgh and Hussain, 2014). The primary reason given by the adolescents for why they were not using contraceptives in this study was that they ‘didn't need them’ (65%). After decades of research and programming to advance adolescent sexual and reproductive health, it is increasingly apparent that improving access to, and the quality of services does not single-handedly serve to enhance health outcomes. The SRHR of adolescents is heavily influenced by a host of social, cultural, political, and economic factors and inequalities (Svanemyr et al., 2015). Research suggests that there is strong parental denial of adolescent sexuality in Zimbabwe and challenges in tackling SRHR within families (Chikovore et al., 2013; Chiweshe and Chiweshe, 2017). Addressing these underlying determinants by engaging numerous stakeholders such as parents, community members and policy makers, is vital for adolescents to appreciate their SRHR and human rights, and for young women to increase their control of their sexual and reproductive lives. In addition, increased research is required to fully understand the manner in which structural, relational and psychological changes that accompany the shift to adolescent motherhood shape unprotected sex (Groves et al., 2018).

This study is limited in several ways. Firstly, the study used self-report instruments vulnerable to reporting bias and there might have been underreporting on account of social desirability bias or stigma. Secondly, this was a purposive sample and not selected randomly thus conclusions cannot be generalised. Thirdly, the sampling of the study may be subject to volunteer bias since participants joined voluntarily, thus the sample may be different than the normal population in their rate of experiencing adverse outcomes. Fourthly, lack of validated measures may be problematic in terms of accurate assessment.

5 CONCLUSION

Pregnant adolescents and young mothers demonstrate a range of vulnerabilities amidst some available resources in rural Zimbabwe. Participants reported child marriage, inadequate social support, lack of education or educational opportunities, poor sexual and reproductive health

knowledge and uptake of contraception, high levels of poverty, compromised mental health and challenges in parenting and attachment. There was also concern of potential high levels of IPV. Participants did report some protective resources to enable psychosocial development in terms of social support, and, for some, sound educational foundations. Our study provides evidence to guide programmatic intervention and design and adds to the limited available literature on this vulnerable group in SSA. Interventions that mobilise available resources and intentionally address the particular vulnerabilities of this population are critical to alleviating probable negative outcomes for both mothers and their children. Investing in health and education will not only transform the lives of adolescents and young mothers in LMICs, but will similarly generate elevated economic and social returns for their families and their children's future.

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CONFLICT OF INTEREST

No potential conflict of interest was disclosed by any of the authors.

AUTHOR CONTRIBUTION

Study design: LM, MB; Data collection: SB; Data analysis: MB; Study supervision: LM, MB; Drafting article: NW, MB; Critical revision: NW, MB, SB, LM, LE; Final approval: NW, MB, SB, LM, LE.

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