



Research to Help Girls and Women Thrive

EXPLORING THE ASSOCIATION
BETWEEN FGM/C
AND EARLY/CHILD MARRIAGE:
A REVIEW OF THE EVIDENCE

May 2017



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ACRONYMS

DfID	Department of International Development (UK)
DHS	Demographic Health Survey
EBSCO	Academic Search Complete database
FGM/C	Female Genital Mutilation/Cutting
GBV	Gender-based Violence
HIV	Human Immunodeficiency Virus
MICS	Multiple Indicator Cluster Survey
NORAD	Norwegian Agency for Development Cooperation
OBS	Observational study
Pubmed	MEDLINE (database of references and abstracts on life sciences and biomedical topics)
QEX	Quasi-experimental studies
SADC	Southern African Development Community
SSA	Sub-Saharan Africa
UN	United Nations
UK	United Kingdom
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WHO	World Health Organisation

EXECUTIVE SUMMARY

Introduction

Over the last several decades, global efforts to end female genital cutting/mutilation (FGM/C) have intensified through the combined efforts of international and non-governmental organisations (NGOs), governments, and religious and civil society groups. The existing evidence base on the wider impacts of practising FGM/C and that on abandonment interventions is small but emerging. Among the many adverse health outcomes thought to be associated with FGM/C, four are frequently cited by policymakers and advocates—associations between FGM/C and HIV, infertility, fistula, and Early/Child Marriage—because of their severity and the associated stigmatisation, yet relatively little rigorous evidence is available for each.

FGM/C and Early/Child Marriage are linked practices prevalent in sub-Saharan Africa (SSA). In Africa, although the age at marriage has been rising, over a third of women are married before age 18. FGM/C and Early/Child Marriage constitute harmful practices affecting not only the health of the girl child, but also their development and quality of life. Consider:

- FGM/C has affected an estimated 200 million women in 29 countries, 27 of which are in Africa, and up to 30 million girls are considered to be at risk during the next decade (UNICEF 2013).
- An estimated 15 million girls marry before age 18 years annually, and without interventions to stop Early/Child Marriage the total number of girls who will be married before age 18 years will rise from the current 720 million to an estimated 1.2 billion by the year 2050 (UNFPA 2014)¹.
- While Early/Child Marriage occurs across the globe, FGM/C is most prevalent in regions of SSA and South Asia.
- Both traditions seem to have similar factors and consequences and may, therefore, have some form of association, e.g. FGM/C is part of the transition from childhood to adulthood, and is more often than not a prerequisite for marriage.
- There are global efforts to reduce and ultimately eliminate these practices as stated in the Sustainable Development Goal on gender equality (Target 5.3).

Study Rationale

FGM/C has been frequently linked to marriageability and thought to be associated with child marriage, yet there is remarkably little rigorous research to clarify the relationship between these two practices to inform discussions and responses. Furthermore, trends are also shifting in the timing of FGM/C from adolescence to early childhood, and the implications this might have on the links between Early/Child Marriage and FGM/C are not well understood.

This review of current available evidence aims to assess the association between FGM/C and Early/Child Marriage in contexts where both practices are carried out. It includes evidence from English-language peer-reviewed and grey literature. The quality of the studies to be included was appraised using the Department for International Development (DfID) 2014 guidance *How to Note: Assessing Strength of Evidence*.

¹ See Girls Not Brides Fact Sheet. 2014. www.girlsnotbrides.org/wp-content/uploads/2014/10/GNB-factsheet-on-child-marriage-numbers-Oct-2014.pdf

What does the evidence tell us about the association between FGM/C and Early/Child Marriage?

- Only six studies of low to moderate quality met the inclusion criteria—four primary studies of moderate quality and two reviews of low quality.
- There was no quantitative evidence to quantify an association or lack of it. The evidence describing the association between FGM/C and Early/Child Marriage was qualitative.
- Evidence from three studies in Somaliland² and Ethiopia³ show a direct association, with FGM/C transitioning a girl from childhood to adulthood, which leads to child marriage.
- All included studies reported an indirect association between the two practices. This is based on the similarity of causes or underlying drivers behind each such as poverty—the need to secure a financially stable future for the girl, circumcised girls are easily married off and often fetch a higher bride price; and social cultural norms and beliefs—the need to maintain chastity and virginity among girls and make them more submissive to males. The negative consequences of child marriage and FGM/C are also similar, including maternal and neonatal deaths, birth complications, stigmatisation and social isolation, domestic or intimate partner abuse, among others.
- Using the available literature, a conceptual framework outlining some of the commonalities in causes and consequences was developed (Figure 1).

What do we still need to better understand the associations between FGM/C and Early/Child Marriage?

The evidence on the associations between FGM/C and Early/Child Marriage is generally scant. This review highlights valuable methodological and reporting lessons for the design of high quality studies to assess the relationship between the two practises. Some of these lessons include:

1. The sampling needs to be robust and representative of the different cultures and contexts if we are to say something meaningful about a given region. Alternatively, studies need to be conducted in a context that is homogenous to allow for a better understanding of these practices;
2. There is need for better documentation and/or the use of robust and temporal study designs to enable a more complete analysis of any possible causal relationships between child marriage and FGM/C;
3. Longitudinal studies would further enhance the reliability of findings on FGM/C and/or child marriage status; and
4. The triangulation of data, especially in contexts where marriages and births are registered, would greatly enhance the validity and reliability of studies; currently researchers have relied upon participant self-reporting, which can be biased.

From the evidence, it is hard to describe clearly the associations quantitatively between FGM/C and Early/Child Marriage. Using data already available (like DHIS and MIC data), we can attempt to answer some of these questions:

1. What is the association of FGM/C and Early/Child Marriage in different ethnic groups but within the same country?

² Rural Oromia people (World Vision UK 2014) and Somali people who practice the Sunna type of FGM/C in Somaliland. (World Vision UK 2013).

³ Wolayta people in Southern Ethiopia (Boyden 2013)

2. Why are these practices continuing in one ethnic group in rural settings while being abandoned in urban areas?

There also needs to be a deliberate attempt to assess and evaluate interventions, which are aimed at eliminating these practices. Efforts to monitor and evaluate interventions has been poor making it hard to infer reasons as to why interventions work in one setting and not in another. Governments need to improve vital statistics data collection, e.g. birth and marriage dates, so that there is more reliable data and to enforce laws which have been enacted to control these practices. Implementing partners and governments need to design integrated interventions and strategies to tackle FGM/C and child marriage in contexts where both practices are prevalent. The social and cultural norms that underpin both practices and thus their continuation may vary across cultures and countries and even change over time; the challenge is to understand how social norms will and could be changed to end harmful practices that affect the lives of girls and women.

INTRODUCTION

FGM/C and Early/Child Marriage are linked practices that are prevalent in Sub-Saharan Africa (SSA). In Africa, while the age at marriage has been rising, over a third of women are married before their 18th birthday.⁴ While FGM/C has affected an estimated 200 million women in 29 countries, 27 of which are in Africa, up to 30 million girls are considered to be at risk of being cut during the next decade.⁵ The changing trend that seen a shift in the timing of FGM/C from adolescence to childhood⁶ and the implications this might have on the links between child marriage and FGM/C is therefore of interest.

FGM/C and Early/Child Marriage are traditional harmful practices that need to be abandoned (Boyden et al 2013, 2012). Due to their very nature of promoting gender inequality, these practices are a violation of the rights of girls and women (Wadesango et al 2011) and increase risk of gender-based violence (Morton et al 2014). Several United Nations (UN) conventions state the need to eliminate child marriage and FGM/C including the Convention for the Elimination of All Forms of Discrimination Against Women (CEDAW), the Convention on the Rights of the Child, and the Convention Against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment.⁷ In addition, the UN's 1994 International Conference on Population and Development (ICPD) Programme of Action urges governments to prohibit FGM/C and protect women and girls from such dangerous practices. Finally, the UN's Sustainable Development Goals 5.3 calls for the 'elimination of all harmful practices, such as child, early and forced marriage and female genital mutilation'.⁸

There are deep social norms that hold both FGM/C and girl marriage in place: the consolidation of family interests of maintaining honor, enhancing fidelity within marriage and preserving virginity before marriage, the social integration of the girl and family, and financial security in situations of poverty (Boyden et al 2012). Several programmes have sought to intervene to reduce the harms associated with the practices of FGMC and Early/Child Marriage, but measurable effects or progress are not very clear, necessitating the need to review the state of existing evidence. There has been remarkably little rigorous research exploring the relationship between FGM/C and Early/Child Marriage in a variety of contexts, to inform discussions and actions to end them.

Child marriage

Annually, an estimated 15 million girls marry before the age of 18, and without interventions to stop Early/Child Marriage, the number of girls married before age 18 will rise from the current 720 million to 1.2 billion by 2050 (UNFPA 2014)⁹. Child marriage is most commonly found in Asia, Africa, and some Middle Eastern countries. In south Asia, almost half (46%) of girls are married by the time they are 18 years old, and the figure is only slightly lower in west and central Africa (41%). By contrast, less than five percent of boys between 15 and 19 years of age in the two regions marry (Raj et al 2009). The UN defines child marriage as marriage before the age of 18.¹⁰

⁵ UNICEF. 2013. *Female Genital Mutilation/Cutting: A Statistical Overview and Exploration of the Dynamics of Change*, New York: UNICEF

⁶ Koski A, Clark S, Nandi A. 2017. Has Child Marriage Declined in sub-Saharan Africa? An Analysis of Trends in 31 Countries. *Popul Dev Rev* 43(1): 7–29. <http://doi.wiley.com/10.1111/padr.12035>

⁷ Kangas, A. 2011. International Instruments and Female Genital Mutilation/Cutting, GSDRC Helpdesk Report and Nowak, M., 2008, "Promotion and Protection of All Human Rights, Civil, political, Economic, Social and Cultural Rights, Including the Right to Development", Special Rapporteur on torture and other cruel, inhuman or degrading treatment or punishment. www.unhcr.org/refworld/docid/47c2c5452.html

⁸ Sustainable Development Knowledge Platform. <https://sustainabledevelopment.un.org>

⁹ Girls Not Brides Fact Sheet of 2014. www.girlsnotbrides.org/wp-content/uploads/2014/10/GNB-factsheet-on-child-marriage-numbers-Oct-2014.pdf

¹⁰ www.unicef.org/protection/57929_58008.html

It is important to note that some countries do not have a minimum age of marriage. In addition, the definition of a child is country dependent based on the existing laws and culture¹¹ such that some countries refer to childhood as below 15 years of age, while in others a child is below 18 or 21 years.¹² Though child marriages may affect both boys and girls, the practice disproportionately endangers the lives of young girls. Child marriages tend to lack consent, and hence some texts refer to it as a forced or arranged marriage.¹³

There is increasing awareness and evidence that child marriage compromises girls' health, with pregnancies associated with complications and even death¹⁴, given the girls' physical immaturity. Other effects of child marriage include greater risk of acquiring sexually transmitted infections¹⁵ and fewer educational and long-term economic opportunities (Alemu 2006, Avalos et al 2015).

Female genital mutilation/cutting (FGM/C)

Globally, close to 200 million women have been circumcised, and two million girls are estimated to be circumcised each year (UNICEF 2013, UNICEF 2016). There are different forms of FGM/C with the more extreme forms (Types 3 and 4) leading to potentially serious health consequences. Female circumcision has been associated with a range of reproductive health problems. Infibulation, or Type 3 FGM/C according to WHO classification, has been shown to be associated with keloid formations, pelvic infection, dysmenorrhea, hematocolpos (accumulation of menstrual blood in the vagina), painful intercourse, infertility, and complications during childbirth (WHO 2000; UNICEF 2013). Proponents of FGM/C, however, argue that the least invasive form of FGM/C (Type 1, Cliterodectomy) does not lead to negative medical implications (Wadesango et al 2011).

As shown in figures 1a and 1b on the following page, in many African countries where national data on FGM/C prevalence is available, child/early marriage is also practiced. There are 30 countries in SSA with a child marriage prevalence rate of 30 percent or more.¹⁶ A community that supports FGM/C is likely to push its children into early marriage since beliefs about the need to ensure a girl's virginity and purity are strengthened by following FGM/C with child, early and forced marriage.¹⁷ Furthermore, civil war, poverty, weak legislative frameworks and enforcement, harmful traditional practices, gender discrimination and lack of alternative opportunities for girls (especially in education) are all posited as some of the drivers of child marriage (World Vision UK 2013).

¹¹ In some cultures, when menstruation starts a girl is no longer seen as a child and can be married; some girls can start menstruation as early as 12 (World Vision UK 2013)

¹² Some texts will refer to it as under age marriage. In this review, we use Early/Child Marriage, but when there is need to quote verbatim then underage marriage and forced marriage terms may be used.

¹³ The Universal Declaration of Human Rights states that marriage should be entered into by the free and full consent of the two spouses and as such minors do not have full maturity to give consent for marriage. Arranged marriage in adults is not necessarily forced marriage as some communities, especially in Asia, still have arranged marriages among consenting adults (Raja et al 2010, Singh & Vennam 2016).

¹⁴ Patton GC, Coffey C, Sawyer SM, Viner RM, Haller DM, Bose K, et al. 2009. Global patterns of mortality in young people: a systematic analysis of population health data. *Lancet* 374 (9693): 881–92.

¹⁵ Koski A, Clark S, Nandi A. 2017

¹⁶ The countries are Zimbabwe (31%), Senegal (33%), Congo (33%), Gabon (33%), Sudan (34%), Sao Tome & Principe (34%), Benin (34%), Cote d'Ivoire (34%), Mauritania (35%), Gambia (36%), Cameroon (36%), Tanzania (37%), Liberia (38%), Nigeria (39%), Democratic Republic of the Congo (39%), Ethiopia (41%), Zambia (42%), Somalia (45%), Uganda (46%), Eritrea (47%), Burkina Faso (48%), Sierra Leone (48%), Madagascar (48%), Malawi (50%), Mozambique (52%), Mali (55%), Central African Republic (61%), Guinea (63%), Chad (72%), Niger (75%). Source: UNFPA database. Household surveys (DHS and MICS) completed between 2000 and 2011. www.scribd.com/document/226723959/Fact-Sheet-on-Ending-Child-Marriage

¹⁷ orchidproject.org/wp-content/uploads/2015/12/Girl-Summit-factsheet.pdf

Female genital mutilation/cutting and child/early marriage

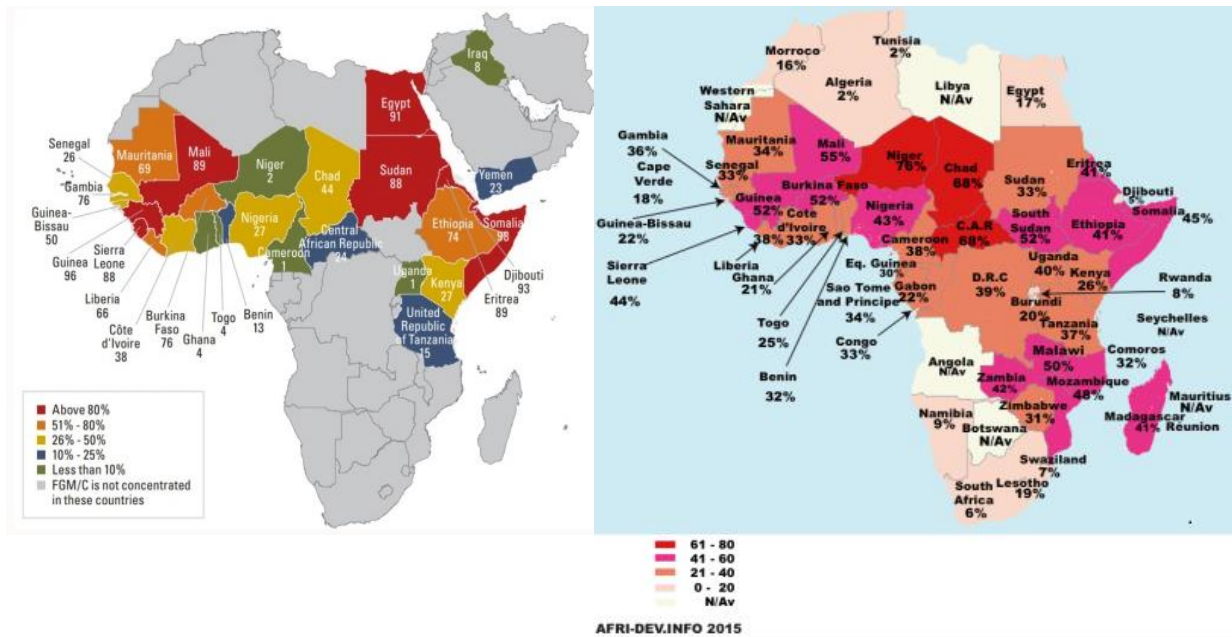


Figure 1a: Prevalence of FGM/C in Africa¹⁸

Figure 1b: Underage/child/forced marriage in Africa under 18 yrs.¹⁹

¹⁸ www.unicef.org/protection/files/00-FMGC_infographiclow-res.pdf

¹⁹ www.afri-dev.info (for child marriage map)

METHODOLOGY

This study aims to summarise the literature available on the association between FGM/C and Early/Child Marriage. Specifically, it attempts to answer the question ‘What is the available rigorous evidence on the association between FGM/C and Early/Child Marriage?’

This review of literature followed a systemic process of search and quality assessment as outlined in five steps adapted from the DfID 2014 *How to Note: Assessing Strength of Evidence*.

Step 1: Search for evidence

A set of search phrases—‘Female circumcision’, ‘FGM,’ ‘FGMC’, ‘Female Genital mutilation’ AND ‘Child marriage’, ‘Forced marriage’—were used in a variety of search engines to identify relevant literature. Peer reviewed literature was identified using PubMed and EBSCO. We further searched institutional websites and databases of organizations involved in FGM/C and Early/Child Marriage activities, to identify reports and any possible “grey literature”. These included the organizational websites searched of UNICEF, UNFPA, FORWARD UK, Population Council, World Vision, USAID, Girls Not Brides; The Global Partnership to End Child Marriage, WHO Adolescent Health Division, Plan International, Young Lives, DfID, and NORAD. General searches were conducted using google and google scholar to be sure we had not missed any literature. In addition, we cross referenced articles which were relevant and scanned through their bibliography to identify additional materials.

Step 2: Study selection

Final studies were selected for review based on the following inclusion and exclusion criteria:

The Inclusion criteria:

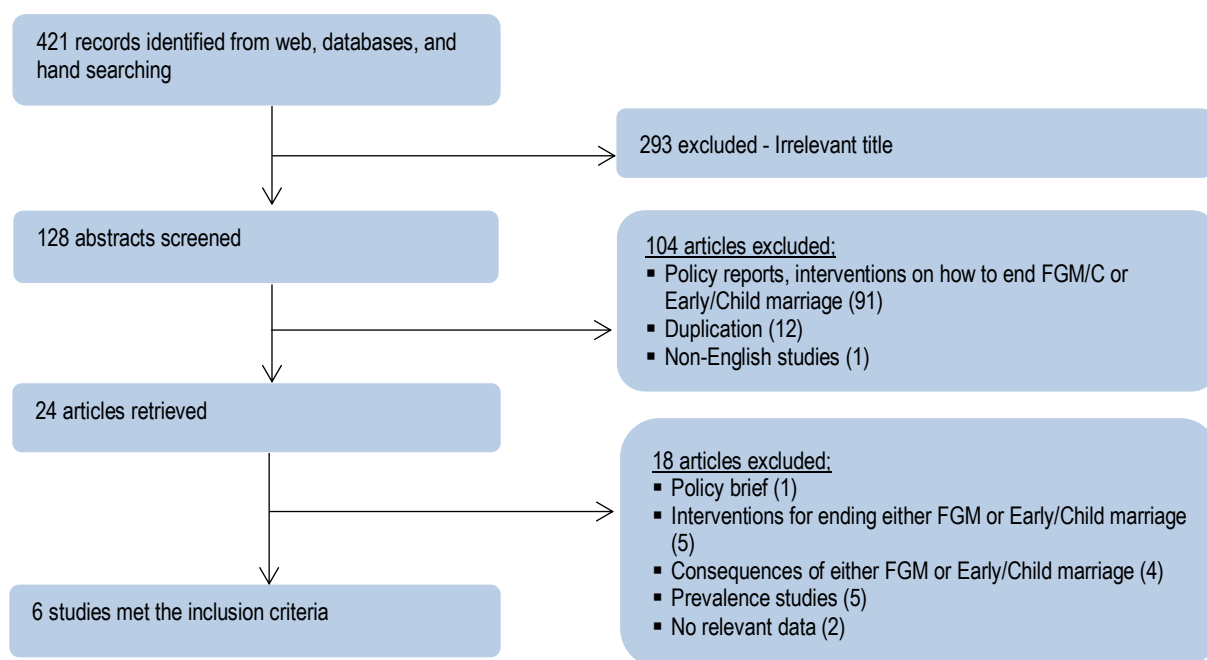
- Studies reporting on the association of FGMC and Early/Child Marriage, in any setting (low, middle or high income setting).
- Because the evidence base returned from the above search was too limited, studies reporting on common causes for FGM/C and Early/Child Marriage were included to see if there is a causal effect between the two practices.
- All study designs, experimental, quasi experimental or observational (e.g. case reports, cohorts studies, case controls), were included.

The following studies were excluded from the search results:

- Studies in a language other than English
- Studies that reported only on the consequences of FGM/C or child marriage alone

We did not exclude any studies based on their methodological quality or publication status - peer reviewed works, unpublished reports and any grey literature including Masters and PhD thesis were included. In total, 412 records were yielded from various databases. Following the screening of publication titles and the application of the inclusion and exclusion criteria, a total of 6 studies qualified for inclusion in this review (Figure 2, following page).

Figure 2. Study Selection



Step 3: Study categorization

Studies that met the inclusion criteria were categorised according to type, primary or secondary, and design. Primary studies²⁰ were those which observed phenomenon first hand and collected, analyzed or presented raw data. On the other hand, secondary studies were those that used systematic, or other types (narrative review or any non-systematically conducted review) of, reviews to assess and/or analyse multiple primary research studies, providing a summary of their data and findings (DfID 2014).

Step 4: Quality assessment

Data from studies which met the inclusion criteria were extracted into an excel spreadsheet. This included data on the author, year, country, prevalence of FGM/C, prevalence of Early/Child Marriage, sample size and source population, findings (common causes, consequences or reasons for FGMC or Early/Child Marriage), and association if reported. The quality of these studies was then assessed using the 2014 DfID *How to Note on 'Assessing the strength of evidence'*.²¹ One reviewer did the data abstraction and quality assessment while the second reviewer counter checked the data abstracted and quality assessment.

FGMC and Early/Child Marriage have significant cultural underpinnings such that most of the retrieved evidence utilized qualitative or in some cases mixed methodologies. We have therefore not used all the indicators as prescribed in the DfID 2014 guidance as they are more appropriate for interventional/experimental studies but may be inadequate when applied to observational studies, especially evaluation studies.

²⁰ Study designs were experimental, quasi experimental or observational.

²¹ DfID *How To Note: Assessing The Strength of Evidence*. March 2014

We used six criteria/principles (Table 1) adapted from the DfID How to Note to assess the quality of research.²² These principles were applied to both quantitative and qualitative studies. By applying these principles, it is expected that some studies will score higher than others due to the research method used, however, this does not indicate that low quality studies are poorly conducted. Instead such studies may not have provided sufficient information to allow for a thorough assessment of the indicators that are part of the DfID tool.

Table 1: Quality assessment for primary studies

Principles of quality	Indicators	Score
Conceptual framing	Does the study acknowledge existing research?	0=Major issues 1=Some issues 2=No issues
	Does the study pose a research question or outline a hypothesis?	
Transparency	Does the study present or link to the raw data it analyses?	0=Major issues 1=Some issues 2=No issues
	Does the study declare sources of support/funding?	
Appropriateness	Does the study identify a research design, methods and analysis approach?	0=Major issues 1=Some issues 2=No issues
	Does the study demonstrate why the chosen design and method are well suited to the research question?	
Cultural/Context sensitivity	What is the geography/context in which the study was conducted?	0=Major issues 1=Some issues 2=No issues
	Does the study explicitly consider any context-specific cultural factors that may bias the analysis/findings?	
Validity ²³	To what extent is the study internally valid?	0=Major issues 1=Some issues 2=No issues
	To what extent is the study externally valid? How representative is the sample used in the study?	
Reliability ²⁴	What measures were put in place to ensure consistency of data collection?	0=Major issues 1=Some issues 2=No issues
	To what extent are the measures used in the study internally reliable?	
Score (sum)	0-4 (Low Quality), 5-8 (Moderate Quality), 9-12 (High Quality)	0-12

For each study, a score of 0 to 2 was given for each quality principle based on the extent to which the question/indicator is yes (1) or no (0). A score of 2 represents 'no issues', i.e. all questions answered yes; 1 stands for 'some issues', where one question answered 'yes' and the other answered 'no'; and 0 for 'major issues', i.e. all the questions answered no. Each study was then assigned an aggregate score assuming equal weighting for each principle. We reviewed all studies and recorded notes on each study that we first individually assessed to provide justification for the scores and to facilitate quality assurance on cross-checking. Scores were then compared and discussed to resolve any discrepancies between reviewers.

For secondary studies, three indicators/questions were used to assess the quality of each study as shown in the assessment framework in Table 2. Each question was assigned a score of 2 if "Yes", 1 if "Unclear," which means that there may have been a mention of some sort of inclusion criteria, for example, but it is not shown explicitly what it entailed, and 0 if "No". Each study was given an aggregate score ranging from 0 to 6 based on the extent to which it abided with the principles of research quality as outlined in the DfID How to Note. A secondary study was graded high if it scored 5 to 6, moderate if it scored 3 to 4, and low if it scored 0 to 2.

²² That is why the 'tool' is adapted and therefore may vary from the original. DfID 2014. 'Tool,' for example, the principle of cogency is considered within the principle of cultural/context sensitivity to fit the type of evidence available for this review

²³ For qualitative research, assess whether the authors considered 'reflexivity' i.e. an attempt to explain to what extent a research could have been biased by the researchers own perceptions or opinions.

²⁴ Based on credibility and dependability by richness of data as opposed to assessing the stability of measures

Table 2. Quality assessment for secondary studies

Quality Principle	Question	Scoring
Transparency	Does the study describe where and how studies were selected for inclusion?	No = 0 Unclear=1 Yes = 2
Validity	Does the study assess the quality of the studies included?	No = 0 Unclear=1 Yes = 2
Reliability	Does the study draw conclusions based on the reviews conducted?	No = 0 Unclear=1 Yes = 2
	Score	0 - 6
	Scoring: 0 – 2 low, 3-4 moderate and 5-6 High	

Step 5: Evidence synthesis

The characteristics of all the included studies are as shown in Table 3. Due to the methodological variation in the included studies, a narrative synthesis approach, which relies primarily on the use of words and text to summarise and explain the findings of the synthesis,²⁵ was used. The findings of individual studies were summarised for type of association (direct or indirect association) reported, common drivers reported, and commonality of consequences where it was reported in the primary study. The overall body of evidence and how it addresses the research question is also described. The description includes an assessment of its quality,²⁶ size,²⁷ context²⁸, and consistency²⁹ of the body of evidence. This enables a final summary of whether the body of evidence is very strong, strong, medium, limited, or absent.³⁰

²⁵ Popay, J. et al. 2006. Guidance on the Conduct of Narrative Synthesis in Systematic Reviews. Final Report. Swindon: ESRC Methods Programme. <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.178.3100&rep=rep1&type=pdf>

²⁶ Consolidated assessment of the body of evidence i.e. high quality (where majority of included studies are of high quality; moderate quality; approximately half of the studies reviewed are of a moderate quality, as assessed according to the principles of research quality. Low quality; large majority of the studies reviewed are considered to be of a low quality,

²⁷ Assessment of the number of studies that address the research question and the extent to which the findings of one study have been replicated or corroborated by others.

²⁸ Context of the body of evidence refers to its specificity. While some evidence relates to a highly specific set of countries/communities or regions others may be more global benefit.

²⁹ **Consistent:** A range of studies point to identical, or similar conclusions. **Inconsistent:** One study or more directly refutes or contest the findings of another study or studies carried out in the same context or under the same conditions. **Mixed:** Studies based on a variety of different designs or methods, applied in a range of contexts, have produced results that contrast with those of another study.

³⁰ **Very strong evidence:** high quality body of evidence, large in size, consistent, and contextually relevant. **Strong evidence:** high quality body of evidence, large or medium in size, highly or moderately consistent, and contextually relevant. **Medium evidence:** moderate quality studies, medium size evidence body, and moderate level of consistency. Studies may or may not be contextually relevant. **Limited evidence:** moderate-to-low quality, medium size evidence body, low levels of consistency. Studies may or may not be contextually relevant. **Absent evidence:** Where there are few or no studies that address the research question.

FINDINGS

General description of included studies

There was a general paucity of studies which investigated the quantifiable association of FGM/C and Early/Child Marriage, with a total of six studies meeting the inclusion criteria (Figure 3). All included studies were conducted in SSA and describe probable associations between FGM/C and Early/Child Marriage in a qualitative manner. Two were conducted in Ethiopia (World Vision UK 2014, Boyden et al 2013), one focused on the Southern African Development Community (SADC)³¹ (Wadesango et al 2011), one in Tanzania (Avalos et al. 2015), and one in Senegal (Diop et al 2008) while the other studies describe the situation in Somaliland, Bangladesh and Niger (World Vision UK 2013). Four of the studies were primary studies while two were secondary (review) studies.

Quality of included studies

In terms of quality, the four primary studies were of moderate quality. This was based on the assessment of principles as set out in Table 1. Generally, there were methodological limitations and inadequate reporting limitations which made the assessment of validity (sample selection was not always clear to assess how representative it was), reliability (there was a general lack of reporting on what was done to ensure that data were consistently collected) and cultural sensitivity (explicit consideration of context specific cultural factors was not very clear) to be limited and as such ended scoring low on these principles. The two reviews were of low quality mainly due to the lack of transparency (no clear inclusion criteria for articles) and validity (no description of how quality assessment was done). The study descriptions are as shown in Table 3:

Table 3. Description of the studies, by type and quality

Author/Year	Title	Location	Study type	Quality
Diop 2008	Evaluation of the Long-term Impact of the TOSTAN Programme on the Abandonment of FGMC and Child marriage: Results from a qualitative study in Senegal	Senegal	Primary Qualitative	Moderate
Avalos 2015	Ending Female Genital Mutilation & Child marriage in Tanzania	Tanzania	Secondary; review	Low
Boyden 2013	Harmful Traditional Practices and Child Protection: Contested Understandings and Practices of Female Child marriage and Circumcision in Ethiopia	Ethiopia	Primary; mixed methods	Moderate
Wadesango 2011	Violation of Women's Rights by Harmful Traditional Practices	South African Development Cooperation	Secondary; review	Low
World Vision 2014	Exploring the links: Female genital mutilation/cutting and Child marriage	Ethiopia	Primary; qualitative	Moderate
World Vision 2013	UnTying The Knot Exploring Child marriage in Fragile States	Bangladesh, Somaliland and Niger	Primary; qualitative	Moderate

³¹ SADC (Southern African Development Community) is a regional organisation consisting of 14 Member Countries (Angola, Botswana, Congo (DR), Lesotho, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe)

Description of probable associations

As outlined earlier, there was no quantified direct association (or lack of association) between FGM/C and Early/Child Marriage. We therefore describe the findings of the six articles by outlining the common causes or common consequences of these two practices. This provides a proxy indicator of possible associations, i.e. there is an attempt to describe indirect association.

All the studies point to the strong effect that social norms play in perpetuating FGM/C and Early/Child Marriage. The probable associations between FGMC and Early/Child Marriage are also found to be direct whereby some communities, for example, in northern Ethiopia, marry their children immediately after FGM/C (World Vision UK 2014, Boyden et al 2013). This is because FGM/C is considered a rite of passage from childhood to adulthood. In other areas like Somaliland, there is description of a direct association whereby, forms of FGM/C (often called "Sunna" by practicing communities) will lead to Early/Child Marriages. Sunna is seen as a less severe form of cutting (unlike infibulation, Type III) and is perceived to not control sexuality or ensure sexual purity. This finding is from a study with a small sample size. There may be a need to assess this in a larger and more representative sample so as to confirm or refute this claim (World Vision UK 2013). The other studies describe indirect associations between the two practices by reporting similar underlying causes/drivers like poverty and the need to control girls/women's sexuality and also suggest similar consequences for the two practices (Diop et al 2008, World Vision UK 2014, Avalos et al 2015, Wadesango et al 2011, Boyden et al 2013). The findings from these studies are summarised in Table 4 below.

Table 4: Findings of included studies

First Author/Date	Country	Sample source/Size	Findings	Association
World Vision 2014	Ethiopia	<p>126</p> <p>56 girls aged (some >16 years and others between 16 and 25 years).</p> <p>45 parents (mothers and fathers) who have daughters.</p> <p>25 community key-informants (religious leaders etc.)</p>	<p>Drivers of FGMC and marriage:</p> <p>Gender inequality – both occur in communities where women and girls are discriminated against</p> <p>Social norms – both happen so as to conform to certain ways that are common to a given community/society and also to enhance skills of humility and maintaining a household i.e. domestic skills</p> <p>Female sexuality – FGMC removes pleasure part reduces physical desire for sex hence less sexual activity while child marriage matches the girl to a man just as she is starting to develop sexually this reduces experimentation thereby controlling sex; child marriage enhances capacity to reproduce due to an start of reproducing</p> <p>Religion which forms part of the social norms enhances FGMC by beliefs that by being uncut will limit a girls access to some amenities like a mosque; it is also perceived to be a sin not to circumcise in some communities as they believe that it is written in the holy books. Religious leaders in this context also reinforce this beliefs.</p> <p>Social – Economic status - Limited economic opportunities lead to child marriage so as to secure financial security. Where FGMC is a step in marriage preparation, limited economic opportunities leads to it being practiced(Poverty)</p>	<p>Direct association</p> <p>Rural Oromia people practice FGM/C as a rite of passage and publicly celebrate it and this then leads to marriage.</p> <p>Indirect association</p> <p>Urban Oromia people perform FGM/C in privacy and during infancy.</p>
Diop 2008	Senegal	<p>Total of 150</p> <p>28 participating women in the Tostan Villages.</p> <p>45 non participating women.</p> <p>44 leaders from participating and non-participating villages.</p> <p>7 facilitators.</p> <p>26 'Other information providers'</p>	<p>FGMC and marriage have similar causes:</p> <p>Female sexuality and social norms - Parents who fear that their daughters may get pregnant before marriage circumcise them so as to reduce sexual desire and may also marry them off so that pregnancy occurs in the confine of marriage.</p> <p>Abandonment of FGM/C may lead to undesired effect of Early/Child Marriage as the parents fear for their daughter becoming pregnant and hence marry them off. FGMC acts as a proof of virginity due to the scar tissue.</p> <p>Religion – a religious leader is believed to influence the practice of either an if he/she says that the practice is harmful then people are likely to abandon it and if he/she upholds it, then it's likely to persist.</p> <p>FGMC and marriage have similar consequences;</p> <p>Complications on health of mother and child</p>	<p>Indirect association</p> <p>Similar causes and similar consequences and one type of intervention (education) having an effect of reduction of the practice though to differing extents. (more reduction/abandonment of FGM/C as opposed to child marriage)</p>
Avalos 2015	Tanzania	Not described	<p>Drivers for both FGMC and marriage:</p> <p>Social economic status; Poverty leads to marriage so as to secure financial security and FGMC provides some form of income to the excisors and clan elders who make decision on FGMC. In some communities FGMC is useful in enhancing marriageability (uncut girls find it difficult to get husbands) and improves the bride price (circumcised girls fetch higher prices).</p> <p>Female sexuality – FGMC helps control a woman's sexuality by preventing premarital sexual activity due to reduced physical desire. Virginity is highly significant in some communities and greatly improves marriageability.</p> <p>Social norms - both carried out so as to fit in the society and hence reduced stigmatization and isolation; marriage carried out to preserve the family honor; the more the number of child brides by some community leaders is seen as a sign of masculinity.</p> <p>Common consequences for both FGMC and marriage</p> <p>Unequal power dynamics due to gender inequality; health risks including risk of HIV transmission and childbirth complications.</p>	<p>Indirect association</p> <p>Similar causes and similar consequences</p>

First Author/Date	Country	Sample source/Size	Findings	Association
Wadesango 2011	South African Countries (SADAC)	Not described (this is a review of documents and reports on a number of harmful practices from the South African regions).	<p>Bothe FGMC and Child marriage drivers:</p> <p>Female Sexuality; Ensure virginity at marriage by suppression of sexual desire through FGMC and marriage ensures that one still gets married while still a virgin</p> <p>Social norms - enable social integration into the community and additionally for marriage bear children for barren sister</p> <p>Religious - comply with religion beliefs based on the (mis)interpretation of holy books.</p>	<p>Indirect association</p> <p>Similar causes.</p>
Boyden 2013	Ethiopia	100 children in a longitudinal study	<p>FGMC and marriage drivers:</p> <p>Social norms – both practices help constraint errant sexual behaviour thereby safeguarding social standing in the society,</p> <p>Female sexuality – they both help in control of sexual behavior/activity</p> <p>Social economic status - FGMC helps improve marriageability in some communities (perform FGMC as a prerequisite for marriage), circumcised girls are more marriageable and attract better bride prices in some communities.</p> <p>Religious – Both are based on some religious beliefs/myths child marriage is based on the notion that one should only marry a virgin while others consider it <i>haram</i> (sinful) not. To circumcise or marrying a non-circumcised girl.</p> <p>Specific to FGMC only:</p> <p>FGMC helps create a social belonging (social integration) and also a sense of purity (by instilling some good behaviors/skills and reduction of sexual desire)</p> <p>FGMC is protective of future childbirth – spillage of some blood cleanses away bad disease.</p>	<p>Direct association</p> <p>FGMC is a pre-requisite for marriage in Wolayta community in Southern Ethiopia.</p> <p>Indirect association</p> <p>Similar drivers and/or reasons for carrying out the practices.</p>
World Vision 2013	Bangladesh, Somaliland and Niger	<p>More than 50 focus group discussions³². These were; Girls <16 years (married and unmarried), Boys <16 years, Women and mothers >25 years, Men and fathers >25 years</p> <p>Key informant interviews (religious, traditional community leaders, officials of local NGOs).</p>	<p>Girls who have experienced Sunna (pricking type 3 FGMC) are often considered more 'sensitive' and are therefore urged to marry young to avoid the temptations of premarital sex.</p> <p>Non infibulation types of FGM/C leads to Child marriage so as to ensure and prove appeal, value and respectability.</p> <p>Social norms of desire to be part of the community are the common reasons for engaging in the two practices.</p>	<p>Direct association</p> <p>Sunna FGMC leads to child marriage.</p> <p>Indirect association</p> <p>Common drivers</p>

³² The size of the focussed group discussions was not described for any of the group. However they did do 30 key informant interviews.

DISCUSSION

Associations between FGM/C and Early/Child Marriage

The associations between Early/Child Marriage and FGM/C can be direct whereby one practice leads to the other. In this review, two studies of moderate quality (Boyden et al 2013, World Vision UK 2014) describe what could be considered a direct association where FGM/C is a prerequisite for marriage in communities like the Wolayta of Southern Ethiopia, the Oromia in rural areas of Ethiopia and amongst Somalis in Somaliland. In these contexts, because FGM/C is often carried out during the adolescent period (below age 18 years) after which the girl is married immediately (World Vision UK 2013).

The associations could also be indirect by virtue of the two practices sharing common causes/drivers and common associations. All the studies reviewed described very similar factors for the practices, categorised and elaborated as personal attributes, family attributes, and community or social norms.

There seems to be a congruence between some of the drivers and consequences of FGM/C and child marriage. Social economic status is one of the main driver's common to both practices. For child marriage a bride price is paid to the family of the girl and young girls attract a larger bride price.³³ Also through marriage, families are able to 'offload' the girl to another family who will now be taking care of them and in doing so guarantee the girl's economic security. Finally, child marriage may be seen as a source of children who will in turn provide labor for domestic production (Mathur et al n.d., Boyden et al 2012).

FGM/C excisors and clan elders receive money, or some other form of compensation such as goats and food for their service. For example, the payments may average about \$3 per girl in Tanzania, and the number of girls is usually high, making it a good income earner especially for those in rural areas (Otoo-Oyortey et al 2016). FGM/C also serves to improve marriageability enabling girls to be easily married and hence families get economic reprieve through dowry and having 'one less' person to take care of (Boyden et al 2013).

Cultural and gender norms that underpin the control of women's sexuality and/or facilitate social integration are other common drivers of both practices. Each aims to achieve sexual control, FGM/C by reducing libido through the removal/modification of genitalia and child marriage by ensuring that girls marry while still virgins and avoid pregnancy out of marriage (UNICEF 2013, UNICEF 2005, Avalos et al 2015). FGM/C is often a prerequisite for marriage; among communities where FGM/C is a rite of passage it can lead to Early/Child Marriage (Boyden et al 2013, World Vision UK 2014).

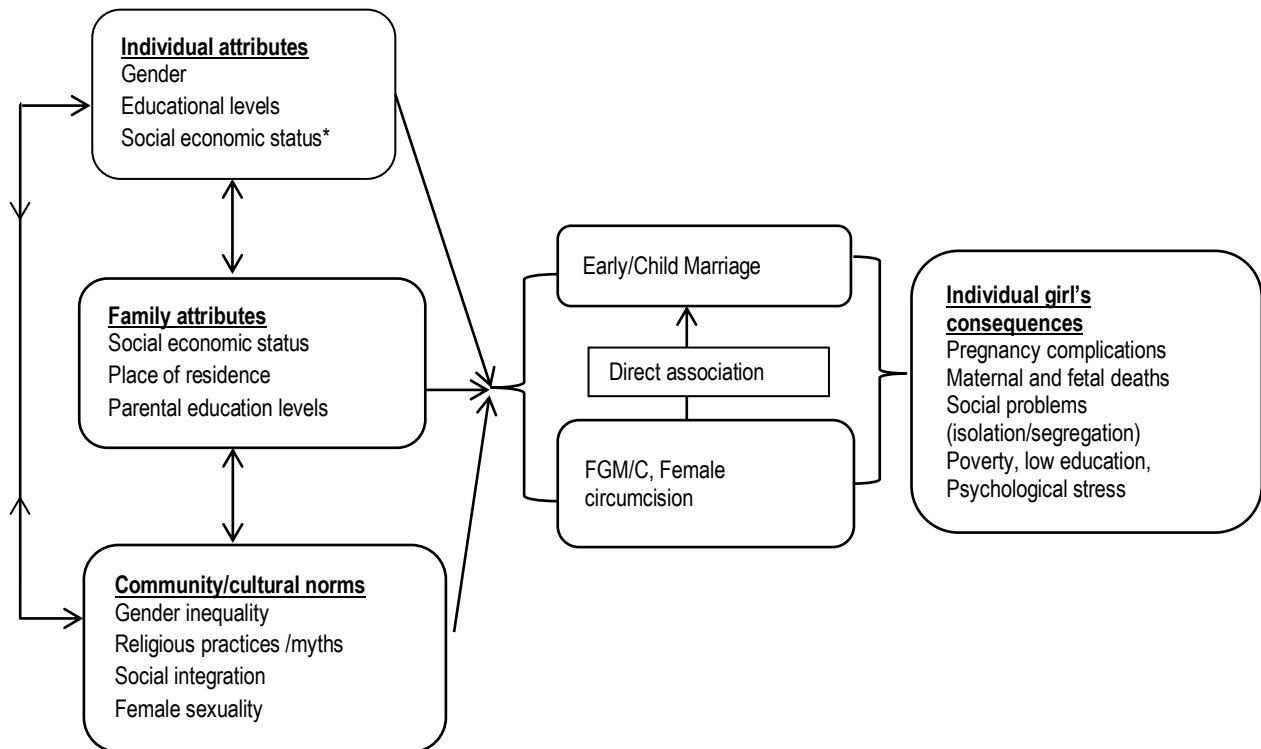
In many countries, the practice of FGM/C and Early/Child Marriage is now widely acknowledged as a violation of children and women's rights and to that effect many countries have now established laws outlawing these practices. Sudan was among the first countries in Africa to enact laws criminalizing the severest form of FGMC in 1946 and later on 2009 banning all forms of FGM (Al-Nagar and Tønnessen 2015). For most countries, however, the continuing challenge has been the implementation of these laws.

³³ Sherman, C. 2014. Ending FGM and Child Marriage in Kenya | Plan International. <https://plan-international.org/blog/2015/05/ending-fgm-and-child-marriage-kenya>

Conceptual mapping of the similarity of causes and consequences between FGM/C and Early/Child Marriage

There are common underlying causes, or drivers, of FGM/C and Early/Child Marriage with similar consequences, especially in regions or communities where the two are both practiced. These key drivers and consequences are outlined in Figure 3:

Figure 3. Conceptual mapping of associations between FGM/C and Early/Child Marriage³⁴



*educational status here can be used as a proxy measure of social economic status.

These factors can be broadly grouped into three interrelated categories: individual girls' attributes, family attributes, and community or social-cultural norms, with each attribute affected by the others. At the individual level, gender is important, evinced by the fact child marriages affect girls more than boys (UNICEF 2005, UNICEF 2013), as are parents' educational levels, especially mothers, as well as the girl child herself: The more a girl is educated the less likely she is to be married at an earlier age or to undergo FGM/C. Similarly, parents who are educated are less likely to marry their girls at an early age (Klugman et al 2014, ICRW 2016). Family attributes, including place of residence, place certain girls at risk for FGM/C and child marriage. Girls residing in rural areas are much more likely to experience these two practices than those in urban areas (Boyden et al 2013) and are more likely to conform to cultural and community norms intended to maintain their sexual morality and purity. In some communities, FGM/C is a prerequisite for marriage, among the Maasai in Kenya and Tanzania (World Vision 2011, Avalos et al 2015) and Wolayta of Southern Ethiopia (Boyden et al 2013).

There is evidence to the effect that both FGM/C and Early/Child Marriage lead to similar negative consequences including, but not limited to, pregnancy complications due to age and infibulation, maternal and fetal deaths due to obstructed labour, stigmatisation if one does not perform these practices, and in some cases, domestic violence (Wadesango et al 2011, World Vision UK 2014).

³⁴ In phase 2 of this study, the conceptual framework will be further refined based on the planned multivariate analysis of DHS/MICs data.

Individual attributes

From all the studies, it is clear that even though Early/Child Marriage is defined as a marriage before the age of 18 years, it is the girl child that is more likely to enter into a child marriage, whether by choice or by coercion, with the ultimate intention of fitting into one's community (World Vision UK 2014).

'Faiza was 15 and engaged to be married. She giggled as she talked about her wedding day, planned for just one month from now. She was embarrassed to talk about it in front of her friends—women in Somaliland are expected to conceive shortly after their wedding and Faiza was afraid that her excitement to get married would be seen as shameful. Faiza's parents had decided against her and her sisters undergoing the worst form of FGMC and so she had experienced the Sunna form. As a result of this, she was afraid that people would think she was more likely to be sexually active at a younger age. "It is better for my dignity to have a husband and children now," she explained'. World Vision UK 2014

Educational levels were found to be associated with Early/Child Marriage and FGM/C. More directly; it is evident that keeping the girls in school for longer periods helps keep them away from child marriage or from the circumcisers. Indirectly; it is argued that when girls are educated, they become empowered and are able to make decisions on their own and also become economically independent in the long-run and as such may not have to depend on marriage for social-economic reasons (ICRW 2016, Klugman et al 2014). In societies that practice FGM/C and Early/Child Marriage, educating the girl child is often not a priority. For example, in Tanzanian FGM/C communities, once a girl marries she can never go back to school and for her to get married she needs to have been circumcised.³⁵ This perpetuates a long-term cycle of poverty and dependence given missed educational opportunities, and at the same time, such girls are likely to cut and marry their own young daughters at young ages.

Ethnicity is also a determinant in the association of FGM/C and Early/Child Marriage. For example, in southern Ethiopia among the Wolayta ethnic group, FGM/C precedes Early/Child Marriage while among the northern Amhara and Tigray ethnic groups FGM/C occurs shortly after birth (Boyden 2013). Different ethnic groups are likely to have both practices, but for varied reasons. There are also variations in FGM/C and Early/Child Marriage practices within countries mainly due to ethnic diversity, and these differences inform the cultural beliefs that play a huge role in sustaining or ending these practices (UNICEF 2015).

Across the included studies, there is a general decline in the two practices (as reported by authors) in the younger generations compared to the older generations. This could in part be due to the various interventions that have been implemented in the last few decades to combat these violations of children rights. Also, for younger generations, we are seeing a general improvement in education levels and the use of social media that helps reinforce positive and empowering messages about the girl child.

Family attributes

'When there is no food, some families give their daughters into marriage'³⁶

Social economic status of a girl's family is a great factor of Early/Child Marriage and, by extension, FGM/C. It is a recurrent theme in all studies of this review. Poverty limits girls' economic and educational opportunities. A family that wants the best for their child, or are unable to provide for their children, may marry a girl to a wealthier man to thwart the cycle of poverty (Mtengeti et al. 2008). Fragile states and conflict zones push families into poverty, thereby making child marriage

³⁵ "Adolescent girls in Tanzania who marry or become pregnant are subject to forced expulsion from school without the possibility of returning to school once they give birth." (Avalos et al. 2015)

³⁶ World Vision study 2013 *UnTying The Knot Exploring Early Marriage in Fragile States*.

seem like a better option for young girls. Child marriage has been on the rise in Yemen, a country with an estimated 23 percent FGM/C prevalence, although there has not been any formal study of the association between FGM/C and child marriage in this country.³⁷ Others want to have their very young daughters married to ensure grandchildren who will form part of their social security system in their old age (Girls Not Brides 2015).

For these communities where child marriage is prevalent and linked to the payment of bride price, it becomes a source of income for the girl's family. To enhance a girl's marriage prospects in some communities, FGM/C is then performed.

'Bride price plays a key role in perpetuating Child Marriage and the cycle of domestic violence in such relationships. First, it serves as an incentive for parents to marry off their daughters so that they can collect the bride price'.³⁸

Parents will procure FGM/C for their young daughters to enhance their marriageability³⁹, and sometimes the family of the groom will pay for her circumcision when she is not circumcised⁴⁰ (World Vision 2013).

'The community doesn't accept us—the elders and religious leaders don't have a place for uncut girls. How will they ever get married?' Mother, Oromia, Ethiopia⁴¹

Residing in rural areas has been reported a contributor to FGM/C and Child Marriage in part due to limited economic empowerment as well as the closer enforcement of cultural norms, values, and beliefs due to the closely-knit fabrics of rural communities. Thus, if a community practices either FGM/C, child marriage, or both, these practices become the norm rather than exception for its residents.

Community and social-cultural norms

Social norms are the glue that hold a common people together—they are the unwritten rules that determine how people co-exist, share values, beliefs and traditions. All studies in this review have underscored the importance of social norms and perhaps they form the greatest explanatory force for the continuation of these practices. Controlling female sexuality and ensuring sexual chastity⁴² are among the commonest reasons for practicing FGM/C and Early/Child Marriage. Some communities perform FGM/C as a rite of passage from childhood to adulthood. The implication of this is that immediately after FGM/C the girl is deemed to be ready for marriage (Avalos 2015, World Vision 2014, World Vision 2013, and Boyden 2012). Some forms of FGM/C, like Sunna in Somalia, may accelerate Early/Child Marriage due to fears that this less severe form of cutting will not adequately ensure chastity or suppress libido and those young girls may engage in premarital sex (World Vision 2014).

Where a majority of the community practices either FGM/C and Early/Child Marriage, or both, a parent and a girl might not have a choice but to do as others do so that they not stigmatised or isolated. Girls who do not behave like their peers are often ridiculed and may be seen as of little

³⁷ A recent media article found child marriage in Yemen had risen dramatically given the regional conflict and famine as families struggled with deepening poverty. Batha, E. *Child marriage soars in Yemen as famine looms-UN*. Reuters. 27 March 2017 <http://news.trust.org/item/20170327152607-456zy/>

³⁸ Avalos 2015 page 13 ibid

³⁹ "In parts of Ethiopia, where girls typically marry under the age of 16 years old, we found strong links between FGM/C and Early/Child Marriage. Several mothers in Oromia told us that it was essential for their daughters to be cut if they were to be married" World Vision 2014

⁴⁰ This has been reported in some tribes in Sierra Leone.(World Vision UK 2013)

⁴¹ World Vision 2014 "Exploring the links: genital mutilation/cutting and Early/Child Marriage"

⁴² Some communities which practice Early/Child Marriage often argue that by marrying a girl early (during adolescence) they are paired with a man when they are beginning to get sexually active and hence will limit experimentation with boys (Minna et al. 2016).

value.⁴³ Marriage, therefore, helps safeguard the honour of not only girls but their families and communities (World Vision 2013, Boyden 2013).

'You will be insulted as a girl if you are not in school and you are not married. People will think you have a bad character'.⁴⁴

Gaps in the body of evidence on associations between Early/Child Marriage and FGM/C

In this review of the literature the evidence on the association between FGM/C and Early/Child Marriage is generally scant. Knowledge gaps remain in our understanding of the links between the trends and factors of child marriage in relation to FGM/C and other indicators such as education, empowerment, violence, migration, civil strife and war. Evidence is also needed from rigorously evaluated programmes that are responding successfully on efforts to end child marriage, their sustainability and cost effectiveness.

There were methodological limitations in the included studies, specifically issues with the samples sizes and how representative they were, of the phenomenon they were describing. This is taking cognisance that culture (which varies from ethnic group to ethnic group) has an influence on the two practices. The studies depended heavily on self-reports even on issues that were perhaps verifiable such as age. Self-reporting can introduce a bias whereby a child might be classified as an adult depending on the legal context and circumstances. For example, in countries where it is illegal to marry a girl who is below the age of 18 years, the parents/or the girl might deliberately report that the girl is over 18 years of age even though that is may not be the case. The implication of this is an under-estimation of the prevalence of child marriage. Moreover, given that survey questions tend to focus on what age one was when they were married, in countries without strong civil registration systems, recall bias might lead to giving the incorrect age at which they first got married. This might lead to over or under reporting of Child Marriage as well.

Furthermore, there were also reporting limitations whereby some studies were not adequately described to give the reader/reviewer enough details to make a good judgement of quality.

Limitations of the study

1. The available evidence is limited in terms of quantity, only six studies are included in this review and are all from similar settings, therefore the generalizability of these findings to other contexts might be limited.
2. Lack of proper cohort study with an adequate follow-up duration to allow for determination not only for an association but even a causal association are generally lacking. This makes it hard to conclusively state which practices causes or precedes the other.
3. Studies published in non-English language were omitted and this may have led to omission of crucial information.
4. The UN Declaration of CRights defines a child as under 18 years of age. However, the definition of a child is not always clear cut across countries. In some countries, even when they are signatories to UN Conventions they use definitions that are context or cultural specific and often do not have strong civil registration systems. This may have resulted in classification bias for this review.

⁴³ In some community, the value of the girl child is to get married and bear children and raise them (Raj et al. 2009).

⁴⁴ World Vision 2013 "UnTying The Knot Exploring Early/Child Marriage in Fragile States" p.26.

CONCLUSION

There is a dearth of information quantifying the extent of the association (positive, negative or no association) between FGMC and Early/Child Marriage. Building on the current review of the literature a second phase of this study is planned to undertake a limited multivariate analyses of the DHS/MICS datasets from multiple African countries that have the relevant data to investigate the associations, causative factors, and relevant correlates for FGM/C and Early/Child Marriage.

Although the overall body of evidence is limited, there is consistency in the underlying drivers of the two practices. Whereas Early/Child Marriage is a 'heavier burden' affecting more girls than FGM/C; when the two practices occur concurrently, or in the same community, the consequences on the girl child are often serious. Some of these consequences include 1) HIV transmission—equipment used for FGM/C may often not be well sterilised and Early/Child Marriages are often 'with older males who may already be infected or the young girl will have limited agency to negotiate condom use' (Koski et al 2017), 2) Gender-based violence—FGM/C practices often make or teach girls to be submissive and Early/Child Marriages place a young girl in the hands of an older male who may abuse her physically and even emotionally due to the imbalance of power in the union, 3) Health complications—Type 3 (infibulation) often leads to birth complications and sometimes even deaths of mother and child; Early/Child Marriage leads to similar childbearing complications as girls are not full developed to handle pregnancy. Most preventable maternal deaths occur in young mothers (UNICEF 2012).

These limitations notwithstanding, this review demonstrates the lack of quantification of the associations between two harmful practices affecting girls and women in general. The conceptual mapping points of some variables could be investigated using publicly available data like DHS and MICs to quantify associations or lack of them, which would help designs for intervention programming in response to the diversity and variability of the practice in specific contexts.

Although Early/Child Marriage is a global issue, rates of this practice vary even within countries. Specifically, researchers should focus on mapping the hot spots for FGM/C and Early/Child Marriage within a given country, and or region, and further study modifiers and confounders of this association as this was lacking in the literature included in this review. It is also important to understand the local or context definition of a child and assess how it compares with the internationally accepted definition of a child. This will help further inform us on how communities perceive child marriages thus clarifying the age spectrum to help determine appropriate interventions. Research is needed to understand what has worked to implement laws and the challenges faced with current sanctions to end FGM/C and Early/Child Marriage.

There is also need for evidence on the long term and intergenerational effects of Early/Child Marriage and FGM/C and its relationship to broader social, economic and political issues. For example, civil strife in many countries which practice FGM/C and Early/Child Marriage has increased population migration into countries which may have/or not criminalized these practices. It will be important to assess whether diffusion or dilution of these practices into those countries occurs among the immigrant communities. Conditions of war or poverty may see parents marry their daughters at an earlier age: Thus what are the costs of child marriage and FGM/C?

From a programme point of view, this review, although only of a few studies, begins to point at some of the common causes and possible associations of FGM/C and Early/Child Marriage, which is useful in bringing attention to the need for exploring interventions using an integrated approach to eliminate the two harmful traditional practices, as outlined in Goal 5, target 5.3 of the Sustainable Development Goals: 'Eliminate all harmful practices, such as child, early and forced marriage and female genital mutilations, towards achieving gender equality and the empowerment of women and girls'.

APPENDIX 1: CLASSIFICATION OF LITERATURE RETRIEVED

Study	Association	Study method	Quality
Diop, N.J., Moreau, A. & Benga, H., 2008. <i>Evaluation of the Long-term Impact of the TOSTAN Programme on the Abandonment of FGM/C and Early Marriage: Results from a qualitative study in Senegal</i> , Available at: http://pdf.usaid.gov/pdf_docs/Pnadl816.pdf	Indirect association Similar causes and similar consequences and one type of intervention (education) having an effect of reduction of the practice though to differing extents. (more reduction/abandonment of FGM/C as opposed to child marriage)	Primary Qualitative	moderate
Avalos, L. et al., 2015. Ending female genital mutilation and child marriage in Tanzania. <i>Fordham International Law Journal</i> , 38(3), pp.639–699. Available at: https://ezp.lib.unimelb.edu.au/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=ift&AN=102584490&site=eds-live&scope=site%5Cnpapers2://publication/uuid/71677C4F-43CC-48B4-936A-9F8F2F7A087B .	Indirect association Similar causes and similar consequences	Secondary ; review	low
Boyden, J., Pankhurst, A. & Tafere, Y., 2013. <i>Harmful Traditional Practices and Child Protection</i> , Available at: http://www.younglives.org.uk/content/harmful-traditional-practices-and-child-protection	Direct association FGMC is a pre-requisite for marriage in Wolayta community in Southern Ethiopia. Indirect association Similar drivers and/or reasons for carrying out the practices.	Primary; qualitative	moderate
Wadesango, N., Rembe, S. & Chabaya, O., 2011. Violation of women's rights by harmful traditional practices. <i>Anthropologist</i> , 13(2), pp.121–129. Available at: http://www.krepublishers.com/02-Journals/T-Anth/Anth-13-0-000-11-Web/Anth-13-2-000-11-Abst-Pdf/Anth-13-2-121-11-720-Wadesango-N/Anth-13-2-121-11-720-Wadesango-N-Tt.pdf .	Indirect association Similar causes.	Primary; mixed methods	moderate
World Vision UK, 2014. <i>Exploring the links: Female genital mutilation/cutting and early marriage</i> . Available at: http://www.girlsnotbrides.org/reports-and-publications/exploring-links-female-genital-mutilationcutting-early-marriage/ .	Direct association Rural Oromia people practice FGM/C as a rite of passage and publicly celebrate it and this then leads to marriage. Indirect association Urban Oromia people perform FGM/C in privacy and during infancy.	Secondary ; review	low
World Vision UK, 2013. <i>UnTying The Knot Exploring Early Marriage in Fragile States</i> , Available at: https://www.iywg.org/resources/untying-knot-exploring-early-marriage-fragile-states .	Direct association Sunna FGMC leads to early marriage Indirect association Common drivers	Primary; qualitative	moderate

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