

Understanding adolescent perspectives on fertility control during Covid-19

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Abstract

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Background: This study investigates adolescents' perspectives on fertility control strategies during the COVID-19 pandemic in the urban township of Lusaka District. The background highlights existing challenges, such as high HIV rates and teenage birth rates. The research adopts a mixed-methods approach, utilizing in-depth interviews and structured questionnaires. The study involves 20 adolescents and 5 healthcare workers for qualitative data and 130 adolescents aged 13-24 for quantitative data, selected through purposive and convenience sampling.

Results: The findings reveal that a majority of participants are sexually active, using contraceptives, with a noteworthy proportion experiencing pregnancies despite contraceptive use. Vaccination status is linked to contraceptive use. Factors such as social support, economic support, spiritual/religious influence, self-efficacy, and assertiveness in sexual situations significantly influence the inclination to abstain from sexual intercourse. Higher education and older age are associated with increased contraceptive use. Some participants report being affected by COVID-19, citing challenges like condom shortages, strict measures, and fear of infection. Healthcare workers note the pandemic's impact on contraceptive accessibility, contributing to a surge in unwanted pregnancies and sexually transmitted diseases among young people.

Conclusion: The study concludes by emphasizing the necessity of enhancing contraceptive access and promoting safer sex practices, particularly targeting less-educated individuals, those with limited economic and social support, and younger demographics.

Keywords: *Adolescents, Fertility control, COVID-19 pandemic, Contraceptive use, Sexual behaviors*

INTRODUCTION

The global COVID-19 pandemic has ushered in unprecedented challenges across various facets of life, and its ramifications extend to the realms of sexual and reproductive health, particularly among vulnerable populations such as adolescents [1]. Lusaka, Zambia, stands at the intersection of these challenges, providing a unique backdrop for investigating how adolescents perceive and navigate fertility control during the ongoing pandemic [2]. This study delves into the intricate landscape of adolescent perspectives on fertility control, shedding light on their experiences, challenges, and coping mechanisms in the face of disrupted healthcare services and heightened uncertainties. Zambia, like many other countries, has witnessed disruptions in healthcare delivery due to the pandemic, with implications for the availability and accessibility of reproductive health services [3]. Adolescents, constituting a significant demographic segment, face distinctive challenges in articulating and addressing their reproductive health needs during these tumultuous times [4]. Against this backdrop, our research seeks to unravel the nuanced perspectives of adolescents in Lusaka regarding fertility control, exploring the impact of COVID-19 on their decision-making processes, access to contraceptives, and the influence of socio-cultural factors on their reproductive choices. Through both quantitative and qualitative inquiry and direct engagement with adolescents in Lusaka, this study aims to contribute valuable insights to the discourse on adolescent sexual and reproductive health in the context of a global health crisis [5]. Understanding the dynamics of fertility control during COVID-19 from the standpoint of adolescents is crucial for informing targeted interventions, policy formulation, and healthcare strategies that are attuned to the unique needs and challenges faced by this demographic [6]. This study was aimed at understanding the adolescent perspectives during the Covid-19 pandemic.

MATERIALS AND METHODS

Study design

This study employed a concurrent mixed methods design, utilizing a cross-sectional approach for quantitative and a case study for qualitative. The cross-sectional design facilitated simultaneous measurements of exposure and effect. The research aimed to gain insights into current attitudes regarding fertility control strategies during the Covid-19 pandemic among

adolescents and young people in the Urban Township. The study encompassed both qualitative and quantitative methodologies.

The investigation was conducted in the Lusaka District within urban Lusaka. As per the 2010 census, the urban Lusaka district houses a population of 1,747,152 people, of which 418,386 fall within the 10 to 19 age group. Notably, teenage pregnancy incidence is relatively low in the Lusaka district, with approximately 15% of teenagers experiencing pregnancy (CSO, 2018). Consequently, the sexually active nature of teenagers in this district rendered them valuable sources of information on adolescent contraception.

Participants in the study comprised adolescents and young people seeking healthcare at Chipata Clinic and Chilenje Level One Hospital in Lusaka. Chipata Clinic and Chilenje Level One Hospital were strategically selected as focal points (sites) to engage a diverse demographic of teenagers, both male and female, aged 13 to 24, representing various cultural backgrounds.

The sample comprised 130 records related to fertility control services at Chipata and Chilenje Level One Clinics in Lusaka. To establish the size of the qualitative sample, saturation methods were employed. Initially, we engaged 16 health practitioners offering family planning services from both Chilenje and Chawama Level One Clinics in Lusaka, with ten individuals selected from each location. Guided by theoretical saturation, the final decision led to a sample size of 20 adolescents and 5 healthcare workers.

Data collection tool

1. Quantitative Phase:

For the quantitative phase, surveys were administered to adolescents aged 13 to 24 in Lusaka, Zambia, utilizing structured questionnaires to assess attitudes, knowledge, and behaviors concerning fertility control during COVID-19. These surveys were conducted either electronically or in-person, with the sample size determined to achieve statistical significance. Additionally, a health records review extracted data from the records of adolescents attending Chipata Clinic and Chilenje Level One Hospital, focusing on variables such as the incidence of teenage pregnancies, contraceptive use, and other relevant health indicators. The analysis spanned the COVID-19 period, providing a comprehensive understanding of the impact on adolescent reproductive health.

2. Qualitative Phase:

During the qualitative phase, in-depth interviews were conducted with a total of 20 adolescents and 5 healthcare workers in Lusaka, Zambia. The interview guide consisted of open-ended questions aimed at exploring participants' perceptions, challenges, and experiences related to fertility control during the COVID-19 pandemic. Purposeful sampling was employed to ensure diversity in backgrounds, experiences, and contraceptive practices among the participants, contributing to a comprehensive understanding of the nuanced perspectives within the adolescent and healthcare worker populations.

Data analysis

Quantitative data were analyzed using Stata v.14, employing descriptive statistical approaches based on data type. Categorical data were presented through proportions and percentages using one-way and two-way tables. The qualitative data underwent thematic analysis, involving a manual examination of patterns and themes.

Ensuring validity involved meticulous procedures, including structuring questions logically, aligning them with the measurement scale, and categorizing responses. Consistency in questioning was maintained by addressing errors and eliminating confusion in question sequencing.

To enhance the effectiveness of the data gathering strategy, considerations were given to the target population's educational level, cultural biases, and language limitations. Field testing involved individuals similar to the target group, affirming the appropriateness of the procedure. Validity was further bolstered by employing diverse data gathering methods, encompassing both questionnaires and interviews. Rigorous review and cleansing processes were implemented to guarantee the completeness and accuracy of the collected data.

RESULTS

Sociodemographic Characteristics

The quantitative phase of the study constituted a sample of 130 adolescents and young people as well as 5 healthcare workers. Most (58.14%) of the participants were 18 years and below. Majority were female (69.77%), with over half (64.46%) indicating they were in a relationship. Additionally, majority were still in secondary school (76.58%) while close to half (49.22%) of the participants were sponsored by formally employed persons. The results further indicate that most of the participants (42.19%) lived with their mother and father. see Table 1.

Table 1 Socio-demographic Characteristics of the Study Participants

Variable	Category	Frequency	Percentage
Age	<=18 years	75	58.14
	Above 18 years	54	41.86
Sex	Male	39	30.23
	Female	90	69.77
In a relationship	No	43	35.54
	Yes	78	64.46
Level of Education	<=12th grade	85	76.58
	Tertiary	26	23.42
Employment Status of Guardian	Formally Employed	63	49.22
	Other	37	28.91
	Unemployed	28	21.88
Live With	Mother Only	33	25.78
	Father Only	16	12.5
	Father and Mother	54	42.19
	Other	25	19.53

COVID-19 and Fertility Control Strategies among Adolescents and Young People

The goal of this study was to see how COVID-19 affected the fertility techniques used by adolescents and young people. Only

vaccination (p 0.05) was linked to contraceptive use, according to the findings. In comparison to individuals who were not vaccinated, those who were vaccinated were more likely to use contraception. There was no evidence of a link

between abstinence and health. See Table 2

Table 2 Fertility Control Strategies and Compliance with COVID-19 Preventive Measures

Variable	Group	Abstain		Use Contraceptives		
		No	Yes	Group	Yes	No
Compliance	Poor	28 (35.9%)	50 (64.1%)	Poor	50 (63.3%)	29 (36.7%)
	Good	11 (28.2%)	28 (71.8%)	Good	25 (64.1%)	14 (35.9%)
Fully Vaccinated	No	24 (31.6%)	52 (68.4%)	No	54 (70.1%)	23 (29.9%) *
	Yes	17 (33.3%)	34 (66.7%)	Yes	26 (51.0%)	25 (49.0%)

* $p < 0.05$

Socio-cultural Factors and Fertility Control Strategies

Abstinence and Socio-cultural Factors

When compared to situations where these factors were lacking ($p = 0.05$), having social support,

economic support, spiritual/religious influence, self-efficacy, and speaking out when approached in a sexual way significantly boosted the desire to abstain from sexual intercourse. However, there was no statistically significant relationship between having someone to turn to ($p = 0.269$), age group ($p = 0.422$), degree of education ($p = 0.115$), and having someone to turn to for finances ($p = 0.292$) and the end variable, abstinence. (**Table 3**).

Table 3: Association between abstinence and selected socio-cultural factors

Variable	Group	Abstinence		P
		No	Yes	
Age group	≤ 18 years	22 (29.7%)	52 (70.3%)	0.422
	> 18 years	19 (36.5%)	33 (67.5%)	
Level of Education	$\leq 12^{\text{th}}$ grade	23 (27.4%)	61 (72.6%)	0.115
	Tertiary	11 (44.0%)	14 (56.0%)	
Someone to Turn To	No	9 (42.9%)	12 (57.1%)	0.269
	Yes	32 (30.5%)	73 (69.5%)	
Some to Turn to For Finances	No	15 (38.5%)	24 (61.5%)	0.292
	Yes	24 (28.9%)	59 (71.1%)	
Social Support	No	19 (55.9%)	15 (44.1%)	0.001*
	Yes	21 (23.3%)	69 (76.7%)	
Economic Support	No	22 (44.0%)	28 (56.0%)	0.019*
	Yes	18 (24.0%)	57 (76.0%)	
Spiritual/Religious Influence	No	15 (60.0%)	10 (40.0%)	0.001*
	Yes	25 (24.8%)	76 (75.3%)	
Self-efficacy	No	11 (52.4%)	10 (47.6%)	0.031*
	Yes	30 (28.3%)	76 (71.7%)	
Speak Out When Approached in Sexual Way	No	10 (62.5%)	6 (37.5%)	0.006*
	Yes	31 (28.2%)	79 (71.8%)	

* $p < 0.05$

Contraceptives Use and Socio-cultural Factors

The study found that contraceptive use among adolescents and young people was connected with a greater level of education ($p = 0.007$) and age group 18 and above ($p 0.001$). However, there was

no significant relationship between the outcome variable and someone to turn to for help ($p = 0.340$), someone to turn to for finances ($p = 0.205$), social support ($p = 0.785$), economic support ($p = 0.309$), spiritual/religious influence ($p = 0.143$), self-efficacy ($p = 0.156$), or speaking out when approached sexually ($p = 0.599$) (Table 4).

Table 4 Association between Contraceptive Use and Socio-cultural Factors

Variable	Group	Use of Contraceptives		P
		No	Yes	
Level of Education	<= 12 th grade	57 (67.9%)	27 (32.1%)	0.007*
	Tertiary	10 (38.5%)	16 (61.5%)	
Age group	<=18 years	56 (75.7%)	18 (24.3%)	<0.001*
	>18 years	24 (45.3%)	29 (54.7%)	
Someone to Turn To	No	15 (71.4%)	6 (28.6%)	0.34
	Yes	64 (60.4%)	42 (39.6%)	
Some to Turn to For Finances	No	28 (71.8%)	11 (28.2%)	0.205
	Yes	51 (60.0%)	34 (40.0%)	
Social Support	No	21 (60.0%)	14 (40.0%)	0.785
	Yes	57 (62.6%)	34 (37.4%)	
Economic Support	No	29 (56.9%)	22 (43.1%)	0.309
	Yes	50 (65.8%)	26 (34.2%)	
Spiritual/Religious Influence	No	12 (50.0%)	12 (50.0%)	0.143
	Yes	68 (66.0%)	35 (34.0%)	
Self-efficacy	No	16 (76.2%)	5 (23.8%)	0.156
	Yes	64 (59.8%)	43 (40.2%)	
Speak Out When Approached in Sexual Way	No	9 (56.3%)	7 (43.7%)	0.599
	Yes	70 (63.1%)	41 (36.9%)	

* $p < 0.05$

Lived Experiences of Adolescents on Fertility Control

Some of the participants in this study said they were impacted by COVID-19, while others said they were unaffected by the epidemic. The majority of them continued to have sexual relations and used available contraception, with male condoms being the most popular. Some did say otherwise, with one saying;

"Sexual activity decreased since we began to see each other less during the pandemic. 20 years old female participant.

Others one said;

"COVID-19 had no effect on my sexual life because I was still able to have sex with my spouse as before the epidemic." 19-year-old female

participant.

"It was challenging in the beginning, but as everything settled down, it grew easier." 21 years old male participant.

"I use condoms and morning pill to prevent pregnancy just as a by the way situation" 19 years old female participant.

Among those who highlighted the challenges they experienced, a good number indicated stock outs of condoms, strict measures, and fear of contracting the infection.

"Due to five golden rules, especially social distance, they did not want so many people at the clinic and my fear of getting infected made it really difficult for me." 18 years old female participant

“I was scared that I could get coronavirus and give it to my relatives some of whom might be affected severely so I opted to buy on my own at the nearest chemists. However, due to financial challenges sometimes I had unprotected sexual intercourse because I trust my boyfriend and we often get tested.” **18 years old female participant.**

The study also interviewed the healthcare workers who indicated that pandemic made it difficult for adolescents and young people to access

contraceptives which led to a rise in unwanted pregnancy and sexually transmitted diseases among young people.

“There was an increase in sexually transmitted diseases and unwanted pregnancy. Adolescents and young people were not coming to the clinic because of fearing the pandemic and infection. Meanwhile, they were doing things they were not supposed to do at home.” **35 years old female nurse.**

DISCUSSION

The majority of adolescents and young people in our study reported sustained sexual activity and contraceptive use, diverging from findings in similar healthcare investigations during the lockdown in Nigeria [6,7]. While the Nigerian study revealed significant declines in service utilization, including shortages of medications and contraceptives, our study, conducted over an extended period, suggests that increased COVID-19 awareness contributed to a steady rise in family planning attendance. A comparable Mozambican study [8] supports our findings, emphasizing the adaptability of reproductive health services in the face of pandemic challenges.

The association between COVID-19 vaccination and increased contraceptive use highlights the evolving dynamics of healthcare adaptations during the pandemic. Vaccinated individuals in our study were more likely to access contraceptives, aligning with heightened awareness and vaccination efforts. Notably, our study did not find evidence linking abstinence to health, challenging assumptions about the conventional relationship between sexual activity and health outcomes.

Pregnancy and contraceptive use patterns revealed a significant association between contraceptive use and increased pregnancy rates, potentially attributed to incorrect condom usage. This underscores the importance of comprehensive sexual education and consistent, correct condom use to maximize effectiveness. Our findings contrast with studies reporting high condom use rates, emphasizing the critical role of proper usage [9-17].

Socio-cultural factors significantly

influenced both abstinence and contraceptive use. Positive impacts of social support, economic support, spiritual/religious influence, self-efficacy, and assertiveness in sexual situations on abstinence align with existing literature. Conversely, factors like having someone to turn to, age group, level of education, and financial support showed no significant association with abstinence, highlighting the intricate nature of these relationships.

Educational attainment and older age emerged as factors linked to increased contraceptive use, aligning with broader trends. The study results suggest the need for targeted interventions tailored to diverse demographic groups, acknowledging the unique needs of adolescents in navigating their sexual and reproductive health. The importance of education in influencing contraceptive practices is reinforced by studies indicating that greater knowledge facilitates easier access to sexual and reproductive health services [18-23].

The impact of COVID-19 on sexual life and contraceptive use among adolescents revealed varied experiences, with the majority continuing sexual relations, primarily using male condoms. Challenges such as stockouts, stringent procedures, and fear of infection were reported by some, echoing findings in other studies [24]. Healthcare practitioners noted difficulties in contraceptive access during the pandemic, contributing to unintended pregnancies and sexually transmitted infections. These findings align with studies indicating increased unplanned pregnancies during the COVID-19 epidemic [25], emphasizing the critical role of accessible reproductive health services.

This study contributes nuanced insights into the complex interplay of socio-cultural

factors, healthcare adaptations, and the evolving dynamics of the COVID-19 pandemic on adolescent reproductive health. The results highlight the need for adaptive, context-specific interventions that consider socio-cultural factors and healthcare adaptations, emphasizing the importance of comprehensive sexual education to improve contraceptive practices. Further research should explore the long-term implications of these findings and inform strategies that address the diverse needs of adolescents in navigating their sexual and reproductive health amidst global health challenges.

CONCLUSION

While the COVID-19 had an impact on sexual life and contraceptive usage among young people and adolescents, not all teenagers were significantly affected, according to one study. The majority of young individuals continue to participate in sexual activity while using contraceptives, while others abstain. It is important noting, however, that many people have continued to have difficulty getting contraception as a result of the COVID-19 outbreak. For both adolescents and young people, there is a need to expand access to contraception and encourage safer sex. The emphasis must be on people who are less educated, have little economic and social resources, and are considerably younger.

DECLARATION

Competing interests There were no competing interests from all authors in this study.

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