PEER REVIEW HISTORY

ARTICLE DETAILS

TITLE (PROVISIONAL)	Unintended pregnancy, induced abortion and abortion care-seeking experiences among adolescents in Kinshasa, Democratic Republic of Congo: a cross-sectional study
AUTHORS	Fatusi, Adesegun; Riley, Taylor; Kayembe, Patrick K.; Mabika, Crispin

VERSION 1 – REVIEW

REVIEWER	Asghari, Fariba Tehran University of Medical Sciences, Medical Ethics and History of Medicine Research Center
REVIEW RETURNED	14-Dec-2020

GENERAL COMMENTS	This manuscript is the report of a study on the incidence of intended abortion among adolescents of Kinshasa. the main result of this paper was a higher rate of unintended pregnancy among adolescents in Kinshasa compared to older women. The paper seems to be done through a valid method. I wonder what is the legal age of adulthood for seeking independent informed consent for abortion or family planning services in the Democratic Republic of Congo. Do physicians ask for parents' consent or have to ask for parents' consent for providing health care services to adolescents? Authors should provide ethical approval for doing this research.

REVIEWER	Basu, Saurav Maulana Azad Medical College
REVIEW RETURNED	27-Feb-2021

GENERAL COMMENTS	1. When referring to 'women's experiences', a qualitative component is usually warranted which is not described in this study 2. "The burden of unsafe abortion is highest in countries with restrictive abortion laws" Yes, with one noticeable exception, in India, which has rates of unsafe abortion in spite of liberal abortion laws. Basu S. Abortion services and ethico-legal considerations in India: The case for transitioning from provider-centered to women-centered care. Dev World Bioeth. 2020 Oct 5. doi: 10.1111/dewb.12296. 3. Abortion related care seeking behavior is likely to differ between age-groups due to social stigma of pre-marital sexual unions as

	suggested by the authors themselves. What are the consequences of using a common multiplier for all in terms of underestimation of adolescent abortion rates . Also, what are the likely abortion care seeking pathways in the women in your study settings - how did you capture information on the experience of the women who preferred seeking care from non-formal unlicensed medical practitioners? 4. Did partner or family support influence abortion care seeking behavior? 5. In Figure 3, you have reported hazard ratio? Did you conduct a survival analysis? 6. How did you attempt to minimize the effect of the social desirability bias in influencing participant responses?

REVIEWER	Bhattacharya, Sohinee University of Aberdeen, Public Health
REVIEW RETURNED	15-Mar-2021

GENERAL COMMENTS	Many thanks for asking me to review this interesting manuscript reporting really important findings related to abortions in Kinshasa. I have a few suggestions to improve the manuscript: 1. The policy change in relation to induced abortion in DRC in 2008 should be mentioned in the abstract, replacing "until recently". 2008 is not that recent! i am also intrigued as to why data from 2016 was used for the analysis and how relevant the findings are in today's DRC. This warrants a full discussion. 2. Lines 31-32 in the discussion section states "Our results show that adolescents have the lowest abortion rate for women aged less than 35 years". Please rephrase this statement to make it clearer. 3. The authors recommend that adolescent sexual health be prioritised as SRH agenda. It would be good to get some policy context with regard to this, especially since the authors have already referenced several previous publications identifying gaps in this care provision. In short, what do the findings add to the existing literature?

VERSION 1 – AUTHOR RESPONSE

Response to Reviewer 1:

The age of majority in the DRC is 18, for example for marriage. With the abortion law amendment in DRC Congo, which was referenced in the manuscript, women of all ages can seek and receive abortion services and adolescent are to be accompanied by an older person. Also, physicians do not need parental consents to provide care to minor. The ethical approval information is included in the appropriate section at the end of the manuscript on page 17: “We obtained ethical approval from the institutional ethics board of the Guttmacher Institute (10 November 2015, DHHS identifier IRB00002197) and from the University of Kinshasa School of Public Heath Ethics Committee (27 December 2015, approval number ESP/CE/010B/2015).”

Responses to Reviewer 2:

1. While women's experiences are often measured qualitatively as the reviewer noted, health care related experiences have been studied in several contexts using quantitative measures where appropriate and where relevant data are available. In our case, as specified in the methodology section, we described each of the nine care-related experiences of interest – and had the quantitative data required to assess each of them.

2. The point made by the reviewer is appreciated along with reference (Basu, 2020) provided. Indeed, the rate of unsafe abortion is still high in India as the reviewer noted and other studies have shown despite the legalization of abortion since 1971, (e.g. Singh S, Shekhar C, Acharya R, Moore AM, Stillman M, Pradhan MR, Frost JJ, Sahoo H, Alagarajan M, Hussain R, Sundaram A, Vlassoff M, Kalyanwala S, Browne A. The incidence of abortion and unintended pregnancy in India, 2015. Lancet Glob Health. 2018 6(1):e111-e120. doi: 10.1016/S2214-109X(17)30453-9; Sharma P, Pradhan MR. Abortion care seeking in India: patterns and predictors. J Biosoc Sci. 2020 May;52(3):353-365. doi: 10.1017/S002193201900049X. Epub 2019 Sep 10. PMID: 31500676). However, global analysis has consistently supported the statement we made that "The burden of unsafe abortion is highest in countries with restrictive abortion laws". To quote Ganatra et al, which we cited, based on their global analysis, "When grouped by the legal status of abortion, the proportion of unsafe abortions was significantly higher in countries with highly restrictive abortion laws than in those with less restrictive laws."

3. The use of a common multiplier is likely to bias the estimates as we have noted in our discussion as one of the limitations of our study. If the multiplier is higher for adolescents than for older ages, for example, we would have underestimated the abortion rate for this group. We have expanded on this in our discussion. The Abortion Incidence Complications Method (AICM), as explained briefly in the methodology, has "Health Professions Survey" (HPS) as one of its components. HPS "provides an estimate of the proportion of abortions that results in facility-based treatment of abortion complications, the inverse of which serves as the multiplier or adjustment factor in the AICM approach." Thus, the AICM derives estimates of women who may have used services outside the health facilities from in-country experts and takes that into account in generating the relevant figures.

4. This is an important question but outside the focus of our study and we have no data related to this question.

5. As stated in the methodology, we used a Cox proportional hazard model to derive the hazard ratio where such applied.

6. Again, our study is based on a secondary data analysis and we presented a summary of the primary data collection process as previously detailed in the work of Chae et al (2017), which included the steps taken to minimize bias generally and improve the quality of data collected. With the sensitive nature of abortion, social desirability bias is a possibility as we duly stated in our discussion section as a limitation. However, the findings that adolescents are less likely to report their pregnancy as intended and more likely to report their pregnancy as induced may indicate a low level of social desirability bias. We have slightly expanded the discussion on social desirability bias in the revised manuscript.

Responses to Reviewer 3:

1. The suggestion has been effected. The policy change was in 2018 (and not 2008 as mistakenly stated in the original manuscript) – this has been corrected. 2016 data was used because that was

the latest data on abortion available for Kinshasa. We believe that the study is still relevant to the study context as behaviour change takes a considerable time at population level as documented in literature.

2. We have rephrased the sentence in line with the advice.

3. In terms of what this study adds to the literature, as we noted in the manuscript, this study presents the first adolescent-specific abortion measures for Kinshasa, DRC and further present the evidence that adolescents had less desirable abortion care experiences compared to older women. Also, we have provided some policy contexts, and specifically cited the National Multisectoral Plan on Family Planning (2014 – 2020) and school-based Sexuality Education Programs in the context of adolescent sexual and reproductive health programs.

VERSION 2 – REVIEW

REVIEWER	Basu, Saurav Maulana Azad Medical College
REVIEW RETURNED	07-Jul-2021

GENERAL COMMENTS	Accept