



Research Article

Amref Alternative Rites of Passage (ARP) model for female genital mutilation/cutting, teenage pregnancies, and child, early and forced marriages in Kenya: a stepped-wedge cluster randomised controlled trial protocol

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Background

The Amref Alternative Rites of Passage (ARP) model was initiated in 2009. To date, about 20,000 girls have been supported by their communities to denounce female genital mutilation/cutting (FGM/C) and graduate into 'maturity' through ARP. While this intervention has been implemented for decades, there is limited evidence of its effectiveness in ending FGM/C. In order to ascertain the effectiveness of this intervention, Amref has developed a digital tracking tool to follow up on girls who have and haven't gone through the ARP. The key research question is: what effect does ARP have on incidences of FGM/C, teenage pregnancy and child, early and forced marriages among adolescent girls and young women?

Methods

The study will adopt a stepped-wedge cluster randomised controlled trial design to assess the effectiveness of the ARP model on the incidence of FGM/C; teenage pregnancy; child, early and forced marriage; and educational attainment. We selected one cluster in Kajiado County where recent ARPs have been conducted as the intervention site at the beginning of the study and 3 wards/clusters in Narok County as control sites. Approximately 604 girls aged 10-18 years who reside in selected sites/clusters in Kajiado and Narok counties will be recruited and followed up for 3 years post-exposure. Quantitative data analysis will be conducted at bivariate and multivariate levels. Content/thematic analysis approach will be used to analyse qualitative data.

Ethics and dissemination

The study obtained ethical approval from the Amref Ethics and Scientific Review Committee (AMREF-ESRC P1051-2021). The findings of this study will be shared with local, national and regional stakeholders working in ending FGM/C, teenage pregnancy, and child, early and forced marriages.

Registration - Pan-African Clinical Trials Registry (PACTR202208731662190).

The World Health Organization (WHO) defines Female Genital Mutilation/Cutting (FGM/C) as the partial or complete removal of the female external genitalia or any other injury to the female genital organs for non-medical reasons. Worldwide, more than 200 million girls and women have been subjected to FGM/C and 70 million girls aged 0-14 years are at risk of undergoing the practice every year. Africa, FGM/C is practised in 28 countries spread across the East, North, West, Central, and the Horn of Africa where approximately 91 million women and girls aged ten years and above have been cut.

In Kenya, the national prevalence of FGM/C among girls and women between the ages of 15-49 years was 21% in 2014. Cross-sectional data collected by the Kenya Demographic and Health Survey over the last decade indicates that the national prevalence of FGM/C has been steadily decreasing. In 1998, the prevalence was approximately 38% and dropped to 32% in 2003, 27% in 2009, and recently 21% in 2014. However, there are significant regional variations, with prevalence ranging from 0.8% in the Western region to over 97% in the North-Eastern region, whereas in

the pastoral Maasai and Samburu communities the prevalence stands at 78% and 86% respectively.⁴

FGM/C is performed mostly on girls aged between 12 and 18 years. Some studies have shown that girls are being cut secretly or earlier between the ages of 7 and 12 years. 8-10 In most cases, once the girls are cut, it is culturally construed that they are ready for marriage. Although the minimum age for marriage is 18, and the Children's Act of 2001 forbids early or forced marriage, many marriages are not officially registered or are performed under customary or Islamic law, which has no age restriction. In this regard, FGM/C could be a precursor to other harmful practices including early and forced marriage. 11,12

FGM/C is a sociocultural tradition, often enforced by community pressure and the threat of stigma. 13 Although every community in which FGM/C is found in Kenya has different specifics around the practice, there are several unifying rationales and beliefs. Among the Maasai, Samburu and Abagusii ethnic groups in Kenya, FGM/C is considered necessary for a girl to 'become a woman'. It is often conducted as part of an initiation into womanhood or a maturity ritual. Traditionally, the rite of initiation into womanhood through genital cutting is one of the most important ceremonies in a young Maasai girl's life. Among the Samburu, who closely share tradition with the Maasai, the girl's father has the greatest say on the rite and it is a communal activity, due to the economic value placed on circumcised girls. The circumcised girls/brides would have higher marriage prospects within the community, are more respected and by implication would fetch more cows for their fathers.

There is a dearth of knowledge regarding the effectiveness of the ARP intervention. ¹⁴ An impact evaluation study revealed that ARP played a role in increasing the years of schooling for girls and reduces the prevalence of FGM/C in Kajiado and Narok. ¹⁵ Nonetheless, the data used in this study was derived from the Demographic and Health Survey (DHS)—a secondary dataset not specifically collected for the purpose of evaluating the effectiveness of the ARP model. Importantly, there were other confounding factors including other models implemented by other partners towards ending FGM/C and as such, it was not possible to directly link the observed changes to the ARP model alone. Besides, comparison communities did not practice FGM/C as a rite of passage and their response to end FGM/C interventions could be somewhat different.

The current study therefore strives to ascertain the effectiveness of this model with data collected from a selected cohort of girls. The study will follow up girls who have gone through the ARP process. Over the years, follow up of girls who have graduated through the ARP process has not been consistent. After the ARP graduation ceremony, no structural follow up mechanisms have been put in place. The programme has also not developed a structured way to document the post ARP experiences of the girls and their progress after graduation. Possible aspects to be looked into include schooling, and the social pressure of not undergoing FGM/C, dropping out of school, becoming victims of teenage pregnancies and forced marriages. Previous follow ups of ARP girls have been done through com-

munity based girls' symposiums. These are annual forums held during school holidays where ARP alumni girls meet at a central point mostly in a school or in a church to review life experiences after ARP. They take stock of the challenges they face from among their peers, parents and male counterparts and share solutions to these challenges. These are forums for self-reflection and peer encouragement to persevere in any form of ridicule and persecution. These symposiums have not been an effective method of following up the girls since only a few of them turn up for these forums.

Due to the transition to secondary schools, it is not practically possible to bring together girls from different education levels. This challenge has equally been compounded by the emergence of the COVID-19 pandemic where community meetings have been impossible and tracking the girls negatively affected. 16 This calls for an innovative way to follow up the girls in such crisis situations. In the proposed study, Amref Health Africa endeavours to deploy a digital tracking tool to monitor girls who have gone through ARP as a means to end FGM/C until they attain the age of 24 years. This tool is aimed at collecting longitudinal data to describe the effectiveness of the ARP model in ending FGM/C, teenage pregnancy and child marriage. The tool will also collect data on certain socio-economic, educational and health outcome indicators of the girls. Information gathered will be used to describe the effectiveness of the ARP model in protecting girls from FGM/C, empowering them to exercise their agency and promote their sexual and reproductive health and rights. The specific objectives of the study are: (i) To determine the effect of ARP on FGM/C, teenage pregnancy and early marriages among girls and young women who have graduated from ARP; (ii) To establish the effect of ARP on the quality of life of adolescents girls and young women who have graduated from ARP; and (iii) To determine the effect of ARP on education attainment and career choices among girls and young women who have graduated from ARP.

METHODS

STUDY DESIGN

The study will adopt a stepped-wedge cluster randomized controlled trial design to assess the effectiveness of ARP model on FGM/C prevalence, teenage pregnancy, child and early forced marriage and education attainment. This is a novel research study design that is increasingly being used in the evaluation of service delivery type interventions. The design involves random and sequential crossover of clusters from control to intervention until all clusters are exposed. In stepped-wedge design, units or clusters act as their own control hence very few units are needed, and hence feasible in situations where the intervention cannot be introduced in all areas at the same time. ¹⁷

STUDY SETTING

In this study, we propose to select one cluster in Kajiado County where recent ARPs have been conducted as the intervention site at the beginning of the study and 3 wards/

clusters in Narok County as control sites. After a period of every 6 months, each ward in Narok County selected as a control site will cross over to intervention sites. ARP sessions will be introduced in the selected sites of Narok County in a staggered way until all the 3 sites have been exposed. Approximately 604 girls aged 10 to 18 years who reside in selected sites/clusters in Kajiado and Narok County will be recruited and followed up for a 3 year period post exposure to assess incidence of FGM/C, teenage pregnancy, child, early and forced marriages, establish their quality of life and education attainment as well as career progression. In this study, educational attainment will be defined as school retention and transition to higher learning while quality of life will be defined as an individual's perception of their position in life in the context of the existing culture and value systems in the community which they live in and in relation to their goals, expectations and concerns.

ELIGIBILITY CRITERIA

The study will target girls and young women eligible for training and graduating from the ARP program in Kajiado and Narok counties. Specifically, the study shall target girls who meet the following criteria: aged 10-18 years, eligible for ARP, who have not undergone FGM/C, have not been pregnant and are not married at the time of recruitment, and are in school at the point of enrollment. Young women who do not consent to be part of the study, minors who do not assent to be part of the study, and minors whose parents do not consent to be part of the study will be excluded from the study.

INTERVENTIONS

The Amref Alternative Rites of Passage (ARP) Model is a community-led cultural alternative to FGM/C that retains cultural rituals and ceremonies in the transition to womanhood, whilst replacing the harmful 'cut' by sexual and reproductive health rights education and the promotion of girls' education. This process begins through structured community entry and intergenerational community dialogues with various community members including men and boys who are actively engaged in addressing norms, attitudes and behaviors underlying FGM/C and other forms of sexual violence. They also address harmful traditional practices including child and early marriage. After this initial engagement with the whole community and buy in to the alternative process, the real initiation process with the girls begins. This follows the tripartite sequence of separation, transition and assumption. First, the girls undergo a separation process whereby they are taken into seclusion, a safe space within the community, where they will reside during this whole process. The transition process involves training of girls on a variety of topics including sexual and reproductive health, the dangers of FGM/C, early marriage, teenage pregnancy, life skills and gender issues, self-esteem, life skills and children's rights. It culminates in a graduation which takes the original traditional format that involves the girls, parents, women leaders, elders and other community leaders. The assumption involves the new initiates taking up new roles as envisaged in the traditional rites of passage.

The intervention will be deployed in the study setting by Amref Health Africa which has over a decade of experience in implementing community focused interventions addressing harmful traditional practices that negatively affect girls. Amref Health Africa will use local community structures during implementation of intervention activities which is a community-led initiative among the Maasai community. A key challenge we foresee during implementation include actualization of the assumption that the new initiates will take up new roles as envisaged in the traditional rites of passage and become agents of change. While we hope that the intervention will preserve the traditional culture of celebration without cutting girls, it is probable that the intervention will also alter the traditional practice of celebrating girls coming of age. Consequently, girls may not find it fashionable to take up the traditional roles.

Since the study will adopt a stepped-wedge cluster randomized controlled trial design, it will involve random and sequential crossover of clusters from control to intervention until all clusters are exposed. We expect that the control sites will continue receiving the usual behavior change communication initiatives implemented by various nongovernmental organizations and implementation of the anti-FGM/C law by the government.

OUTCOMES

The primary outcome of the study is incidence of FGM/C. Secondary outcomes include: incidence of teenage pregnancies, incidence of child marriages, and educational attainment.

SAMPLE SIZE CALCULATION

The formula for sample size calculation is as follows:

$$n = rac{2\sigma^2(Z_eta + Z_{lpha 2})^2}{ ext{difference}^2}$$

Where:

- β = Statistical Power 80% (0.80)
- α = 95% confidence interval (1.96)
- $\mu_1 \mu_2$ = Estimated mean difference in incidence of FGM/C (difference²) = 5%
- σ (Standard deviation) = 3
- Source of standard deviation = Modelling and mapping of girls FGM/C in the context of economic, social and regional disparities.⁹

The formula derives a sample size of 137 for each of the selected clusters. Working with a total of 4 clusters and a possible 10% loss to follow up, the total sample size will be 604 girls.

SAMPLING STRATEGY/RECRUITMENT

Simple random sampling will be used to select the sample for follow up. This will give an equal chance to all the girls to be selected and minimize selection bias. The girls will be recruited from the ARP database by a person offsite. The list of the girls will be abstracted from the database of all girls who will have been trained and graduated from ARP during the study period. Randomization will be conducted using SPSS to select a total of 137 girls who meet the inclusion criteria for follow up. To further reduce selection bias, we will ensure that enrolled study participants reflect the target population. This will be done by drawing all the study participants from only the target population.

DATA COLLECTION

Data will be collected electronically using the developed online digital tracking tool. All the data will be uploaded into a cloud server domiciled at Amref Health Africa head-quarters in Nairobi, Kenya. The principal investigator, data manager and other authorized study team members will then download the dataset for further analysis.

DATA PROCESSING AND ANALYSIS

Study data will be electronically transmitted to servers domiciled at Amref headquarters in Nairobi. Data will first be downloaded in an Excel format then exported to a statistical software for analysis. Key variables to be tracked will include: (i) Incidence of FGM/C—number of new cases of FGM/C within the cohort; (ii) Incidence of teenage pregnancies—number of new cases of teenage pregnancies within the cohort; (iii) Incidence of early child marriages—number of new cases of early child marriages within the cohort; (iv) Educational attainment—number of cases who complete classes, school dropouts, and transition to higher learning; (v) Quality of life—changes in the quality of life; and (vi) Career choices—changes in the career life.

Analysis will be done at bivariate and multivariate levels. At bivariate level, the analysis will include comparing the mean differences in the incidences of key variables using t-tests. At multivariate levels, all significant associations at the bivariate level (p<0.05) will be subjected to regression models. All datasets will be anonymized and made available to the public upon request to the corresponding author.

ETHICS STATEMENT

The study obtained ethical approval from the Amref Ethics and Scientific Review Committee (AMREF- ESRC P1051-2021). All study participants will provide written informed consent prior to participating in interviews. For study participants aged less than 18 years, consent will be sought from their parents or guardians as well as seeking assent from the respondents prior to interviewing them. Research assistants will sign a confidentiality agreement form as an assurance for confidentiality.

DISCUSSION

Given the negative effects of FGM/C on the health and well-being of women and the community at large, a variety of programmes and policies geared towards abandonment of the practice have been implemented. ¹⁸ In Kenya, especially among the Maasai living in Kajiado and Narok, public dec-

larations and community mobilizations have been popular strategies but evidence on their effectiveness in eliminating FGM/C is limited. Research on ARP as an intervention to end FGM/C points to the need for ARP programmes to be well understood and accepted by the reference community, especially by decision-makers, including parents/ guardians, community leaders, church leaders, and school administrators. 19-21 This is informed by the fact that the choice of an individual or family is rarely made in isolation but is dependent on expectations of families or communities and can affect their social standing.^{2,13} FGM/C is a social norm and therefore beliefs about what other community members do, expectations of what other members should do, maintained by social approval and disapproval, will often guide a person's decision to either practice FGM/C or not.²² Consequently, harmful practices, such as FGM/C, that are social in nature require programmes that support the revision of social expectations of people throughout the entire community of interest, and not programmes that focus their interventions solely on the indi-

The impact of community-based programmes in addressing community members' willingness to abandon FGM/C is well documented.²¹ The Tostan programme – a Senegalese non-governmental organization's communitybased education programme on abandoning FGM/C - is worth noting. The programme included education, community dialogue and debate, and public declaration which enabled several families to question and decline to participate in the practice.²¹ Findings from an evaluation of the Tostan programme showed greater achievement with improvements in knowledge and attitudes toward FGM/C among women and men. If decision making around FGM/C tends to be influenced very strongly by other family or community members, we hypothesize there is a better likelihood that an ARP intervention using a community-led model may have greater impact in abandonment of the practice. It is also important to consider and examine the social, political and economic factors that may continue to drive the practice despite embracing the ARP. 13,23,24

The Maasai community are semi-nomadic, pastoral Nilotic people mainly settled in Narok and Kajiado Counties. 18 Among the Maasai, FGM/C is practiced to mark a girl's transition to womanhood, to gain respect in the community, to promote virginity and chastity before marriage, to prepare the girl for marriage, and to educate her on her role in society.²⁵ FGM/C takes place once per year for all girls in the appropriate age group, usually between the ages of 12 and 14 years (prior to marriage), and the celebration is seen as an important rite of passage into womanhood. The procedure is often performed during school holidays and also involves having the girl's hair shaved as part of the womanhood ritual. 18 Type II excision is the most common type of cutting in the Maasai tribe.²⁶ Although the Maasai are proud of their culture and have been resistant to the outside influence, they have shown willingness to adjust their practices, including ways to minimise infection during the traditional procedure although this does not protect girls from the ${\rm cut}^{27}$ as well as embracing ARPs a protective and preventive strategy for girls. 28

Despite progress at the national level and numerous interventions implemented at community and grassroots level, FGM/C prevalence rates among the Maasai ethnic group continue to remain relatively high compared to national trends. This study will examine the impact of ARPs as implemented by Amref Health Africa in Kajiado and Narok counties. The two counties are predominantly inhabited by the Maasai who view FGM/C as a rite of passage, have a strong sense of community and have been known to hold on strongly to their culture and traditional way of life but still being open to ARP intervention. ^{25,29} Findings on effectiveness of ARPs will be important in informing FGM/C programmes in Kenya and other similar settings on the design and implementation of ARP interventions.

A key limitation of this study is the duration of post exposure whereby approximately 604 girls aged 10 to 18 years who reside in selected sites/clusters in Kajiado and Narok County will be recruited and followed up for a period of three years. While this is a practical decision dictated by project timeline, three years is quite a short duration to assess changes in traditional practices (incidence of FGM/C, teenage pregnancy, child, early and forced marriages) that have proven to be quite stubborn to eradicate.

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AUTHORSHIP CONTRIBUTIONS

Study conceptualization and proposal writing (TE, JS, HC, DK, BM, DL, YO, and SM); Protocol writing (TE, JS, HC, DK, BM, DL, YO, SM, and DM); Technical review and editing (DM). All authors read and approved the final draft of the protocol.

DISCLOSURE OF INTEREST

The authors completed the ICMJE Disclosure of Interest Form (available upon request from the corresponding author) and disclose no relevant interests.

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