

## Review Article

# Drivers of early marriage and teenage pregnancy in Kenya and Uganda during COVID-19 lockdown period: A systematic review

### ABSTRACT

The present study aimed to explore the drivers of early marriage and teenage pregnancy in Kenya and Uganda during COVID-19 lockdown period. A systematic review design was adopted. The major online databases utilized were PubMed, Google Scholar, Uganda and Kenya Ministry of Health repositories, ScienceDirect, and Scopus. Studies that were originating from Kenya and Uganda that were publicly available in electronic format published from March 2020 to March 2022 were used. The thematic analysis identified major concepts that were drivers to the present research problem which were as follows: (1) school closure and (2) loss of income by parents. The COVID-19 containment measures introduced in the two countries were noted as major contributing factors. During the pandemic, lockdown led to school closures which meant the teenagers being idle at home with an increased opportunity to indulge in sexual risk behaviors. Schools have been noted to be a safe place protecting this vulnerable population. However, with their prolonged closure, the teenagers were exposed to sexual predators. Parents lost income, and this might have contributed to early marriages and teenagers' dependency on their sexual partners. Based on the reviewed evidence, the present study furthers the advocacy for the reduction of early marriages and teenage pregnancy, especially in the current COVID-19 pandemic era. The study calls upon the governments to intensify efforts toward the present research problem as the COVID-19 pandemic is eroding the earlier gains made within the region.

**Keywords:** Adolescent, COVID-19, humans, Kenya, marriage, sexual behavior, teenage pregnancy, Uganda

### INTRODUCTION

COVID-19 is an infectious disease that has spread globally, infecting over 387 million people and resulting in 5,705,754 deaths as by February 4, 2022.<sup>[1,2]</sup> The disease is an ongoing global pandemic that was declared so by the World Health Organization (WHO) on March 11, 2020, having spread to over 110 countries and territories.<sup>[3]</sup> Currently, Africa accounts for 2.8% of the global cases of which Uganda has reported 162,136 confirmed cases and 3549 deaths.<sup>[1,4]</sup> While Kenya has had 321,922 infections

**Brian Barasa MASABA<sup>1</sup>, Rose MMUSI-PHETOE<sup>1</sup>, Jacklyne Atieno ODHIAMBO<sup>2</sup>, Bernard RONO<sup>3</sup>, Jane Wamuyu KABO<sup>4</sup>, Damaris MORAA<sup>5</sup>, Alex RUTTO<sup>6</sup>, John Kennedy MOTURI<sup>4</sup>, Thomas Ong'ondo NG'AMBWA<sup>6</sup>, Damaris OCHANDA<sup>6</sup>, Sammy Diana MAWIA<sup>7</sup>, Mary KIPMEREWO<sup>6</sup>, Samuel OYUGI<sup>6</sup>, Stephenie Lydia OJIAMBO<sup>8</sup>**

<sup>1</sup>Department of Health Studies, School of Social Sciences, College of Human Sciences, University of South Africa, Pretoria, South Africa; <sup>2</sup>School of Nursing, Great Lakes University of Kisumu, Kisumu, Kenya; <sup>3</sup>Centre of Microbiology Research, Kenya Medical Research Institute, Kisumu, Kenya; <sup>4</sup>School of Nursing, Kibabii University, Bungoma, Kenya; <sup>5</sup>School of Nursing, Kaimosi Friends University, Kaimosi, Kenya; <sup>6</sup>School of Nursing, Midwifery and Paramedical Sciences, Masinde Muliro University of Science and Technology, Kakamega, Kenya; <sup>7</sup>School of Nursing, University of Embu, Embu, Kenya; <sup>8</sup>School of Economics, University of Nairobi, Nairobi, Kenya

**Address for correspondence:** Dr. Brian Barasa MASABA, Department of Health Studies, University of South Africa, College of Human Sciences, School of Social Sciences, Pretoria, South Africa.  
E-mail: 63714094@mylife.unisa.ac.za

**Submitted:** 01-Jul-2022  
**Accepted:** 04-Nov-2022

**Revised:** 12-Oct-2022  
**Published:** 26-Dec-2022

Access this article online	
<b>Website:</b> <a href="http://www.journalin.org">www.journalin.org</a>	<b>Quick Response Code</b> 
<b>DOI:</b> 10.4103/jin.jin_63_22	

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: WKHLRPMedknow\_reprints@wolterskluwer.com

**How to cite this article:** Masaba BB, Mmusi-Phetoe R, Odhiambo JA, Rono B, Kabo JW, Moraa D, *et al.* Drivers of early marriage and teenage pregnancy in Kenya and Uganda during COVID-19 lockdown period: A systematic review. *J Integr Nurs* 2022;4:202-10.

and 5604 COVID-19-related deaths since the pandemic began.<sup>[1]</sup>

To contain the COVID-19 pandemic, countries were advised to urgently implement some of the following measures by the WHO: have a lockdown in place, prohibit social gatherings within communities, maintain social distancing, and practice cough hygiene. A lockdown is defined as an emergency protocol issued by the government with the purpose of preventing people from leaving a given area.<sup>[5]</sup> In the East African region countries, Uganda, Rwanda, and Kenya were stricter in their COVID-19 measures, contrary to Burundi and Tanzania that resorted more to prayer as a cure for the epidemic.<sup>[6,7]</sup> Kenya and Uganda's COVID-19 response strategy was somehow similar, as they reported their first cases within the same period. They had a hard lockdown on March 15, 2020, and March 20, 2020, respectively. Further measures were that they closed schools, did massive testing of people, contact tracing and put cases in quarantine.<sup>[6,7]</sup> While tight restrictions on movement may contribute to reduced disease transmission.<sup>[2]</sup> These COVID-19 containment measures are having far-reaching impacts on people around the world.<sup>[8]</sup>

Previous literature demonstrates that in times of humanitarian crisis (e.g., conflict and war, famine, and disease outbreaks), women and girls are especially vulnerable because of gender inequality.<sup>[8]</sup> A case in point is the Ebola crisis in Sierra Leone in 2014–2015.<sup>[9,10]</sup> It is noted that there was a 65% increase in teenage pregnancy due to girls being out of school.<sup>[8]</sup> Since children are extremely vulnerable to the “secondary” impacts of the pandemic, with a possibility of lifetime effects, it is crucial to look into the impact of COVID-19 on children.<sup>[3]</sup> Based on this argument, the COVID-19 effects reviewed in the present study are not the direct result of the infection but instead the indirect consequences of socioeconomic disruptions in the society more so teenagers.<sup>[11]</sup> Teenage pregnancies are correlated to contextual factors, which have to do with the environments where these teenagers live.<sup>[12]</sup> These include services available to the teenagers to empower them, including learning – information and formal, health services and education, social services, and other socioeconomic factors.<sup>[12]</sup> With disruption of these services due to lockdown; the COVID-19 pandemic further indirectly exposes adolescent girls to multiplied risks of sexually transmitted infections including HIV and human papillomavirus.<sup>[13]</sup>

It should be noted that early marriage and teenage pregnancy have been a persisting public health problem even before the COVID-19 pandemic. The pandemic is currently exacerbating

many of the complex factors that drive child marriage and teenage pregnancy. Child marriage – also termed “early marriage” – is broadly defined as a legal or customary union involving a boy or girl under the age of 18.<sup>[14]</sup> The world hosts in excess of 650 million girls and women who were married as child brides.<sup>[14]</sup> Global estimates further show that 12 million girls under 18 years of age are married annually. In other words, every minute, 22 girls have their futures cut short as they are exposed to early marriages.<sup>[15]</sup> Although almost every country in the world has pledged to end child marriage by 2030 under target 5.3 of the Sustainable Development Goals, progress has been slow.<sup>[15]</sup>

In sub-Saharan Africa, nearly half (45%) of all pregnancies among girls aged 15–19 are unintended.<sup>[16]</sup> Projections from UNFPA/UNICEF show that the impact of COVID-19 could potentially result in an additional 13 million child marriages taking place between 2020 and 2030 that could otherwise have been averted.<sup>[17]</sup> Adolescent pregnancy already constitutes a major public health concern in Kenya; prior to COVID-19, one in five girls between 15 and 19 years was either pregnant or already a mother.<sup>[12,18]</sup> Further, a recent anecdotal Kenyan national report noted that, there was a 40% increase in teenage pregnancy 3 months after the COVID-19 lockdown was introduced.<sup>[19]</sup> While in Uganda, vulnerability of women and children due to the COVID-19 pandemic and its associated containment measures has so far been understated in the literature and policymaking.<sup>[20]</sup>

With most energies of the international health bodies geared toward the stop of COVID-19, there is fear of the adolescent girls' health advocacy being neglected.<sup>[21]</sup> For instance, field research activity in Uganda on “child marriage in development and humanitarian contexts” has also been put on hold until COVID-19 movement restrictions are lifted.<sup>[22]</sup> There is a trending call to action for governments to put in measures to safeguard this vulnerable population of adverse sexual reproductive health outcomes.<sup>[13]</sup> According to Plan International Organization reports, the COVID-19 pandemic risks undoing decades of progress made against early marriage, especially in the sub-Saharan region.<sup>[23]</sup> The present systematic review identifies, evaluates, and synthesizes research results to create a summary of current evidence that can contribute to evidence-based practice.<sup>[24]</sup> It is essential as its evidence generates insights beyond those found in a single study. In the present study, the researchers integrated and evaluated evidence from two countries on the current research problem.<sup>[24]</sup> The present study aimed to explore the drivers of early marriage and teenage pregnancy in Kenya and Uganda during COVID-19 lockdown period.

## METHODOLOGY

### Study design

The PICoS tool was used to identify the components of study inclusion through the evaluation of “Participant,” “Phenomena of interest,” “Context,” and “Study design.” The participants were adolescents, parents, or health-care providers. A phenomenon of interest was the possible drivers of early marriage and teenage pregnancy. A COVID-19 lockdown-related teenage pregnancy in the current study was defined as any pregnancy of a girl who is 19 years and below, and the pregnancy occurred during the COVID-19 lockdown period of March 2020 to its end in the two respective countries.<sup>[25]</sup> The context of the study was in Kenya and Uganda. Study design was a systematic review of studies that were originating from the aforementioned countries that were publicly available in electronic format. The study adopted systemic review methodology that was previously presented by Liberati *et al.*<sup>[24]</sup> Articles included were those published from March 2020 to May 2022 and in English language. No restrictions were put on the type of study designs adopted in the articles. This was to enable the researchers to have a large pool of articles to sample. The articles that discussed a similar research problem to the present study were included. Inaccessible articles, those outside the study area, abstracts, letters to the editor, and unpublished studies were all excluded.

### Information sources

The major online databases utilized were PubMed, Google Scholar, Uganda and Kenya Ministry of Health repositories, ScienceDirect, and Scopus. MeSH terms that guided the search were as follows: “adolescent,” “COVID-19,” “female,” “humans,” “Kenya,” “marriage,” “pregnancy in adolescence,” “Pregnancy,” “sexual behavior,” “Uganda.”

### Search

The search of articles commenced on January 7 and ended on May 3, 2022. The researchers used the following combination of MeSH terms in the PubMed, Google Scholar, Uganda and Kenya Ministry of Health repositories, ScienceDirect, and Scopus databases: “adolescence pregnancy,” “teenage pregnancy,” “adolescence marriage,” “adolescence sexual behavior,” AND “COVID-19 Uganda,” AND “COVID-19 Kenya.”

### Study selection

Mendeley Reference Manager was used to store the downloaded copies of the articles on the researchers’ personal computer. The reviewers assessed independently selected the articles in the following order: title screening, abstract screening, and finally full-text screening. Disagreements in the selection process were discussed and solved by consensus

among the reviewers.

### Data collection process

The reviewers were divided into two groups (A and B). The two independent groups of reviewers conducted comprehensive searches of relevant electronic databases and manual searches of relevant research bibliographies. Data were collected from the articles that were selected after full-text screening. The researchers utilized a data extraction form that identified the article’s year of publication, study setting, key objectives, study design, results, and discussion. Disagreements in the selection process were discussed and solved by consensus among the two groups of reviewers.

### Quality assessment

The two aforementioned groups of reviewers (A and B) used the Critical Appraisal Skills Programme for the quality assessment of the identified articles. Each included study was scored on 14 aspects: (1) whether the study aims/objectives were clear; (2) whether the study design was appropriate for the stated aim (s); (3) whether the study sample size was justified; (4) whether the study the target/reference population was clearly defined; (5) whether the selection process was likely to select subjects/participants that were representative of the target/reference population under investigation; (6) whether the risk factor and outcome variables measured appropriate to the aims of the study; (7) whether the risk factor and outcome variables were measured correctly using instruments/measurements that had been piloted or published previously; (8) whether the methods (including statistical methods) were sufficiently described to enable them to be repeated; (9) whether the basic data were adequately described; (10) whether the response rate failed to raise concerns about nonresponse bias; (11) whether the authors’ discussions and conclusions were justified by the results; (12) whether the limitations of the study were discussed; (13) whether there were no any funding sources or conflicts of interest that may affect the authors’ interpretation of the results; and (14) whether there was an ethical approval or consent of participants.<sup>[26,27]</sup> The reviewed studies were categorized as follows: those that scored 5 out of 14 points were considered of low quality; 6–10 points were of moderate quality and finally high quality studies were those with a score above 10 points. Only studies with moderate and high quality were included. The first group (A) of reviewers independently assessed the quality of the included studies while the second group (B) of reviewers checked the assessed studies. Disagreements in this quality assessment were discussed and solved by consensus among the groups.

### Synthesis of results

The extracted data included research designs, populations, interview methods, and main findings on the drivers of early marriage and teenage pregnancy in Kenya and Uganda during COVID-19 lockdown period. The findings were assembled and categorized based on similarity of meaning. These categories were then integrated to generate comprehensive findings. While the development of descriptive themes remains “close” to the primary studies, the analytical themes represent a stage of interpretation whereby the reviewers “go beyond” the primary studies and generate new interpretive constructs, explanations, or hypotheses.<sup>[28]</sup> The thematic analysis identified two major concepts to the present research problem. Data were subsequently presented in two thematic areas. The current study adopted PRISMA [Figure 1] reporting as demonstrated previously by Liberati *et al.*<sup>[24]</sup>

### RESULTS

The online search from the major databases generated 2884 of which 24 were identified as duplicates and removed. Upon the completion of the screening process of titles and abstracts, only 37 articles were identified and were included in the subsequent full-text review step. On further assessment using the inclusion criteria set, of the 37 articles, only 16 were finally selected. Table 1 demonstrates the characteristics of the articles that formed the final sample size; 9 articles were from Kenya, 6 from Uganda and one was a multi-site article of both countries. All the articles were published between 2020 and 2022.

The present systematic review study aimed to explore the drivers of early marriage and teenage pregnancy in Kenya and Uganda during COVID-19 lockdown period. The thematic analysis identified two major concepts to the present research problem which were discussed as follows: (1) COVID-19 lockdown and school closure and (2) loss of income by parents.

### DISCUSSION

#### COVID-19 lockdown and school closure

As earlier defined in this study, COVID-19 lockdown-related teenage pregnancy is any pregnancy of a girl who is 19 years and below and the pregnancy occurred during the COVID-19 lockdown period of March 2020 to its end in the two respective countries.<sup>[25]</sup> There is evidence to demonstrate a rise in occurrences of teenage pregnancies within this pandemic period in the region as earlier predicted in past reports.<sup>[19]</sup> Ugandan youths in a past survey noted that their most common problem during pandemic was unwanted pregnancy (32.4%).<sup>[29]</sup> A Kenya Demographic and Health Survey (KDHS) review demonstrated a steady rise in number of pregnancies in the group of 15–19 years during the COVID-19 period compared to the pre-COVID-19 period.<sup>[11]</sup> Corroborating this, the UNICEF report shows that, in Kenya, more than 150,000 teenage girls became pregnant over a 3-month period during the economic lockdown, which amounts to a 40% jump.<sup>[14]</sup> Similarly as noted within the UNICEF report in Uganda, the number of adolescent pregnancies reportedly doubled in the Nwoya district when

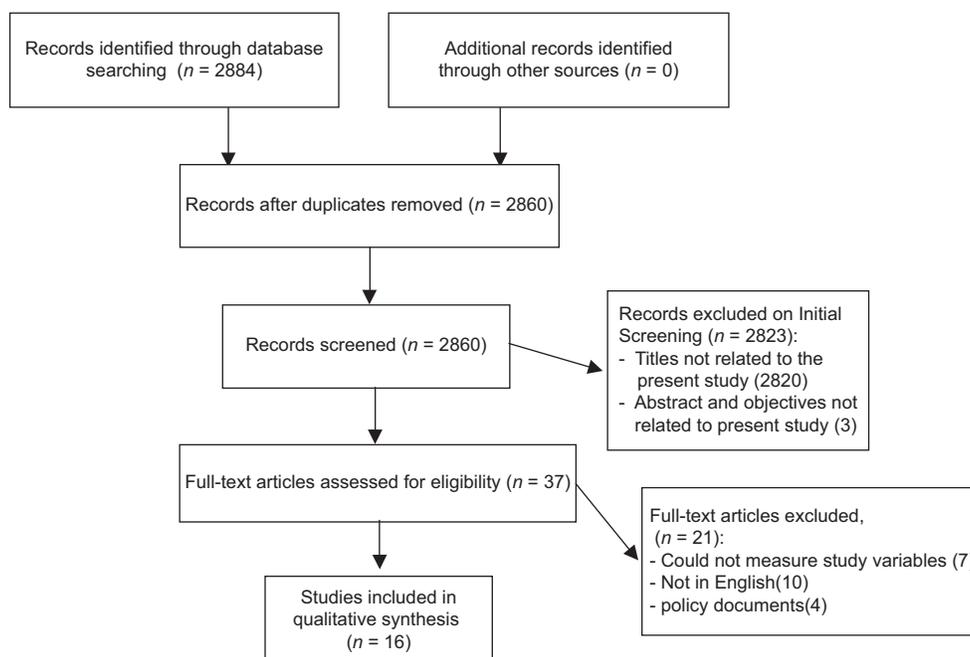


Figure 1: PRISMA flow diagram of literature search and screening

**Table 1: The characteristics of the articles sampled for the present study**

Article	Design	Participant	Setting	Quality score	Results
Karp <i>et al.</i> , 2021	Mixed-methods study to	756 partnered adolescents aged 15–24 years	Kenya	12	COVID-19 disrupted adolescent girls' and young women's romantic relationships, depriving some of partner emotional support and exposing others to sexual violence, early pregnancy
Flowe <i>et al.</i> , 2020	Cross-sectional	80	Kenya	13	Girls had heightened vulnerability to sexual violence committed by nonstranger perpetrators (e.g., neighbors) at private residences during the daytime, owing to school closures and a lack of alternative safe venues
Shumba <i>et al.</i> , 2020	-	-	Kenya	10	During COVID-19 pandemic, the trend of teenage pregnancy is already showing signs of being more severe as a result of prolonged school closure, sexual violence, and the declining economic situation in Kenya
Mambo <i>et al.</i> , 2021	Cross-sectional	724 participants	Uganda	14	STIs and unwanted pregnancies were the most prevalent problems faced by Ugandan youths during the COVID-19 lockdown
Parkes <i>et al.</i> , 2020	Qualitative longitudinal	36 young people	Uganda	12	Young people interviewed reported instances in their communities of economic pressures and conflict in family homes during the lockdown leading girls to move to live with their boyfriends
Lampi, 2021	Cross-sectional (content analysis)		Uganda	11	"Men are taking advantage of the financial difficulties brought about by the lockdown, demanding sex from girls in exchange meeting their basic needs"
Nabukeera, 2021	Cross-sectional (content analysis)		Uganda	10	Prolonged stay at home for women and young girls is not safe as many of them are exposed to increased risk of infections through rape and defilement among other sexual evil
Nuwematsiko <i>et al.</i> , 2022	Mixed methods cross-sectional study	425 household heads	Uganda	14	"Girls have got unwanted pregnancies and as a mother, I can't take care of the pregnant girl and the unborn baby because I have no money"
Shikuku <i>et al.</i> , 2022	Cross-sectional study		Kenya	12	COVID-19 may have contributed to increased adolescent pregnancy
Zulaika <i>et al.</i> , 2022	Longitudinal	910 girls in their last 2 years of secondary school	Kenya	14	Adolescent secondary schoolgirls who remained out of school for 6 months due to the COVID-19 lockdown had twice the risk of becoming pregnant and 3 times the risk of dropping out of school when compared with similar girls graduating just prior to the outbreak
Nyakato <i>et al.</i> , 2021		-	Uganda	10	SGBV is high in Uganda, by both global and African comparison, and the COVID-19 pandemic has made things even worse
Esho <i>et al.</i> , 2022	Cross-sectional study		Kenya, Uganda,	14	COVID-19 pandemic has contributed to the increase in both female genital mutilation/cutting and child, early or forced marriages
UN-Women-Kenya, 2020	Cross-sectional study	2587 individuals from all the 47 counties in Kenya	Kenya	12	Sexual harassment (19% and 16% in urban and rural areas, respectively), child marriages (15% and 20% in urban and rural areas, respectively)
Stevens <i>et al.</i> , 2021	Cross-sectional study		Kenya	14	Sexual violence offense during the pandemic in Kenya most often is taking place during the day (76% of all cases) when children would have previously been at school
PASU, 2022	Cross-sectional study	Nairobi, 403 in Kisumu, 717 in Kilifi, and 1129 in Wajir (a total of 2747 interviews)	Kenya	10	Almost all girls who got pregnant during the school's closure period said that their pregnancies were not planned and expressed apprehension about the future of their education
United-Nations-Human-Rights, 2020	Cross-sectional study	13,872 people across the 7 counties	Kenya	14	Girls no longer receive sanitary towels free of charge and some have engaged in transactional sex to be able to purchase sanitary towels

PASU: Presidential-policy-and-strategy-unit, SGBV: Sexual and gender-based violence, STIs: Sexually transmitted infections

comparing data of January to March and April to June 2020 trends.<sup>[14]</sup> In the context of public health, teenage pregnancy presents significant health consequences to both mothers and newborns.<sup>[7]</sup> It is noted that pregnant adolescents face a higher risk of eclampsia, endometritis, and puerperal infections than women aged 20–24 years.<sup>[7]</sup> In addition, adolescent births are more likely to result in preterm births, low birth weight, and newborns with severe congenital conditions.<sup>[7]</sup> Additional consequences are as follows: unwanted pregnancy, unsafe abortion, and a higher risk of sexually transmitted infections, including HIV, during vaginal intercourse.<sup>[30]</sup> Based on the observed trends, it would not be uncommon for the society to observe an increased risk in perinatal complications and mortalities among the teenagers. A study that utilized KDHS data showed increased adolescent maternal death trends in the pandemic period.<sup>[11]</sup>

It is likely that, the COVID-19-pandemic measures put in place contributed to teen pregnancies. This can also imply that without “the strict COVID-19-pandemic measures” most of the teenager pregnancies recorded during the lockdown period would have been avoided. Ssali’s analysis in Uganda shows that early marriage was attributed to teenagers being out of school.<sup>[6]</sup> School closures heighten teenage pregnancies. Rafaeli and Hutchinson<sup>[31]</sup> illustrate that adolescent girls out of school in Africa are two times more likely to start childbearing earlier than those who are in school. In a mixed-methods study to understand how COVID-19 affected girls’ and young women’s relationships in Kenya, participants noted that school closures led to some girls to spend more time with their partners due to fewer obligations and increased free time.<sup>[32]</sup> On the contrary, when the teenagers are in school, they are less likely to be forced into marriage and be abused sexually.<sup>[33]</sup> During this pandemic (lockdown), however, schools are not there to protect girls.<sup>[33]</sup> Elsewhere in Zimbabwe, parents confirmed that teenage pregnancies were due to the fact of children being unoccupied while at home.<sup>[34]</sup> It is common for the pregnant teenagers to be allowed to marry instead of a return to school. Most of the sociocultural norms in many parts of sub-Saharan Africa devalue girl child education and rather favor a boy child educational training.<sup>[35]</sup> Although most countries guarantee girls’ rights to stay in school during pregnancy and to return afterward, these laws and policies are often insufficiently implemented and sometimes present different barriers.<sup>[10]</sup> Hence, pregnancy could be used as an easy excuse to terminate the educational goals of an adolescent girl in the society.

### **Opportunity for early sexual risk behaviors**

Several studies have shown that the age at first intercourse is reducing, suggesting that today’s young adults are becoming

sexually active at increasingly younger ages.<sup>[36]</sup> Lockdown measures might have given the teenagers opportunity to indulge in sexual risk behaviors at a much earlier age. In a Kenyan longitudinal study, the findings showed that one in two COVID-19 cohort girls become sexually active during follow-up period.<sup>[18]</sup> Similarly, the WHO observes that during the pandemic, consensual sex appears to have seen a sharp increase with idleness and boredom cited as the main reasons for the increased activity.<sup>[37]</sup>

### **Low access and uptake of sexual reproductive services**

Few adolescents use contraceptives and are at risk of pregnancy.<sup>[36]</sup> To further worsen the low contraceptive uptake in this age group, during the pandemic, some sexual reproductive outreaches were closed as social gatherings and travel restrictions were in place. In Uganda, some gendered difficulties included accessing contraceptives.<sup>[38]</sup> Reproductive Health Uganda official reported that they suspended all outreaches during lockdown.<sup>[38]</sup> In support of this, a quarter of the adolescents-participants (26.9%,  $n = 195$ ) reported that testing and treatment services of sexually transmitted infections were not available during the lockdown.<sup>[29]</sup> On the other hand, low visits were noted within the facilities that remained open during the lockdown period. For instance, a health-care provider in Uganda noted an initial decrease in adolescent contraceptive visits at the start of the pandemic and actual visits dipped far below the number projected by the provider for April 2020.<sup>[39]</sup> It is also plausible that the fear of contracting COVID-19 may have kept young women from attending reproductive health services at outreaches since the WHO had advised against group gatherings as a preventive method to curb the COVID-19 spread.<sup>[40]</sup> The indirect costs-increased transport fares to the distant located hospitals could further make the teenagers unable to afford the services during the harsh economic period of the pandemic. However, in some Kenyan studies different patterns were noted, there was a significant increase in proportion among adolescents 10–14 years (0.5%–0.6%) and youths 20–24 years (18.3%–19.6%) seeking the family planning services in the health facilities during the pandemic.<sup>[11]</sup> Sexual reproductive health protection strategies need to be reviewed and adapted to changing risks in this vulnerable group during the pandemic.<sup>[9]</sup> It is well agreed that women should be able to access the right care at the right time to avoid delays that do put them at risk of experiencing poor health outcomes.<sup>[11]</sup>

### **Loss of income during COVID-19 pandemic**

Families who were already vulnerable prior to the pandemic have been pushed to dire circumstances with losses in income and are unable to afford basic necessities.<sup>[7]</sup> Already before the COVID-19 pandemic, an estimated 55.1% of all Ugandans

lived in poverty.<sup>[41]</sup> In Kenya, national estimates indicate that the pandemic led to loss of jobs and other sources of livelihood, and to loss of incomes for more women (20%) than men (12%).<sup>[42]</sup> It is unfortunate that most of those that have suffered the unemployment rate are the poor who work with the Small and Medium Scale Enterprises as they were the first casualties of the crises.<sup>[43]</sup>

The parents having lost jobs coupled with all children at home due to school closure might have contributed to them allowing their teenagers to marry in exchange of bride price. The WHO observes that, in times of economic hardship, families are much more likely to get their daughters married to reduce financial hardship on their own family.<sup>[37]</sup> To illustrate this, a Ugandan girl reported that she was lured by a broker and smuggled from her home to be married off with a man shortly after the schools closed; the man had promised her to pay the dowry to her family soon.<sup>[38,44]</sup> Girls shared that they were becoming more reliant on their partners' income than they were pre-COVID-19 due to their own or their family's pandemic-related income loss in Kenya.<sup>[32]</sup> The reliance on the partner by the girl teenager might easily influence a sexual relationship. In Uganda, some study participants reported that economic hardship caused by the lockdown had driven young women in their communities to engage in sex for money or material goods and others.<sup>[41]</sup> As noted elsewhere, the children in Zimbabwe indulged in antisocial behavior such as child prostitution in an endeavor to earn money for buying food.<sup>[34]</sup> With growing poverty, more girls are at risk of early pregnancy and marriage.<sup>[32]</sup> Similarly, in India, the risk of child marriages has heightened as a result of the pandemic's economic fallout, as vulnerable households could be forced to adopt coping mechanisms.<sup>[45]</sup> They would need to find alternative sources of income or else reduce their expenditure by reducing the size of the family and marrying off their child.<sup>[45]</sup>

Although majority of parents noted of loss of income, some continued to work during the pandemic. This implied that their idle children at home stayed unsupervised as schools had closed during the lockdown period. In Uganda, it is noted that the lack of parental supervision placed children at risk of sexual peer-related behavior and raised the likelihood of contact with perpetrators' sexual predators.<sup>[46]</sup>

Finally, some families send their children into early job market, which exposed them to sexual predators at the work environment. Illustrating this, study participants in Uganda mentioned that engagement of children in labor likely exposed them to sexual violence, early pregnancies, undesirable behaviors, and increased school dropout.<sup>[47]</sup>

### Implications of the results for practice, policy, and future research

The current review illustrates that adolescent girls are disproportionately affected by emergencies. Priority efforts are diverted from routine health and gender-based interventions to the prevailing emergencies. Thus, the teenage are left more exposed to the epidemic effects. Based on these observations, the present review informs the policymakers to integrate interventions toward child marriages and those of existing emergencies at hand. The integrated approach should be across the emergency management continuum phases from mitigation, preparedness, response, to recovery. The researchers believe that this would enable nations to keep track toward the pledge to SDG 5.3-to end child marriage by 2030 despite the epidemics. Finally, more comparative studies are needed to detail the cases of early marriages and teenage pregnancy during the pre- and post-COVID-19 pandemic era.

### Limitations

The review could not analyze studies that were purely quantitative since, in the present study, the research problem was only measured by a qualitative approach. The findings cannot also be generalized to all LMICs because of the cultural and socioeconomic diversity among these countries.

### CONCLUSION

The present review demonstrates evidence of drivers of early marriages and teenage pregnancy within Kenya and Uganda during the pandemic period. The COVID-19 containment measures introduced in the two countries were noted as major contributing factors. During the pandemic, lockdown led to school closures which meant the teenagers being idle at home with an increased opportunity to indulge in sexual risk behaviors. Schools have been noted to be a safe place protecting this vulnerable population; however, with their prolonged closure, the teenagers were exposed to sexual predators. Parents lost income, and this might have contributed to early marriages and teenagers' dependency on their sexual partners. Based on the reviewed evidence, the present study furthers the advocacy for the reduction of early marriages and teenage pregnancy, especially in the current COVID-19 pandemic era. The study calls upon the governments to intensify efforts toward the present research problem as the COVID-19 pandemic is eroding the earlier gains made.

### Financial support and sponsorship

Nil.

### Conflicts of interest

There are no conflicts of interest.

## REFERENCES

- World Health Organization. WHO COVID-19 Dashboard. Geneva, Switzerland: World Health Organization; 2022.
- Ahmed SA, Ajisola M, Azeem K, *et al.* Impact of the societal response to COVID-19 on access to healthcare for non-COVID-19 health issues in slum communities of Bangladesh, Kenya, Nigeria and Pakistan: Results of pre-COVID and COVID-19 lockdown stakeholder engagements. *BMJ Glob Health* 2020;5:e003042.
- Sserwanja Q, Kawuki J, Kim JH. Increased child abuse in Uganda amidst COVID-19 pandemic. *J Paediatr Child Health* 2021;57:188-91.
- Batte C, Semulimi AW, Mutebi RK, *et al.* Assessment of the impact of COVID-19 pandemic on the education and psychosocial wellbeing of school-going children in Bududa District, Uganda. 2021. Available from: <https://doi.org/10.21203/rs.3.rs-620499/v1%0A>. [Last accessed on 2022 Feb 02].
- Muzyamba C. Views and experiences on lockdown as a response to the prevention and control of COVID-19 crisis among residents of Uganda. 2021. Available from: <https://doi.org/10.21203/rs.3.rs-432060/v1>. [Last accessed on 2022 Feb 02].
- Ssali SN. Gender, economic precarity and Uganda Government's COVID 19 response. *Afr J Gov Dev* 2020;9:287-308.
- Shumba C, Maina R, Mbuthia G, *et al.* Reorienting nurturing care for early childhood development during the COVID-19 pandemic in Kenya: A review. *Int J Environ Res Public Health* 2020;17:7028.
- Flowe H, Rockowitz S, Rockey J, *et al.* Sexual and Other Forms of Violence During the COVID-19 Pandemic Emergency in Kenya. Birmingham: University of Birmingham Institute for Global Innovation; 2020.
- Stevens LM, Rockey JC, Rockowitz SR, *et al.* Children's vulnerability to sexual violence during COVID-19 in Kenya: Recommendations for the future. *Front Glob Womens Health* 2021;2:630901.
- Baker T. COVID-19 Aftershocks: Access Denied. Manila Cover: World Vision International; 2020. p. 1-39.
- Shikuku D, Nyaoke I, Gichuru S, *et al.* Early indirect impact of COVID-19 pandemic on utilization and outcomes of reproductive, maternal, newborn, child and adolescent health services in authors. *Afr J Reprod Health* 2022;25:6.
- Mbogo RW. Global Multisectoral Leadership Interventions on the Teenage Pregnancy Menace and Implications for Kenya. *Ed Consort J Arts Humanit Soc Stud* 2021;3:1-15.
- Murewanhema G. Adolescent girls, a forgotten population in resource-limited settings in the COVID-19 pandemic: Implications for sexual and reproductive health outcomes. *Pan Afr Med J* 2020;37:41.
- United-Nations-Children's-Fund-(UNICEF). COVID-19 : A Catastrophe for Children in Sub-Saharan Africa. Geneva, Switzerland: United Nations Children's Fund (UNICEF); 2020.
- World-Vision-International. COVID-19 and Child Marriage: How COVID-19's Impact on Hunger and Education is Forcing Children into Marriage. Geneva, Switzerland: World Vision International; 2021.
- Undie CC. Lockdowns & Learning Possibilities: Reflections on Unintended Pregnancy and School Re-Entry for Girls in Sub-Saharan Africa. Nairobi: Population-Council; 2020.
- Musa SS, Odey GO, Musa MK, *et al.* Early marriage and teenage pregnancy: The unspoken consequences of COVID-19 pandemic in Nigeria. *Public Health Pract (Oxf)* 2021;2:100152.
- Zulaika G, Bulbarelli M, Nyothach E, *et al.* Impact of COVID-19 lockdowns on adolescent pregnancy and school dropout among secondary schoolgirls in Kenya. *BMJ Glob Health* 2022;7:1-9.
- Willie MM. Teenage pregnancy during a pandemic. *Int J Women's Health Care* 2021;6:9-11.
- Atim MG, Kajogoo VD, Amare D, *et al.* COVID-19 and health sector development plans in Africa: The impact on maternal and child health outcomes in Uganda. *Risk Manag Healthc Policy* 2021;14:4353-60.
- Addae EA. COVID-19 pandemic and adolescent health and well-being in sub-Saharan Africa: Who cares? *Int J Health Plann Manage* 2021;36:219-22.
- UNFPA. Child Marriage in COVID-19 Contexts: Disruptions, Alternative Approaches and Building Programme Resilience. South Africa: UNFPA; 2022.
- Plan-International. COVID-19 and Child Marriage in West and Central Africa. Dakar Senegal: Plan International; 2020.
- Liberati A, Altman DG, Tetzlaff J, *et al.* The PRISMA statement for reporting systematic reviews and meta-analyses of studies that evaluate health care interventions: Explanation and elaboration. *Ann Intern Med* 2009;151:65-94.
- Chipo C, Ndlovu C, Makoni P, *et al.* COVID-19 lockdown related teenage pregnancy : Concept analysis. *Int J Adv Res Nurs* 2021;4:101-8.
- Downes MJ, Brennan ML, Williams HC, *et al.* Development of a critical appraisal tool to assess the quality of cross-sectional studies (AXIS). *BMJ Open* 2016;6:e011458.
- Shu ZB, Cao HP, Li YC, *et al.* Influences of laparoscopic-assisted gastrectomy and open gastrectomy on serum interleukin-6 levels in patients with gastric cancer among Asian populations: A systematic review. *BMC Gastroenterol* 2015;15:52.
- Thomas J, Harden A. Methods for the thematic synthesis of qualitative research in systematic reviews. *BMC Med Res Methodol* 2008;8:45.
- Mambo SB, Sikakulya FK, Ssebuufu R, *et al.* Challenges in access and utilization of sexual and reproductive health services among youth during the COVID-19 pandemic lockdown in Uganda: An online cross-sectional survey. *Front Reprod Health* 2022;3:705609.
- Adline AC. The Impact of COVID-19 Lockdown on the Child Sexual Abuse in Lagos, Nigeria. Nigeria: Child Protection Network Nigeria; 2021.
- Rafaeli T, Hutchinson G. The Secondary Impacts of COVID-19 on Women and Girls in Sub-Saharan Africa. K4D Helpdesk Report 830. Brighton, UK: Institute of Development Studies; 2020.
- Karp C, Moreau C, Sheehy G, *et al.* Youth relationships in the era of COVID-19: A mixed-methods study among adolescent girls and young women in Kenya. *J Adolesc Health* 2021;69:754-61.
- Chukwurah MC. The socio-economic impact of COVID-19 pandemic on women and girls in Nigeria. *Sapientia Found J Educ Sci Gend Stud* 2020;2:291-305.
- Dudzai C, Wamara CK. COVID-19 pandemic and the informal sector in Zimbabwe. *Afr J Soc Work* 2021;11:201-8.
- Ahinkorah BO, Hagan JE Jr., Ameyaw EK, *et al.* COVID-19 pandemic worsening gender inequalities for women and girls in Sub-Saharan Africa. *Front Glob Womens Health* 2021;2:686984.
- Manduku JG, Ronoh M, Kapkiai BJ. Effects of teenage pregnancy on academic transition in primary schools in Nandi County, Kenya. *Int J Res Educ Psychol* 2021;7:52-66.
- Lynn E. School closures and teenage pregnancy. *Bull World Health Organ* 2021;99:6-7.
- Lampi M. Social. In: *Justice and Gender: The COVID-19 Lockdown in Uganda*. Jyväskylä: University of Jyväskylä; 2021.
- Makumbi F, Kibira SP, Giibwa L, *et al.* Access to Contraceptive Services Among Adolescents in Uganda During the COVID-19 Pandemic. 125 Maiden Lane New York: Guttmacher Institute; 2020. Available from: <https://www.guttmacher.org/report/impact-COVID-19-on-adolescent-srh-uganda>. [Last accessed on 2022 Feb 02].
- Kimani RW, Maina R, Shumba C, *et al.* Maternal and newborn care during the COVID-19 pandemic in Kenya: Re-contextualising the community midwifery model. *Hum Resour Health* 2020;18:75.
- Parkes J, Datzberger S, Howell C, *et al.* Young people, inequality and violence during the COVID-19 lockdown in Uganda. (CoVAC Working Papers). London, UK: UCL Institute of Education; 2020.
- UN-Women-Kenya. An Assessment of the Gendered Effects of the COVID-19 Pandemic on Households. Nairobi: UN Women-Kenya; 2020.

43. Eyisi EC, Iwendi OF. Port Harcourt journal of history & diplomatic studies. Port Harcourt J Hist Dipl Stud 2020;7:357-78.
44. Nabukeera M. Prevention and response to gender-based violence (GBV) during novel Covid-19 lock-down in Uganda. The Journal of Adult Protection 2021;23:116-33.
45. Bahl D, Bassi S, Arora M. The impact of COVID-19 on children and adolescents: Early evidence in India. Obs Res Found 2021. Available from: <https://www.orfonline.org/research/the-impact-of-covid-19-on-children-and-adolescents-early-evidence-in-india/>. [Last accessed on 2022 Feb 02]
46. Nyakato VN, Kemigisha E, Tuhumwire M, *et al.* COVID Reveals Flaws in the Protection of Girls in Uganda. Sweden: The Nordic African Institute; 2021.
47. Nuwematsiko R, Nabiryo M, Bomboka JB, *et al.* Unintended socio-economic and health consequences of COVID-19 among slum dwellers in Kampala, Uganda. BMC Public Health 2022;22:88.