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DATA NOTE

REVISED Early Marriage among young girls in Eastern Ethiopia: trend during 2008-2018 [version 2; peer review: 2 approved]

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Abstract

Early marriage practices undermine girls' autonomy and seriously affect their physical and mental wellbeing. Monitoring the trends and understanding the drivers is essential in intervening against early marriage. However, many studies on early marriage in Ethiopia are cross-sectional, focusing only on the magnitude at a single point in time. Hence, we extracted data of girls of 10-17 years from Kersa Health and Demographic Surveillance System (Kersa HDSS) database for the period of 2008–2018 in order to examine the trends of early marriage. In this data note we provide the details of a research database of 24,452 girls in the age group of 10-17 years. The extracted data include date of marriage and the girls' socio-demographic variables. Other variables considered to be potentially associated with timing of marriage were also extracted. The purpose of this publication is to describe the dataset for external researchers who may be interested in making use of it as a secondary use of their routinely collected data. This dataset is available at https://doi.org/10.6084/m9.figshare.15034812.

Keywords

Key words: adolescent girls, incidence, early marriage, Ethiopia

This article is included in the Sociology of Health gateway.

Open Peer Review

Approval Status ✓ ✓

	1	2
version 2 (revision) 12 May 2022	✓ view	✓ view
version 1 16 Aug 2021	? view	

1. **İlknur Yüksel-Kaptanoğlu**, Hacettepe University, Ankara, Turkey

2. **Sarni Berliana** [iD], Sekolah Tinggi Ilmu Statistik, Jakarta, Indonesia

Any reports and responses or comments on the article can be found at the end of the article.

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Author roles: Abdurahman D: Conceptualization, Data Curation, Formal Analysis, Funding Acquisition, Investigation, Methodology, Project Administration, Resources, Software, Supervision, Validation, Visualization, Writing – Original Draft Preparation, Writing – Review & Editing; **Assefa N**: Conceptualization, Data Curation, Formal Analysis, Funding Acquisition, Investigation, Methodology, Project Administration, Resources, Software, Supervision, Validation, Visualization, Writing – Original Draft Preparation, Writing – Review & Editing; **Berhane Y**: Conceptualization, Data Curation, Formal Analysis, Funding Acquisition, Investigation, Methodology, Project Administration, Resources, Software, Supervision, Validation, Visualization, Writing – Original Draft Preparation, Writing – Review & Editing

REVISED **Amendments from Version 1**

The benefits of a data set for researchers who investigate child marriage, the definitions of early marriage, and the choice of using early marriage instead of child marriage are all explained in the latest edition of this document's Introduction section. In the material and method part, a more extensive explanation of the KERSA HDHSS system is provided based on the comments and suggestions, as well as the overall goal of the system, sample size, how data is acquired, and the constraints of the data set.

Any further responses from the reviewers can be found at the end of the article

Introduction

This dataset is used as a great source for researchers who study early marriage and interested in making use of it as a secondary use of their routinely collected data. It also enables to generalize the findings for a large community as it is huge in number and shows a trend of early marriage for more than a decade.

Early marriage is defined as any marriage or union between two people where at least one of the parties is under 18 years of age (OHCHR, 2019). Marriages that take place before age 15 are considered "very early marriages" (UNICEF, 2020)."Early marriage" has been interpreted, as synonymous with "child marriage" or as more inclusive as child marriage. 'Early' does not have to refer solely to age, however, and could be read to include other factors that would make a person unready to consent to marriage (Sri, 2013). It undermine girls' autonomy and seriously affects their physical and mental wellbeing (Nour, 2006; Walker, Mukisa, Hashim, & Ismail, 2013).

The highest rate of child marriage is in sub-Saharan Africa, with 37 percent of young women marrying before age 18. According to the Ethiopian demography and health survey (EDHS) 2016, the national prevalence of early marriage was 58% (CSA, 2016). Ethiopia ranks 15th in the prevalence of early marriage and 5th in the total number of early marriages globally. Nearly 40% of girls in Ethiopia are married before they turn 18 years and approximately 14% are married before their 15th birthday (UNICEF, 2018). Monitoring the trend and understanding the drivers is essential in intervening against early marriage. However, evidence on the effectiveness of interventions from longitudinal community-based studies is scarce. Hence, we extracted data of girls of 10–17 years from the Kersa Health and Demographic Surveillance System (Kersa HDSS) database for the period of 2008–2018 in order to examine the trends of early marriage.

Methods and materials

This data note used data from an open dynamic cohort that gives leverage of a huge set of data from the exiting Health and Demographic Surveillance System (Kersa HDSS). The Kersa HDSS is located in the eastern Hararghe Zone of the Oromia regional state in Ethiopia. It is a demographic and health surveillance and research center established in 2007 by Haramaya University to serve as a research center and source of health and demographics data for Eastern Ethiopia, thus creating a framework for research at the community level and to be a platform for various health-related research by the College of Health and Medical Sciences in Haramaya University. The initial baseline household and population census' were conducted in 2007, and the database is updated every six months with registration of demographic (birth, death and migration) and health (reproductive and morbidity) events (Assefa et al., 2016). Kersa HDSS does monitoring demographic events such as birth, death, marital status change, and migration; and health-related conditions such as pregnancy, immunization, and morbidity among children and adults. Data collectors who know the language of the community are permanently recruited and execute the data collection regularly. The data are collected by trained interviewers who are mainly residents in the study Kebele (the smallest administrative unit in Ethiopia). In each round of data collection, the household head or any adult member of the household is interviewed using structured forms that are prepared to capture a specific demographic or health event.

Source of data

Data was extracted from Kersa HDSS database for the period of January 01, 2008 to December 31, 2018 for girls in the age group of 10 to17 years with a sample size of (24,452) which helps to generalize the findings to the eastern part of the country. The extracted data includes date of marriage and girl's socio-demographic variables. Other variables considered to be potentially associated with the timing of marriage were also extracted. Microsoft Excel 2010 (Microsoft Excel, RRID:SCR_016137) was used to process the data (an open access alternative to Excel 2010 is Google Sheets). KHDSS data collection tool lack some important exposure variables that help to assess the socio-cultural factors; like social norms, the reason for marriage, parental education, occupation and socioeconomic status of the parents, which had a significant effect on early marriage. Hence, could be considered as a limitation of this study.

Ethical approval

Kersa HDSS has ethical approval from the Institutional Health Research Ethics Review Committee (IHRERC) of Haramaya University at the initiation of the surveillance system and renewed every five years. The approval written informed consent for KHDSS head office for the sharing of girls' data was obtained from the IHRERC of Haramaya University, Ethiopia with approval number (IHRERC/177/2018). The accessed data were used for this research only.

Data availability

Datasets are available publicly via:

Figshare: Early Marriage among young girls in Eastern Ethiopia: trend during 2008-2018.

https://doi.org/10.6084/m9.figshare.15034812 (Abdurahman et al. 2021).

The project contains the following underlying data.

- Early marriage data.xlsx. (contains data in excel spreadsheet of ten years of marriage data and girl's socio-demographic variable)

Data are available under the terms of the Creative Commons Attribution 4.0 International license (CC-BY 4.0).

Author contributions

All authors contributed equally from conception, design, data extraction, and statistical analysis to interpretation of data. They also took part in the drafting of the manuscript and final approval for submission.

Acknowledgments

References

Abdurahman D, Assefa N, Berhane Y: **Title page.docx.** *figshare. Dataset.* 2021.
Publisher Full Text

Assefa N, Oljira L, Baraki N, *et al.*: **HDSS profile: the Kersa health and demographic surveillance system.** *Int J Epidemiol.* 2016; **45**(1): 94–101.
PubMed Abstract | **Publisher Full Text** | **Free Full Text**

CSA: **Ethiopia demographic and health survey.** *Central Statistical Agency Addis Ababa.* Maryland, USA: Ethiopia ICF International Calverton; 2016.

Nour NM: **Health consequences of child marriage in Africa.** *Emerg Infect Dis.* 2006; **12**(11): 1644.
PubMed Abstract | **Publisher Full Text** | **Free Full Text**

OHCHR: **Child and forced marriage, including in humanitarian settings.** 2019. Accessed on February 25, 2022.
Reference Source

Sri: **Analysis of the Language of Child, Early, and Forced Marriages. United Nations General Assembly Resolution 66/140, The Girl Child. A/RES/66/140, p. 4; Beijing Platform for Action (1995), 259.** 2013.
Reference Source

UNICEF: **Ending Child Marriage: A profile of progress in Ethiopia.** 2018.

UNICEF: **New York.** February 2020. Accessed on February 23, 2022.
Reference Source

Walker J-A, Mukisa S, Hashim Y, *et al.*: **Mapping Early Marriage in West Africa: a scan of trends, interventions, what works, best practices and the way forward Lagos: Ford Foundation.** *West Africa Office.* 2013.

Open Peer Review

Current Peer Review Status: ✔ ✔

Version 2

Reviewer Report 13 July 2023

https://doi.org/10.5256/f1000research.133886.r181996

✔ **Sarni Berliana** (iD)

Sekolah Tinggi Ilmu Statistik, Jakarta, Indonesia

The Kersa HDSS dataset for 2008-2018 includes more than 80,000 observations. The available variables include ethnicity, religion (Muslim, other), occupation (student, unemployed, other), place of residence (urban/rural), education level, age at survey (10-14, 15-17), and trend at marriage (10-14, 15-17). The authors admitted that the data lack of some important variables related to early marriage. However, the available data has relevant information that can be used for research on early marriage.

Is the rationale for creating the dataset(s) clearly described?
Yes

Are the protocols appropriate and is the work technically sound?
Yes

Are sufficient details of methods and materials provided to allow replication by others?
Yes

Are the datasets clearly presented in a useable and accessible format?
Yes

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Statistics, Population Studies

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard.

Author Response 13 Jul 2023

Dureti Abdurahman

We'd like to thank the reviewer for taking the time and making the effort to read and approve our paper.

Competing Interests: No competing interests were disclosed.

Reviewer Report 21 June 2022

https://doi.org/10.5256/f1000research.133886.r137597

✔ **İlknur Yüksel-Kaptanoğlu**
Institute of Population Studies, Social Research Methodology Department, Hacettepe University, Ankara, Turkey

Thank you for the revisions.

Is the rationale for creating the dataset(s) clearly described?
Yes

Are the protocols appropriate and is the work technically sound?
Yes

Are sufficient details of methods and materials provided to allow replication by others?
Yes

Are the datasets clearly presented in a useable and accessible format?
Yes

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Domestic violence against women, child, early and forced marriages, qualitative research methods, gender equality

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard.

- -

Version 1

Reviewer Report 08 September 2021

İlknur Yüksel-Kaptanoğlu
Institute of Population Studies, Social Research Methodology Department, Hacettepe University, Ankara, Turkey

This data note describes the data set of Kersa Health and Surveillance System (Kersa HDSS) for the use of secondary analysis. It is appropriate for the publication in F1000 research. However, some parts of this data note needs information to explain the data set in a more detailed way before indexing.

My minor concerns are the following:
- Introduction section should be elaborated by explaining the benefits of a data set for researchers who study child marriages. The definitions of early marriage, and the choice of using early marriage instead of child marriage should be explained. Since, in many data sets it is measured by the age of marriage before 18 or 15. The reference time should be included about the prevalence of child marriage of Ethiopia.

- In the material and method section (it must be named as), more explanation is needed about the system of KERSA HDHSS. The aim of the system in general, sample size, how data is collected, what are the other specific demographic events, other variables and what are the limitations of the data set some of the questions that should be mentioned.

- Some minor grammar mistakes should be reviewed.

Is the rationale for creating the dataset(s) clearly described?
Yes

Are the protocols appropriate and is the work technically sound?
Yes

Are sufficient details of methods and materials provided to allow replication by others?
No

Are the datasets clearly presented in a useable and accessible format?
Yes

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Domestic violence against women, child, early and forced marriages,

qualitative research methods, gender equality

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.

Author Response 01 Dec 2021

Dureti Abdurahman

Dear reviewer
We greatly appreciate the time and effort put forth to improve our paper. We benefited a lot from their insightful comments and suggestions. Based on the suggestions, we have provided a response to each comment as follows, and we will incorporate it on the main document.

General comment
This data note describes the data set of Kersa Health and Surveillance System (Kersa HDSS) for the use of secondary analysis. It is appropriate for the publication in F1000 research. However, some parts of this data note needs information to explain the data set in a more detailed way before indexing.
My minor concerns are the following:

First comment*:*
  ○ *Introduction section should be elaborated by explaining the benefits of a data set for researchers who study child marriages. The definitions of early marriage and the choice of using early marriage instead of child marriage should be explained. Since, in many data sets it is measured by the age of marriage before 18 or 15.*
  ○ *The reference time should be included about the prevalence of child marriage of Ethiopia.*

Authors' Response: We greatly appreciate the reviewer's helpful comment and suggestion
This dataset is used as a great source for researchers who study early marriage and interested in making use of it as a secondary use of their routinely collected data**.** It also enables to generalize the findings for a large community as it is huge in number and shows a trend of early marriage for more than a decade.
Early marriage, or child marriage, is defined as the marriage or union between two people in which one or both parties are younger than 18 years of age (OHCHR, 2019). Marriages that take place before age 15 are considered "very early marriages." (UNFPA, 2020). "Early marriage" has been interpreted, as synonymous with "child marriage" or as more inclusive as child marriage. 'Early' does not have to refer solely to age, however, and could be read to include other factors that would make a person unready to consent to marriage (sri, 2012). Although early is not explicitly defined to mean less than 18 years old, it is frequently found in that context. Several organizations like World Health Organization, UN for instance, use the term 'early marriage' consistently(UNICEF, 2005).
The highest rate of child marriage is in sub-Saharan Africa, with 37 percent of young women marrying before age 18. According to the Ethiopian demography and health survey (EDHS) 2016, the national prevalence of early marriage was 58% (CSA, 2016).

Second Comment
In the material and method section (it must be named as), more explanation is needed about the system of KERSA HDHSS. The aim of the system in general, sample size, how data is collected, what are the other specific demographic events, other variables and what are the limitations of the data set some of the questions that should be mentioned.

Authors' Response: Thank you, we appreciate the valuable suggestions. It is explained as suggested.

Methods and Materials
Kersa HDSS is a demographic and health surveillance and research center established in 2007 by Haramaya University to serve as research center and source health and demographics data for Eastern Ethiopia, thus to create a framework for research at the community level and to be a platform for various health related research by the college of Health and Medical Sciences in Haramaya University. Kersa HDSS does monitoring demographic events such as birth, death, marital status change and migration; and health related conditions such as pregnancy, immunization, and morbidity among children and adults. The baseline census was conducted in 2007 and since then has been updated every 6 months, with registration of demographic and health events (Assefa *et al.*, 2016). Data collectors who know the language of the community are permanently recruited and execute the data collection regularly.
This study used data from an open dynamic cohort that gives a leverage of huge set of data from exiting Health and Demographic Surveillance System (Kersa HDSS) with a sample size of (24,452) that helps to generalize the findings to eastern part of the country.
KHDSS data collection tool lack some important exposure variables that help to assess the socio cultural factors; like social norms, reason for marriage, parental education, occupation and socioeconomic status of the parents, which had a significant effect on early marriage. Hence, could be considered as a limitation of this study.

References

Assefa, N., Oljira, L., Baraki, N., Demena, M., Zelalem, D., Ashenafi, W., & Dedefo, M. (2016). HDSS profile: the Kersa health and demographic surveillance system. *International Journal of Epidemiology, 45*(1), 94-101.
CSA. (2016). Ethiopia demographic and health survey. Central Statistical Agency Addis Ababa . *Ethiopia ICF International Calverton, Maryland, USA.*
OHCHR. (2019). Child and forced marriage, including in humanitarian settings.
sri. (2012). United Nations General Assembly Resolution 66/140, The Girl Child (2012), A/RES/66/140, p. 4; Beijing Platform for Action (1995), L. The Girl Child para. 259.
UNFPA. (2020). Child marriage - Frequently Asked Questions.
UNICEF. (2005). EARLY MARRIAGE: A HARMFUL TRADITIONAL PRACTICE: A STATISTICAL EXPLORATION (2005), p. 4. .

Competing Interests: No competing interests were disclosed.

Author Response 07 Jan 2022

Dureti Abdurahman

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UNICEF. (2005). EARLY MARRIAGE: A HARMFUL TRADITIONAL PRACTICE: A STATISTICAL EXPLORATION (2005), p. 4. .
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Competing Interests: No competing interests were disclosed.

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