

# BMJ Open Early sexual debut among unmarried adolescent girls and young women in Tanzania: analysis of the 2022 Demographic Health Survey on the role of coercion at first sex

Roger Antabe,<sup>1</sup> Yujiro Sano,<sup>2</sup> Florence W Anfaara,<sup>3</sup> Emmanuel Kyeremeh,<sup>4</sup> Albino Kalolo <sup>5</sup>

**To cite:** Antabe R, Sano Y, Anfaara FW, *et al*. Early sexual debut among unmarried adolescent girls and young women in Tanzania: analysis of the 2022 Demographic Health Survey on the role of coercion at first sex. *BMJ Open* 2025;**15**:e094780. doi:10.1136/bmjopen-2024-094780

► Prepublication history and additional supplemental material for this paper are available online. To view these files, please visit the journal online (<https://doi.org/10.1136/bmjopen-2024-094780>).

Received 08 October 2024  
Accepted 01 September 2025



© Author(s) (or their employer(s)) 2025. Re-use permitted under CC BY-NC. No commercial re-use. See rights and permissions. Published by BMJ Group.

For numbered affiliations see end of article.

**Correspondence to**  
Dr Albino Kalolo;  
kaloloa@gmail.com

## ABSTRACT

**Objective** In Tanzania, the problem of early sexual initiation among adolescent girls and adolescent girls and young women has remained a persistent public health and human rights challenge that continues to draw the attention of policymakers. Evidence suggests that in some parts of the country, as much as 70% of women had their sexual debut as minors, underscoring the urgency to understand all drivers of early sexual debut among this population. While scholars have pointed to addressing a range of factors that work to expose adolescent girls and young women to early sexual initiation, the role of coercion at first sex has been less explored.

**Design and setting** We used cross-sectional data from the 2022 Tanzania Demographic and Health Survey.

**Participants** A total sample of 1242 sexually active unmarried adolescent girls and young women aged 15–24.

**Measures** Our study relied on logistic regression models to examine the role of coerced sex on early sexual initiation among sexually active unmarried adolescent girls and young women aged 15–24 years in Tanzania.

**Results** We found that 31% and 14% of sexually active unmarried adolescent girls and young women experienced early sexual initiation and coerced first sex, respectively. At the bivariate level, we discovered that those who indicated that they willingly wanted to have their first sex were less likely to initiate sex early (OR=0.44, 95% CI 0.27 to 0.72). At the multivariate level, the significance of these relationships largely holds, even after sequentially accounting for sociodemographic (OR=0.50, 95% CI 0.30 to 0.82) and HIV-related characteristics (OR=0.50, 95% CI 0.30 to 0.83).

**Conclusions** We recommend re-examination of policy addressing early sexual initiation in Tanzania by incorporating coerced sex as one of the major determinants needing urgent attention. Intensifying awareness creation on the risk of early sexual initiation through coerced sex, especially among adolescent girls and boys, will go a long way to help reduce the incidence of early sexual initiation.

## STRENGTHS AND LIMITATIONS OF THIS STUDY

- ⇒ By employing national-level data and logistic regression, the study provides a robust analysis of the relationships between various variables.
- ⇒ The study's findings reveal statistical associations, not direct causation, as they are based on data collected at a single point in time.
- ⇒ Due to the sensitive nature of the topic in Tanzania, there was likely underreporting of early sexual activity and coerced sex.
- ⇒ Cultural views on the 'ideal' age for sex (potentially younger than 18) may have introduced bias into responses.
- ⇒ The study's focus on unmarried, sexually active adolescent women aged 15–24 limits the generalisability of its findings to other groups.

## INTRODUCTION

Early sexual initiation has been flagged as a major public health challenge. Although there are disagreements concerning the ideal age for a sexual debut, an emerging consensus has been that any sexual debut at age 15 years or younger is too early.<sup>1–3</sup> Early sexual initiation has been found to be a marker of many short-term and long-term health challenges. For example, it is said to be associated with sexually transmitted infections or diseases, poor use of contraception, unplanned pregnancies, substance abuse, increased number of sexual partners and sexual violence.<sup>4–6</sup> Others have noted long-term adverse mental health outcomes, including depression and anxiety, especially for early debutant girls.<sup>7</sup>

In Tanzania, the problem of early sexual initiation has remained a persistent problem that particularly affects the human rights of female adolescents. A study in the country by Mmbaga and colleagues<sup>8</sup> revealed a high prevalence of early sexual initiation, where

among adolescents aged 16–19 years, 57.8% have had their debut before their 15th birthday. Relatedly, Millanzi *et al*<sup>9</sup> found that among adolescents in Tanzania, an estimated 44.4% initiated sexual behaviours during the early stages of their adolescence compared with only 16.2% who did so in late adolescence. In the Mtwara District of the country, as high as 70% of adolescent girls had their sexual debut as minors.<sup>10</sup> Among urban Tanzanian school girls, Whitworth *et al*<sup>11</sup> also noted that early sexual debutants tended to engage in high-risk sexual behaviours, including the poor use of contraceptives. For instance, less than 16% of adolescents in Tanzania are reported to be using modern contraceptives that could aid in reducing their risk of sexually transmitted infections or prevent pregnancy. Although evidence from the national capital, Dar es Salaam, stipulated a higher rate of awareness of at least one modern method of contraception use, only 40% of adolescent school girls in the city had used any of these methods.<sup>12</sup> Generally, among adolescents in the country, there are low levels of awareness of contraceptive use and knowledge about their reproductive rights. Additionally, judgemental attitudes and socio-cultural and religious dynamics may act as barriers to prevent adolescents from accessing contraception in the country.<sup>13</sup>

Early debutant adolescent girls in Tanzania are observed to debut with men who are 5 years or older than them, boyfriends, relatives, people from their community and strangers, with some reporting multiple sexual partners.<sup>11 14</sup> These dynamics are further reflected in the increased rate of teenage pregnancy in the country. Tanzania has the 17th highest adolescent fertility rate in Africa, with 132 per 1000 births for girls aged 15–19 years.<sup>15</sup> This report further suggested that by 2016, one in four adolescents aged 15–19 years in the country had begun childbearing. Unpacking the high rates of early sexual initiation in the country, scholars have pointed to several intersecting factors that may contribute to the risk of early sexual debut, especially among adolescent girls. For example, a decomposition analysis by Fentie *et al*<sup>16</sup> revealed the heightened risk and concentration of early sexual debutants among adolescent girls from materially deprived or poor households in the country.

Contextualising the role of poverty in the risk of teenage pregnancy in Tanzania, McCleary-Sills *et al*<sup>17</sup> opined that it may push adolescents into sexual activities as a means to meet their basic needs. Specifically, transactional sex emerged as one of the few available sources of income for young adolescent girls to meet their basic needs, and as such, they tend to engage in it despite the associated risk. In addition to the role of material deprivation, the authors also identified gendered norms where there are sexual expectations from older men and boys their age with the reported incidence of coerced sex and rape. Additionally, Eliufoo *et al*<sup>18</sup> have discussed the role of education on early sexual debut, suggesting that adolescent girls with no formal education were prone to initiating sex earlier than their colleagues with formal education. This observation has also been made by other

scholars.<sup>19</sup> Other sociocultural dynamics, including child brides, may also contribute to early sexual initiation. Evidence has suggested that not only is child marriage heightened for adolescent girls in Tanzania, but one in three women in the country indicated getting married before 18 years.<sup>20 21</sup> Adolescent girls in marriage unions may particularly be exposed to increased forms of sexual violence.<sup>22</sup>

While the above contextual dynamics of Tanzania may underpin the risk of early sexual debut, it may also help perpetuate sexual violence, such as coercion at first sex among adolescent girls. Sexual coercion is any sexual behaviour involving the use of violence, threat, verbal insistence and/or deception and may include intercourse that is seen as not consensual or consensual but not wanted.<sup>1 23</sup> While the phenomenon of forced sex may be widespread in Tanzania, it may be more rampant among adolescents, which may potentially lead to high rates of early sexual debut.<sup>9 24</sup> For example, in a study focused on childhood sexual violence, it emerged that 28% of girls and 13% of boys in the country experienced sexual violence before their 18th birthday, with about 80% of girls and boys reporting their first incidence of sexual violence between the ages of 14–17 years.<sup>25</sup> In another study among women in Moshi in Northern Tanzania, 10.9% of women reported forced first sex, with another 15.3% reporting unwanted first intercourse.<sup>26</sup> According to Millanzi *et al*,<sup>9</sup> 24.9% of adolescents in the country reported ever engaging in coerced sexual behaviours. In a related systematic review, sexual coercion among adolescents in Tanzania was estimated to range from 15.9% to 32.9%, with more girls (58%) than boys (17.5%) being significantly more likely to be sexually coerced.<sup>14</sup> Coerced sex may have both short- and long-term impacts on adolescents. It may be associated with multiple concurrent sexual partners and the increased risk of contracting sexually transmitted infections.<sup>23 27</sup> Others have also reported poorer psychological, physical and mental health outcomes.<sup>28 29</sup> Although sexual violence, including coerced sex, has been criminalised in Tanzania with a range of prison terms and the attention focused on reducing sexual violence,<sup>24 30 31</sup> evidence still suggests a high risk for adolescent girls and young women in the country. Despite this, nascent studies have examined the role of coerced sex on the heightened prevalence of early sexual initiation among adolescent girls and young women in the country. To contribute to the literature and health policy in Tanzania, the objective of our study is to estimate the prevalence of sexually active unmarried adolescent girls and young women aged 15–24 who initiate their sexual lives under coercion to highlight this issue, providing decision-makers and policymakers with evidence to redesign programmes and policies that support adolescents' comprehensive health in Tanzania.

## METHODS

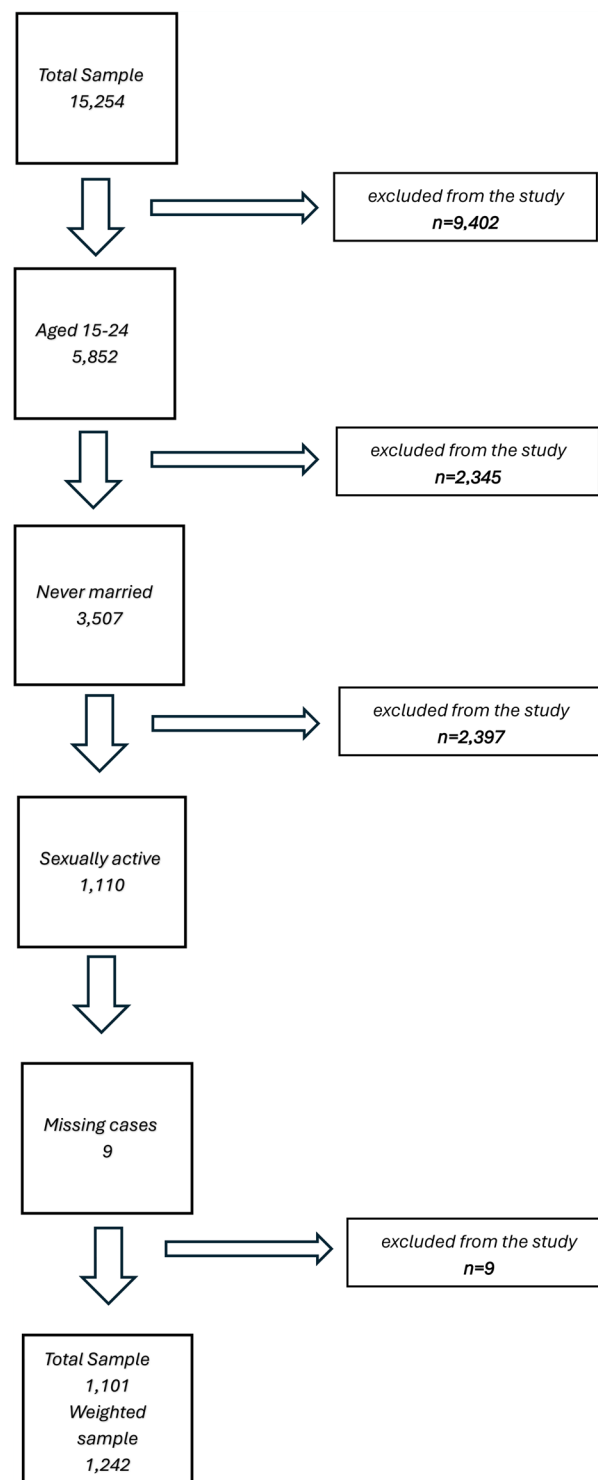
We utilised data from the 2022 Tanzania Demographic and Health Survey (TDHS) to investigate the association between the desire to have first sex and early sexual initiation among unmarried women aged 15–24 years. The TDHS is conducted as a nationally representative survey and is implemented by the National Bureau of Statistics and the Office of the Chief Government Statistician Zanzibar, in collaboration with the Ministries of Health of the United Republic of Tanzania and Zanzibar. The TDHS offers current and reliable information on population and health issues, including details about early sexual initiation. Using a stratified two-stage sample design, the TDHS first selects clusters of enumeration areas based on the 2012 Tanzania Population and Housing Census. The second stage systematically selected 26 households from each cluster. With a response rate of 97%, a total of 15 254 out of 15 699 women aged 15–49 completed interviews. In the 2022 TDHS, the question on coercion at first sex was only asked among sexually active women aged 15–24. Importantly, we found nine missing cases in this data analysis, which accounted for less than 1% of the entire sample. For this reason, we employed a listwise deletion technique, leading to our weighted total sample of 1242 young, unmarried and sexually active women aged 15–24. See [figure 1](#). More information about the dataset can be found elsewhere.<sup>32</sup>

## Measures

Respondents were asked about their age at their first sexual intercourse. This information was categorised into the binary variable to create the dependent variable called ‘early sexual initiation’, capturing whether respondents had first sexual intercourse at the age of 15 or before (0=no; 1=yes). In addition, respondents were asked whether they willingly wanted to have their first sexual intercourse (0=no; 1=yes), which was adopted as our focal independent variable called ‘willingly wanted to have first sex’. Building on insights from prior studies,<sup>33–37</sup> we also considered theoretically relevant sociodemographic and HIV-related characteristics as control variables. Sociodemographic characteristics include place of residence (0=rural; 1=urban), age of respondents (0=15–19; 1=20–24), household wealth (0=poorest; 1=poorer; 2=middle; 3=richer; 4=richest), education (0=no education; 1=primary education; 2=secondary education; 3=higher education) and employment status (0=unemployed; 1=employed). Three HIV-related characteristics were integrated: ever being tested for HIV (0=no; 1=yes), having any HIV-related stigma (0=no; 1=yes) and having adequate HIV knowledge (0=no; 1=yes).

## Statistical analysis

This study includes three distinct analyses. Initially, univariate analysis was conducted, utilising descriptive statistics to describe the characteristics of the analytical sample. Subsequently, bivariate logistic regression analysis was applied to investigate the unadjusted



**Figure 1** Flow chart of selection of final sample for analyses.

associations between the dependent variable and the independent/control variables. Lastly, multivariate logistic regression analysis was performed, sequentially incorporating variables of theoretical relevance. More specifically, Model 1 examined the association between early sexual initiation and the willingness to have first sexual intercourse while adjusting for socio-demographic characteristics. Model 2 extended this

analysis by additionally controlling for HIV-related factors. The results are shown in terms of ORs, with ORs above 1 suggesting a higher likelihood of unmarried women having early first sexual intercourse, and ORs below 1 indicating reduced odds. All statistical analyses were executed using STATA 17 (StataCorp), employing the 'svy' command to account for clustering, stratification, unequal selection probabilities and non-response, with frequency distributions weighted by v005/1 000 000 and regression analyses adjusted for the complex sampling structure.

### PATIENT AND PUBLIC INVOLVEMENT

It was not possible to involve patients and the public in this study, as we analysed data from TDHS.

### RESULTS

Table 1 shows the sample characteristics. We find that 31% of our sample reported having first sexual intercourse at the age of 15 or earlier. In addition, 14% of them reported that they were not willing to have their first sexual intercourse. About 60% of the sample came from households with substantial wealth, and more than half of them had attained secondary education. Over half (53%) of them resided in rural areas and held employment (52%). Concerning the HIV-related variables, many respondents (67%) had tested for HIV before and had adequate knowledge of HIV (65%). Yet only about a third of the sample (30%) were familiar with HIV stigma.

Online supplemental table 1 presents findings from our logit models predicting early sexual initiation among sexually active unmarried women aged 15–24. At the bivariate level, we discovered that those who indicated that they willingly wanted to have their first sex were less likely to initiate sex early (OR=0.44, 95% CI 0.27 to 0.72). At the multivariate level, the significance of these relationships largely holds, even after accounting for sociodemographic characteristics in Model 1 (OR=0.50, 95% CI 0.30 to 0.82) and sociodemographic and health-related characteristics in Model 2 (OR=0.50, 95% CI 0.30 to 0.83). In a fully adjusted model, we found several control variables associated with early sexual initiation (see Model 2). Participants from the 'richest' (OR=0.33, 95% CI 0.15 to 0.71) and 'richer' (OR=0.44, 95% CI 0.23 to 0.85) households had lower odds of reporting early sexual initiation compared with their 'poorest' counterparts. Similarly, those with secondary education or higher were also less likely to report the experience of early sexual initiation compared with those without any education (OR=0.25, 95% CI 0.13 to 0.48). Moreover, study participants aged 20–24 had lower odds of reporting early sexual initiation compared with their colleagues aged 15–19 (OR=0.32, 95% CI 0.21 to 0.47).

**Table 1** Sample characteristics of sexually active unmarried women aged 15–24

	Weighted counts	Weighted percentage
<b>Early sexual initiation</b>		
No	859	69
Yes	383	31
<b>Willingly wanted to have first sex</b>		
No	179	14
Yes	1063	86
<b>Household wealth</b>		
Poorest	121	10
Poorer	152	12
Middle	221	18
Richer	335	27
Richest	413	33
<b>Education</b>		
No education	70	6
Primary education	495	40
Secondary education	676	54
<b>Employment</b>		
Unemployed	596	48
Employed	646	52
<b>Place of residence</b>		
Urban	583	47
Rural	659	53
<b>Age of respondents (categorical)</b>		
15–19	627	51
20–24	615	49
<b>Age of respondents (continuous)</b>	1242	20†
<b>Ever tested for HIV</b>		
No	406	33
Yes	836	67
<b>HIV-related stigma</b>		
Yes	367	30
No	875	70
<b>Adequate HIV knowledge</b>		
No	430	35
Yes	812	65
<b>Weighted total</b>	1242	100
Mean reported for a continuous scale.		

### DISCUSSIONS

Early sexual initiation has been noted as a key public health challenge in Tanzania. While this has attracted a policy response from the government to reduce the

prevalence of early sexual debut, there have been nascent studies focused on the role of coerced sex as a risk factor for early sexual initiation, especially among adolescent girls and young women in the country. Our study, therefore, sought to examine the role of coerced sex as a risk factor for early sexual initiation among sexually active unmarried adolescent girls and young women aged 15–24 in Tanzania.

Our findings revealed that among sexually active unmarried adolescent girls and young women aged 15–24 years, 31% and 14% experienced early sexual initiation and coerced first sex, respectively. Our findings further revealed that compared with those who willingly wanted to have their first sex, those who were coerced were more likely to have had an early sexual debut. These findings align with those of earlier studies in the country.<sup>9 26</sup> The findings are concerning as they suggest that, regardless of the effort by the government of Tanzania to address both sexual violence and early sexual initiation as human rights with impacts on public health, many sexually active unmarried adolescent girls and young women are still being exposed. Sexual coercion in Tanzania may, therefore, serve as a major risk factor for early sexual initiation, especially for sexually active unmarried adolescent girls and young women in the country. In line with Williams *et al*'s<sup>26</sup> earlier findings in Northern Tanzania that early sexual initiation was associated with changes in women's life course that increased their risk of sexually transmitted infections, there is a need to review and revise existing strategies to address sexual coercion as a major determinant of early sexual debut. This finding is consistent with a study across nine African countries where it was established that among girls and adolescent girls and young women aged 13–24 years, coerced first sexual initiation ranged from 14.7% to 38.9%.<sup>38</sup>

Although not the focus of our study, we also found that participants' sociodemographic factors were also associated with their risk of early sexual initiation in Tanzania. That is, compared with those from the poorest households, those from the 'richer' and 'richest' households were less likely to have had an early sexual initiation. This finding may be explained by the National Adolescent Reproductive Health Strategy (2011–2015) which alludes to the fact that in Tanzania, experiences of poverty in the household may create challenges for female adolescents who may be exposed to sexual exploitation, forced into commercial sex work or pushed to leave home to seek livelihood in the informal sector.<sup>24</sup> Similar findings have been made by Ferede and colleagues,<sup>39</sup> where across SSA, they found females from middle and richer households to be less likely to have early sexual initiation compared with their counterparts from poor households. The authors explained that female adolescents from poor households are prone to being lured with gifts, either in cash or kind, and this works to compel them to volunteer for sex, thus putting them at risk of early sexual initiation.

Furthermore, our findings revealed that participants with a secondary level of education were less likely to have

an early sexual debut relative to those with no education. This finding may underscore the confidence and skills that formal educational attainment gives to adolescent girls and young women to delay sexual initiation. Specifically, adolescent girls and young women with secondary levels of education are taken through reproductive health education, where they gain knowledge about the risk of early sexual initiation, including unwanted pregnancy and sexually transmitted infections, and the health benefits of delaying sexual initiation.<sup>39</sup> Elsewhere in SSA, similar findings have been made in Nigeria<sup>40</sup> and Ghana.<sup>41</sup> This finding points to the need to intensify policies aimed at keeping adolescent girls and young women in school at least up to the secondary level, where they have the opportunity to be fully informed and develop the capacity to digest reproductive health information. At this stage, they also tend to have the confidence and skills to be able to delay sexual initiation until it is safe to do so.

We further observed that the older cohorts of sexually active unmarried adolescent girls and young women aged 15–24 were less likely to have initiated sex early compared with their younger counterparts. This finding aligns with that of Mmbaga *et al*<sup>8</sup> who noted that the majority (57.85%) of adolescents in Morogoro Municipality, Tanzania had debuted before their 15th birthday. Our findings may also be suggestive of possible policy complacency in addressing early sexual initiation, as adolescent girls and young women may be increasingly becoming more vulnerable to early sexual initiation relative to their older counterparts. It may be particularly useful to have a targeted policy intervention that addresses this as a human rights and public health issue in Tanzania.

### Study limitations

While these findings provide useful suggestions for policymakers in Tanzania, our study may have some noteworthy limitations. First, our data, the TDHS, was collected contemporaneously, meaning that our findings are limited to statistical association and must be interpreted with caution. Second, we acknowledge that issues about sexual activity, particularly among younger people in the context of Tanzania, are sensitive and may work to impact the responses. It is, therefore, possible that the prevalence of early sexual debut and coerced sex may be underreported. It is also possible that the culturally specific perceptions and understanding of the 'ideal' age for sex, which is younger than 18 years and opposed to national policies, may influence the responses. Additionally, given that respondents were asked to recall whether their first sex was coerced or voluntary, their responses may be exposed to self-recollecting bias. It is, therefore, critical for a follow-up qualitative study to understand the phenomenon of early sexual initiation and coerced sex in Tanzania. Finally, the question about sexual coercion was only asked to respondents who were aged 15–24 years and indicated that they were sexually active. This limits the application of our findings to other women outside this group. To reduce the uncertainties about whether



the sexual coercion took place within marriage unions or not, we also restricted our sample to sexually active adolescent girls and young women who were unmarried. Regardless of these limitations, our study is among the first to examine the influence of coerced sex on early sexual initiation among sexually active unmarried adolescent girls and young women in the country.

## CONCLUSION

Based on our findings, we recommend the need to re-examine policy addressing early sexual initiation in Tanzania by incorporating coerced sex as one of the major determinants needing urgent attention. Intensifying awareness creation on the risk of early sexual initiation, especially among adolescent girls and boys, will go a long way to help reduce the incidence of early sexual initiation. The first step may involve the redesign or inclusion of issues of sexual consent in the reproductive health curricula of schools in the country. It is particularly critical as part of this revised curriculum to highlight the short and long-term implications of coerced sex on victims, including their physical and psychological health. Healthcare institutions and professionals should also be mandated or encouraged to report cases of coerced sex while treating victims with high levels of empathy and care. It is also essential to partner with mass media and social media platforms to create awareness of adolescent sexual health among the general population, with increased emphasis on the importance of sexual consent as it borders on human rights violations of victims. Strengthening the appropriate institutions with a key focus on intersectoral collaborations where the educational, legal, social and economic institutions coordinate to develop a holistic approach to addressing the issue of sexual violence, especially against younger women, will be a useful step. Furthermore, special attention needs to be paid to adolescent girls and young women from poor households, and also creating more opportunities for girls to achieve at least a secondary level of education, given its positive influence on delayed sexual initiation. Overall, the government of Tanzania will need to strategise on how to effectively protect girls and adolescent girls and young women from being overly exposed to early sexual initiation.

### Author affiliations

<sup>1</sup>University of Toronto Scarborough, Toronto, Ontario, Canada

<sup>2</sup>Department of Sociology, Nipissing University, North Bay, Ontario, Canada

<sup>3</sup>Department of Gender, Sexuality, and Women's Studies, Western University, London, England, Canada

<sup>4</sup>Department of Geography and Environmental Studies, Toronto Metropolitan University, Toronto, Ontario, Canada

<sup>5</sup>Department of Public Health, St Francis University College of Health and Allied Sciences, Ifakara, Tanzania

**Contributors** RA: writing—original draft, project administration, methodology, investigation, formal analysis, data curation and conceptualisation. YS: writing—review and editing, validation, supervision, methodology, investigation, formal analysis and conceptualisation. FWA: project administration, data curation and

conceptualisation. EK: project administration, methodology, investigation, formal analysis, data curation and conceptualisation. AK: methodology, investigation, formal analysis, data curation and conceptualisation. AK is the guarantor of this paper.

**Funding** The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

**Competing interests** None declared.

**Patient and public involvement** Patients and/or the public were not involved in the design, or conduct, or reporting, or dissemination plans of this research.

**Patient consent for publication** Not applicable.

**Ethics approval** Not applicable.

**Provenance and peer review** Not commissioned; externally peer reviewed.

**Data availability statement** Data are available in a public, open access repository. The data set supporting the conclusions of this article is available in the DHS Program repository, <https://dhsprogram.com/>

**Supplemental material** This content has been supplied by the author(s). It has not been vetted by BMJ Publishing Group Limited (BMJ) and may not have been peer-reviewed. Any opinions or recommendations discussed are solely those of the author(s) and are not endorsed by BMJ. BMJ disclaims all liability and responsibility arising from any reliance placed on the content. Where the content includes any translated material, BMJ does not warrant the accuracy and reliability of the translations (including but not limited to local regulations, clinical guidelines, terminology, drug names and drug dosages), and is not responsible for any error and/or omissions arising from translation and adaptation or otherwise.

**Open access** This is an open access article distributed in accordance with the Creative Commons Attribution Non Commercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited, appropriate credit is given, any changes made indicated, and the use is non-commercial. See: <http://creativecommons.org/licenses/by-nc/4.0/>.

### ORCID iD

Albino Kalolo <http://orcid.org/0000-0002-2318-2949>

## REFERENCES

- 1 Sano Y, Sedziafa AP, Tenkorang EY. Correlates of Forced First Sexual Intercourse Among Women in the Philippines. *Sexuality & Culture* 2016;20:717–30.
- 2 Hailegebreal S, Gilano G, Seboka BT, *et al*. Prevalence and associated factors of early sexual initiation among female youth in East Africa: further analysis of recent demographic and health survey. *BMC Womens Health* 2022;22:304.
- 3 Ramiro L, Windlin B, Reis M, *et al*. Gendered trends in early and very early sex and condom use in 20 European countries from 2002 to 2010. *Eur J Public Health* 2015;25 Suppl 2:65–8.
- 4 Gazendam N, Cleverley K, King N, *et al*. Individual and social determinants of early sexual activity: A study of gender-based differences using the 2018 Canadian Health Behaviour in School-aged Children Study (HBSC). *PLoS ONE* 2020;15:e0238515.
- 5 Savioja H, Helminen M, Fröjd S, *et al*. Delinquency and sexual experiences across adolescence: does depression play a role? *The European Journal of Contraception & Reproductive Health Care* 2017;22:298–304.
- 6 Donenberg GR, Bryant FB, Emerson E, *et al*. Tracing the roots of early sexual debut among adolescents in psychiatric care. *J Am Acad Child Adolesc Psychiatry* 2003;42:594–608.
- 7 Zimmer-Gembeck MJ, Helfand M. Ten years of longitudinal research on U.S. adolescent sexual behavior: Developmental correlates of sexual intercourse, and the importance of age, gender and ethnic background. *Dev Rev* 2008;28:153–224.
- 8 Mmbaga EJ, Leonard F, Leyna GH. Incidence and predictors of adolescent's early sexual debut after three decades of HIV interventions in Tanzania: a time to debut analysis. *PLoS ONE* 2012;7:e41700.
- 9 Millanzi WC, Osaki KM, Kibusi SM. Attitude and prevalence of early sexual debut and associated risk sexual behavior among adolescents in Tanzania; Evidence from baseline data in a Randomized Controlled Trial. *BMC Public Health* 2023;23:1758.
- 10 Mtepa Z. Factors that influence early sexual debut among female. SOKOINE UNIVERSITY OF AGRICULTURE; 2021. Available: <https://>

- www.suaire.sua.ac.tz/server/api/core/bitstreams/fd5fbc97-638f-4b9d-8abc-445bd7b134e2/content
- 11 Whitworth HS, Baisley KJ, Nnko S, *et al.* Associations between age of menarche, early sexual debut and high-risk sexual behaviour among urban Tanzanian schoolgirls: A cross-sectional study. *Tropical Med Int Health* 2023;28:237–46.
  - 12 KagasheGAB, Honest G. Knowledge and use of contraceptives among secondary school girls in Dar es Salaam Tanzania. *J App Pharm Sci* 2013;3:66–8.
  - 13 Mwakawanga DL, Mkonyi E, Mushy SE, *et al.* Would you offer contraception to a 14-year-old girl? Perspectives of health students and professionals in Dar es Salaam, Tanzania. *Reprod Health* 2021;18:245:245:.
  - 14 Nkata H, Teixeira R, Barros H. A scoping review on sexual and reproductive health behaviors among Tanzanian adolescents. *Public Health Rev* 2019;40:4.
  - 15 UNFPA. Fact sheet: teenage pregnancy. United Nations Popul Funds; 2018.
  - 16 Fentie EA, Kidie AA, Fetene SM, *et al.* Socioeconomic inequality in early sexual initiation among female youths in sub-Saharan African countries: a decomposition analysis. *BMC Public Health* 2023;23::1283.
  - 17 McCleary-Sills J, Douglas Z, Rwehumbiza A, *et al.* Gendered norms, sexual exploitation and adolescent pregnancy in rural Tanzania. *Reprod Health Matters* 2013;21:97–105.
  - 18 Eliufoo E, Mtoro MJ, Godfrey V, *et al.* Prevalence and associated factors of early sexual initiation among female youth in Tanzania: a nationwide survey. *In Review [Preprint]* 2024. 10.21203/rs.3.rs-5369026/v1 Available: <https://doi.org/10.1186/s12905-022-01895-8>
  - 19 Metta E, Leshabari T, Mtimbo AN. Motives for the first sexual experience and sexual behaviours practiced among out of school Youths in Mpimbwe District, Katavi Region Tanzania. *Tanzan J Health Res* 2023;24:312–20.
  - 20 UNFPA Tanzania. Fact Sheet: Child Marriage Child. *UNFPA Tanzania* 2017.
  - 21 Schaffnit SB, Urassa M, Lawson DW. “Child marriage” in context: exploring local attitudes towards early marriage in rural Tanzania. *Sexual and Reproductive Health Matters* 2019;27:93–105.
  - 22 Mwanukuzi C, Nyamhanga T. “It is painful and unpleasant”: experiences of sexual violence among married adolescent girls in Shinyanga, Tanzania. *Reprod Health* 2021;18:1.
  - 23 Moore AM, Awusabo-Asare K, Madise N, *et al.* Coerced first sex among adolescent girls in sub-Saharan Africa: prevalence and context. *Afr J Reprod Health* 2007;11:62–82.
  - 24 MoH Tanzania. National adolescent reproductive health strategy 2011-2015. 2011. Available: [https://genderlinks.org.za/wp-content/uploads/2019/04/Sexual-Diversity\\_Tanzania\\_NationalAdolescentSRHStrategy-2011-2015.pdf](https://genderlinks.org.za/wp-content/uploads/2019/04/Sexual-Diversity_Tanzania_NationalAdolescentSRHStrategy-2011-2015.pdf)
  - 25 Vagi KJ, Brookmeyer KA, Gladden RM, *et al.* Sexual Violence Against Female and Male Children in the United Republic of Tanzania. *Violence Against Women* 2016;22:1788–807.
  - 26 Williams CM, McCloskey LA, Larsen U. Sexual violence at first intercourse against women in Moshi, northern Tanzania: Prevalence, risk factors, and consequences. *Popul Stud (Camb)* 2008;62:335–48.
  - 27 Young BJ. Changes in Adolescents’ Risk Factors Following Peer Sexual Coercion: Evidence for a Feedback Loop Brennan. *Dev Psychopathol* 2012;24:559–71.
  - 28 de Visser RO, Rissel CE, Richters J, *et al.* The impact of sexual coercion on psychological, physical, and sexual well-being in a representative sample of Australian women. *Arch Sex Behav* 2007;36:676–86.
  - 29 Segal DL. Self-reported history of sexual coercion and rape negatively impacts resilience to suicide among women students. *Death Stud* 2009;33:848–55.
  - 30 Tanzania. *Act No.4 of 1998, Sexual Offences Special Provisions Act, 1998.* UNHCR and Refworld, 1998.
  - 31 MOHCDGEC. *National Adolescent Health and Development Strategy 2018 - 2022.* Minist Heal Community Dev Gender, Elder Child, 2018.
  - 32 Ministry of Health (MoH) [Tanzania Mainland], Ministry of Health (MoH) [Zanzibar], National Bureau of Statistics (NBS), Office of the Chief Government Statistician (OCGS) and I. In: *Demographic and Health Survey and Malaria Indicator Survey 2022: Key Indicators Report.* Dodoma: Gov Tanzania, 2023.
  - 33 Antabe R, Sano Y, Anfaara FW, *et al.* Reducing HIV misconceptions among females and males in Malawi: are we making progress? *AIDS Care* 2021;33:408–12.
  - 34 Kangmennaang J, Mkandawire P, Luginaah I. Breast cancer screening among women in Namibia: explaining the effect of health insurance coverage and access to information on screening behaviours. *Glob Health Promot* 2019;26:50–61.
  - 35 Addo IY, Acquah E, Ayebeng C, *et al.* Influence of distance to health facilities on clinical breast cancer screening behaviour among women in five sub-Saharan African countries. *BMC Public Health* 2023;23:915.
  - 36 Thabane K, Mashologu Y, Thabane L. Exploring factors associated with breast cancer screening among women aged 15–49 years in Lesotho. *Pan Afr Med J* 2021;38:108.
  - 37 Tiruneh FN, Chuang K-Y, Ntenda PAM, *et al.* Individual-level and community-level determinants of cervical cancer screening among Kenyan women: a multilevel analysis of a Nationwide survey. *BMC Womens Health* 2017;17:109.
  - 38 Howard AL, Pals S, Walker B, *et al.* Forced Sexual Initiation and Early Sexual Debut and Associated Risk Factors and Health Problems Among Adolescent Girls and Young Women - Violence Against Children and Youth Surveys, Nine PEPFAR Countries, 2007-2018. *MMWR Morb Mortal Wkly Rep* 2021;70:1629–34.
  - 39 Ferede TA, Muluneh AG, Wagnaw A, *et al.* Prevalence and associated factors of early sexual initiation among youth female in sub-Saharan Africa: a multilevel analysis of recent demographic and health surveys. *BMC Womens Health* 2023;23:147.
  - 40 Fatusi AO, Blum RW. Predictors of early sexual initiation among a nationally representative sample of Nigerian adolescents. *BMC Public Health* 2008;8:136:1–14:.
  - 41 Amoako Johnson F. Geographical hotspots and correlates of early sexual debut among women in Ghana. *Reprod Health* 2022;19:118.