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ABSTRACT

Female circumcision affects the lives of millions of girls and women worldwide. This study assessed the demographic and socioeconomic factors associated with the occurrence of female circumcision among women age 15–49 in Maldives. Based on data from the 2016–17 Maldives Demographic and Health Survey, this study used bivariate and logistic regression analyses to examine the characteristics associated with the occurrence of female circumcision. Among all respondents, 17% of the 5,943 women who have heard of female circumcision reported having undergone the procedure. The findings revealed that there is a significant difference in female circumcision by age, education, occupation, and attitudes towards female circumcision. Furthermore, most circumcisions occurred before age 5, and were highest in Malé and the South and North regions. The variables related to opinions were most strongly associated with female circumcision. Compared to women who did not hold these opinions, women who believed that female circumcision is required by their religion or that the practice of female circumcision should continue had more than twice the odds of being circumcised. In addition, crosstabulations of the opinion variables with age and region have found that the highest proportion of women who held these beliefs were age 25–39 and lived in Malé. Therefore, we recommend further research and encouragement to enact policies and legislation that would eliminate the practice of female circumcision in Maldives.

KEY WORDS: Female circumcision, girls and women, demographic and socioeconomic factors, legislation, elimination of female circumcision

1 INTRODUCTION

Female genital mutilation/circumcision (FGM/C) refers to “all procedures involving partial or total removal of the female external genitalia or other injury to the female genital organs for non-medical reasons” (WHO 2008). The practice has no health benefits for girls and women. Long-term consequences may include health problems such as menstrual problems, increased risk of childbirth complications, difficulties with sexual intercourse, the need for additional surgeries, and psychological problems (Klein et al. 2018). It is estimated that 3 million girls are at risk of undergoing FGM/C in different parts of the world every year (WHO 2008). Internationally, the practice has been recognized as a human rights violation and a form of discrimination against women and girls (WHO 2008). This includes violations of the Universal Declaration of Human Rights, the Convention on the Elimination of all forms of Discrimination against Women (CEDAW), the Convention on the Rights of the Child, and many other international treaties and consensus agreements (WHO 2008). Thus, the legislative approach is a vital tool for eliminating FGM/C.

The WHO terminology for FGM/C classification is summarized in Table 1 (WHO 2008). Type I and Type IV are the most common types reported across Asia (ARROW and Orchid Project 2020). FGM/C is referred to as female circumcision (FC) across many South East Asian countries (WHO 2018), including Maldives.

Table 1 WHO terminology for female genital mutilation/circumcision classification

Type	Description
Type I—Clitoridectomy	Partial or total removal of the clitoris (a small, sensitive and erectile part of the female genitals) and/or the prepuce (the clitoral hood or fold of skin surrounding the clitoris).
Type II—Excision	Partial or total removal of the clitoris and the inner labia, with or without excision of the outer labia (the labia are the “lips” that surround the vagina).
Type III—Infibulation	Narrowing of the vaginal opening by creating a covering seal. The seal is formed by cutting and repositioning the inner or outer labia, with or without removal of the clitoris.
Type IV—Other	All other harmful procedures to the female genitalia for non-medical purposes, for example, pricking, piercing, incising, scraping and cauterizing (burning) the genital area.

Although it is considered a violation of human rights, FC is believed to be a practice that originated from communities that want to control female sexual behavior and ensure women’s virginity (WHO 2008). In societies where FC is practiced, it is considered to be socially upheld and based on the assumption that religious norms expect the people to follow this practice (WHO 2008). Some believe that FC is a religious requirement, although it is not mentioned in major religious books (Williams-Breault 2018).

In most South East Asian countries, practices of FC are broadly accepted within the communities, and adhere to social norms associated with a range of motivations that are complex and disputed. Since Islamic South East Asian countries such as Indonesia and Malaysia largely adhere to Islamic law, religious leaders in these countries have strongly supported FC (Dawson et al. 2020). Some religious scholars in Maldives have made similar pronouncements. In 2011, a religious scholar in Maldives encouraged the practice of FC, and suggested that FC was part of practicing Sunni Islam, the largest branch of Islam (Dawson et al. 2020). The continuing religious support for this practice in the region increases the sensitive nature of FC. Thus, collaborative approaches are required to prevent this practice from continuing.

Parallel to traditional practitioners performing FC, the practice has largely become medicalized in many South East Asian countries, including Indonesia, Malaysia, and Singapore (Ainslie 2015; Cappa, Van Baelen, and Leye 2019; Patel and Roy 2016). These actions appear to disregard the zero tolerance approach adopted by the United Nations. The purpose of Sustainable Developmental Goal (SDG) 5 is to achieve gender equality and empower all women and girls, while SDG 5.3 calls for eliminating “all harmful practices such as child, early and forced marriages and female genital mutilation” (United Nations 2022).

To achieve success in preventing the continuation of FC, it is important to identify the driving forces underlying this practice, such as the policies in place, current practice, and community beliefs (Berg and Denison 2013). Rights-based health interventions are important to promote alternatives that can minimize or stop FC. Transmitting the message through educational programs such as leaflets and booklets, as well as training manuals for health care professionals, helps to create awareness rather than behavior change, which results in short-term outcomes. Government action is necessary to create a political and legal environment that diverts people from allowing women to undergo the procedure willingly. Religious and community leaders must play a significant role in sharing religious perspectives through media campaigns, training, and outreach programs that bring about desirable behavior change (Williams-Breault 2018).

1.1 Female Circumcision in Maldives

To date, the only existing formal publication on FC is in the Maldives Demographic Health Survey (DHS) in 2016–17, which showed that 13% of women age 15–49 and 1% of girls age 0–14 were circumcised (Ministry of Health (MoH) [Maldives] and ICF 2018). It was reported in the CEDAW Shadow Report, conducted by Hope for Women (2012), that the most prevalent type of FC in the Maldives is Type IV with pricking, piercing, incising, and cauterizing the area (see Table 1). “Female circumcision” is the term most commonly used in Maldives. Thus, FC is used in this study.

It was said that FC was “widely known to have occurred in Maldives,” although it has been reported that the practice had stopped during the 1980s and 1990s (Hope for Women 2012). In December 2009, a newspaper article in Maldives reported that the then Attorney General had concerns that FC was being practiced in one of the islands of Maldives, Addu Atoll (Minivan News 2009). The Attorney General’s statement was reported in the CEDAW Shadow Report as “religious scholars are going around to midwives giving fatwas that girls have to be circumcised. They’re giving fatwas saying it is religiously compulsory. According to my information, the circumcision of girls has started and is going on. . . .” (Hope for Women 2012). In October 2011, the same newspaper had reported on this issue, quoting the then vice president of Maldives, as “we are beginning to hear reports of this occurring, and I have heard on radio and television people justifying the practice. It is quite disheartening.”

The United Nations and other international agencies (ARROW and Orchid Project 2020; UNFPA and UNICEF 2020; UNFPA 2020) also reported their concerns about Maldivian religious scholars promoting FC, and linking the practice with Islam, despite the fact that FC is not an obligation of any religion. These concerns brought the threat of FC into the open and onto the policy table (Hope for Women 2012; Maldives CEDAW Report 2019). Among circumcised women age 15–49, over 80% were circumcised before age 5, which showed that FC is commonly performed between birth to early childhood. Although the data on circumcised girls age 0–14 is at 1%, which indicates a decrease in FC, this practice still exists in Maldives. Among women who had heard of FC, 10% believed that the practice was required by their religion, and

8% believed that the practice should be continued (Ministry of Health (MOH) [Maldives] and ICF 2018). These data, along with Maldivian religious scholars' recent promotion of FC (Hope for Women 2012), suggest that FC will continue in Maldives. However, to date, there are no known efforts to investigate the persistence of this issue nor any action taken to ratify specific national legislation, national policies, or initiatives that criminalize FC in Maldives. Therefore, this study aims to create awareness of the persistence of FC in Maldives and to provide information on the practice of FC that can serve as basis for policies, programs, and recommendations for legislation and intervention programs needed to combat FC practice in Maldives.

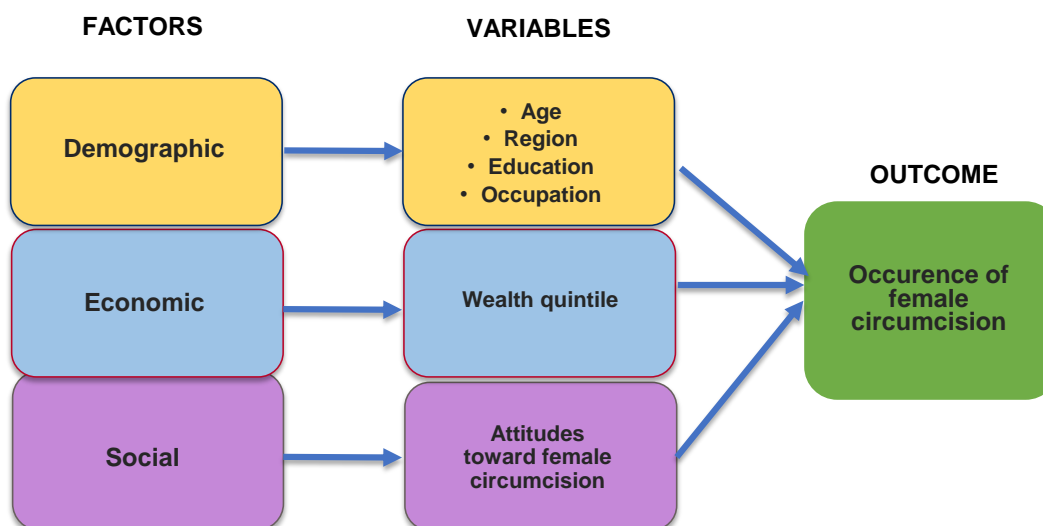
1.2 Theories and Concepts

Understanding the factors that perpetuate FC and how these factors interact with social change processes are critical to understanding why and how communities continue the practice. There are two approaches relevant in the literature on FC—the social convention model and the norm internalization theory. Cultural traditions that have persisted over time represent the values and convictions that have permeated a community for a number of generations (UNICEF 2009). It was reported in the UNICEF report that the most important argument for the continuation of FC is the claim that it is custom and tradition, one of around six pre-coded responses in DHS surveys (UNICEF 2009). The survey respondents' appeal to tradition is consistent with the social convention model, which asserts that when sufficient numbers of people support and perform FC, the practice becomes locked in place (Mackie 1996; UNICEF 2009).

The marriageability interest and health interest have been prioritized in the application of the social convention theory to FC up until this point, with little explicit discussion of normative considerations (UNICEF 2009). The continuation of FC entails legal (social acceptance and disapproval) and religious conventions (moral judgments of right and wrong) (UNICEF 2009). Social norms are beliefs about what other people do and find acceptable. When people internalize social norms—accepting a set of norms and values that others have established—they become more motivated to follow them (Cislaghi and Heise 2018). Thus, by internalizing norms, people are conditioned to conform to society's expectations.

From that theoretical perspective, FC practices can generally be recognized to exist and continue due to various factors that include demographic, economic, and social factors. The customized conceptual framework (Figure 1) builds on existing literature to analyze the demographic, economic, and social factors associated with the occurrence of FC among women age 15–49 in Maldives.

Figure 1 Conceptual framework



The above conceptual framework shows the expected linkages between the occurrence of FC and demographic, economic, and social factors. As the framework indicates, there are direct links between demographic and economic factors and FC occurrence. These links are evident in the findings of Ahinkorah (2021) and Inungu and Tou (2013), which found age, religion, wealth, maternal education, and women’s occupation to be significantly related to the occurrence of FC among women age 15–49. Ahinkorah’s (2021) study was based on the 2014–2015 Chad DHS, which sought to learn more about a population and health issues related to FC. Inungu and Tou (2013) focused on determining the factors that contribute to the practice of FC among women (age 15–49) and their daughters in Burkina Faso.

In countries where FC is practiced, most girls are circumcised before age 5 (Shell-Duncan, Naik, and Feldman-Jacobs 2016). According to Gebremariam, Assefa, and Weldegebreal (2016), the most common ages for FC are between age 5 to 10. A similar age range was reported by other researchers (Elduma 2018; Gudeta, Regassa, and Gamtessa 2022; Kandala et al. 2019). In these studies, religion, residence, maternal education, and occupational status were significantly associated with FC. For example, women from rural residence were seven times more likely to be circumcised (Gudeta, Regassa, and Gamtessa 2022); women with a low level of education were more likely to be circumcised than women with a high level of education (Elduma 2018); and FC was highest among housewives (58%) and unemployed (57%) women in the United Arab Emirates population (Al Awar et al. 2020).

It has also been reported that FC has been adopted by new religious scholars and communities that have been influenced to adopt the practice. Grose et al. (2019) stated that in a shared community, both what others do, and what others expect a woman to do, influence her ability to reject a harmful social norm like FC. There is no connection between FC and religion, despite the belief in many cultures that religion, particularly Islam, is one of the underlying reasons FC is practiced (Shell-Duncan, Naik, and Feldman-Jacobs 2016). Shell-Duncan, Naik, and Feldman-Jacobs (2016) also reported that those with less education, who live in rural areas, and who come from low-income families seem to be more supportive of FC.

1.3 Research Question

Although recent research shows Maldives is experiencing a decrease of FC (Ministry of Health (MOH) [Maldives] and ICF 2018), the practice still exists (Hope for Women 2012). Nevertheless, there is little rigorous research designed to understand the prevalence and practice of FC in Maldives. The central research question centers on what roles demographic, economic, and social factors play in the occurrence of FC in Maldives. Legislation and other policy initiatives are among the most effective strategies for violence prevention and, according to the WHO (2008), a comprehensive government approach is required to create a culture of zero tolerance for FC. Studying the factors associated with the occurrence of FC can promote a collaborative spirit where relevant stakeholders unite in a shared vision to end this practice in Maldives. The results of this study will inform decisions on the development of specific national legislation that criminalizes FC and specific national policies and initiatives that are focused on the elimination of FC in Maldives. The study results will also emphasize the immediate need for research that can fully capture and understand the prevalence and practice of FC in Maldives.

2 DATA AND METHODS

2.1 Study Setting

Maldives has 22 geographical atolls that include about 1,200 islands spread across 21 administrative regions (20 administrative atolls and the Malé area), which are grouped into six geographical regions: Malé, North, North Central, Central, South Central, and South. The total residential population of 402,071 residents (338,434 Maldivians and 63,637 international migrants) is dispersed across 188 inhabited islands. Around one-third (38%) of the population resides in the capital Malé (Maldives Bureau of Statistics 2015). All Maldivians share the same culture and speak Dhivehi, the Maldivian language. Sunni Islam is the state religion, and all permanent residents must be Muslim. This means that those who want to be a resident of Maldives must convert to Islam (United Nations Maldives 2020).

2.2 Data Source

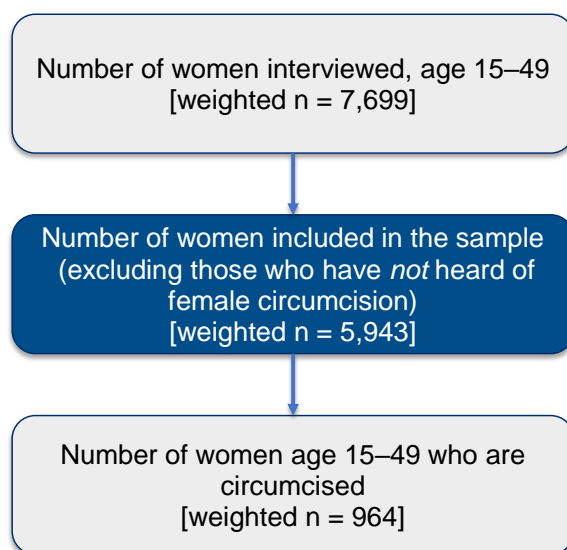
Data were extracted from the 2016–17 Maldives Demographic and Health Survey, which was conducted jointly by ICF Macro International and the Ministry of Health of Maldives. The survey collected information about FC from all women of reproductive age who indicated awareness of the subject. The 2016–17 Maldives DHS survey collected data from a nationally representative probability sample of households, women of reproductive age, and men in sampled households. The survey used a three-stage cluster sampling design. Analyses of data were conducted using descriptive statistics, and tests of proportions and logistic regression, respectively. Analysis was weighted to obtain national estimates of FC prevalence and its differentials.

2.3 Study Sample

2.3.1 Outcome variable

The primary variable of interest (dependent variable) was the occurrence of FC, which is binary in nature (yes or no). In addition, only women age 15–49 who have heard of FC were included in the analysis. This resulted in a sample size of 5,943 individuals after applying sample weights. Figure 2 shows how the survey derived this subsample. The denominator includes those women who have heard of FC.

Figure 2 Study sample



2.3.2 Independent variables

The choice of independent variables was based on the data from the literature, and was defined at the cluster, household, and individual level. The individual level variables are women’s current age, age circumcised (<5, 5–9, 10–14, 15+), highest education level (none, primary, secondary, and higher), occupation, and women’s reported attitudes towards FC. The occupation variable was recoded into five main categories:

1. Not working
2. Professional, which includes technical and managerial
3. Administrative and clerical, which includes sales, and services
4. Household, domestic, and agriculture, which combined unskilled manual, agricultural, and household and domestic work
5. Skilled, which combined skilled manual with armed forces and others

Two questions were used to measure attitude towards FC. One asked if the women thought FC is required by their religion, and the second asked if they thought FC should continue.

The remaining variables in the analysis include other cluster level variables of region (Malé, North, North Central, Central, South Central, and South region). The household variable includes wealth quintiles (lowest, second, middle, fourth, and highest).

2.4 Statistical Analysis

In the analyses, occurrence of FC was the dependent variable and the other variables were independent variables. Descriptive statistics and percentages were computed to describe the variation of the percentages of the women aged 15–49 who were circumcised, and the age at which they were circumcised. Chi-square

tests of association were performed between the independent variables and the outcome. Logistic regression analyses were used to identify the variables' associations with the occurrence of FC. For further analysis of the attitude variable, women's current age was recoded into three groups (15–24, 25–39, and 40 and above) and regions were recoded into four categories (Malé, North, Central [which included Central, North Central, and South Central regions], and South).

The analyses were conducted with STATA 17 software. To ensure representativeness across the country and to correct for non-response, the data were weighted and we considered the complex survey design in the analyses, using the SVY command in Stata. Statistical significance was determined at $p < .05$.

3 RESULTS

3.1 Characteristics of the Study Population

The data from the 2017 Maldives DHS were analyzed with a subset of 5,943 women age 15–49 who have heard about FC. Appendix Table 1 presents the percentage distribution of the sample. A majority of women were age 25–39 (51%), had secondary or higher education (72%), were not working (50%), and were residing in Malé (48%) at the time of the survey. The distribution of wealth quintile ranged between 16% to 24% in each category.

Overall, 17% of the women who have heard about FC reported that they were circumcised (Figure 3). Approximately 83% of circumcised women were circumcised before age 5, and around 15% of the women were unable to report an age (Table 2).

Figure 3 Circumcision status among women age 15–49 who have heard of female circumcision, percent

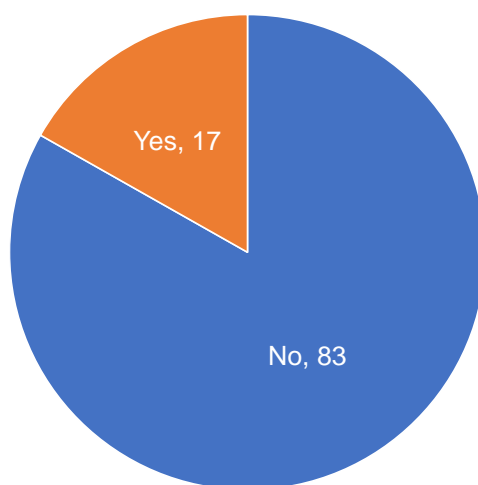


Table 2 Percent distribution of age at circumcision among women age 15–49 who were circumcised and have heard of female circumcision

Age at circumcision	%	Number
<5	83.1	827
5–9	1.6	16
10–14	0.4	4
15+	0.4	4
Don't know/missing	14.5	144
Total	100.0	996

3.2 Associations of Demographic, Economic, and Social Factors

Table 3 describes the associations between FC and the independent variables. All variables were significantly associated with FC except for the wealth quintile and region. The percentage of circumcised women increases with age. Approximately 42% of the oldest age group (women age 40–49) have been

circumcised. Women's educational level is negatively associated with occurrence of FC. For example, the higher the education level, the lower the proportion of circumcised women. However, slightly more women with higher education were circumcised compared to those with secondary education (13% and 10%, respectively).

Table 3 Cross tabulation of female circumcision among women age 15–49 and background variables

Variable	%	95% CI		p value
		Lower	Upper	
Age in 5-year groups				
15–19	1.7	0.7	4.1	
20–24	7.5	4.7	12.0	
25–29	8.2	6.0	11.0	
30–34	14.7	11.8	18.2	<.000
35–39	22.2	18.2	26.8	
40–44	28.0	23.3	33.2	
45–49	41.8	36.1	47.7	
Highest educational level				
None	37.3	29.1	46.3	
Primary	30.4	26.7	34.4	
Secondary	10.1	8.6	11.8	<.001
Higher	13.3	10.7	16.4	
Wealth quintile				
Lowest	20.0	17.1	23.3	
Second	17.1	14.6	20.1	
Middle	16.0	13.7	18.5	.084
Fourth	17.8	14.1	22.2	
Highest	13.9	11.3	17.0	
Women's occupation				
Not working	16.4	14.7	18.3	
Professional	13.3	10.7	16.3	
Admin and clerical	12.9	8.4	19.4	<.001
Household, domestic, and agriculture	25.8	19.7	33.1	
Skilled	23.7	19.9	27.9	
Region				
Malé	16.7	14.3	19.3	
North	18.4	15.1	22.2	
North Central	14.6	11.1	18.9	
Central	13.8	10.8	17.4	.286
South Central	15.5	11.7	20.1	
South	19.7	16.0	24.1	
Opinion on whether female circumcision is required by their religion				
No	13.8	12.3	15.4	
Yes	43.1	37.6	48.8	<.001
Opinion on whether female circumcision should continue				
No	14.2	12.8	15.7	
Yes	44.7	38.6	50.9	<.001

With occupation, the proportion of circumcised women is the highest among the group who is engaged in household, domestic, and agricultural work (26%) or skilled work (24%), compared with those who worked in other professions (professional 13%) and in administration or clerical positions (13%). Approximately 16% of women who were circumcised were not working.

Finally, the prevalence of circumcision is greater among women who believed that FC is required by their religion and that FC should continue than among those women who do not believe these statements. Approximately 43% of women who reported that FC is required by their religion were circumcised, compared to 14% of women who reported that FC was not required by their religion. Similarly, 45% of women who reported FC should continue were circumcised, compared to 14% of women who reported that FC should not continue.

Based on the findings, the variables that show significant variation in the percentage of women reporting to have been circumcised are: age (higher in the older age groups), education (higher in lower levels), occupation (higher among those doing household, domestic, and agriculture work, skilled labor), and attitudes toward FC (higher among those who believe FC is required by their religion and who believe that FC should continue).

3.3 Regression Results of Female Circumcision

Table 4 presents the adjusted odds ratios of the association between occurrence of FC and demographic, economic, and social characteristics. Age was significantly and positively associated with FC, which indicated the increasing likelihood of FC with increasing age. The odds ratio (*OR*) of 1.1 indicates that for every year of increase between age 15–49, the odds of circumcision increased by approximately 10%, on average. While the wealth quintile and region were not found to be significantly associated with FC in the bivariate analysis (Table 3), there were significant findings for these variables in the regression analysis after controlling for other variables. Women in the highest quintile have approximately 50% lower odds of being circumcised compared to women in the lowest wealth quintile (*OR* = 0.5, $p < .01$). In addition, women who currently reside in the Malé (*OR* = 2.1, $p < .01$), North Region (*OR* = 1.5, $p < .05$), and South Region (*OR* = 1.6, $p < .05$) have significantly higher odds of being circumcised compared to women in the Central Region.

The opinion variables have the greatest magnitude of association with FC. Women who thought that FC is required by their religion (*OR* = 2.2, $p < .001$) or thought that FC should continue (*OR* = 2.7, $p < .001$) had more than twice the odds of being circumcised compared to women who did not have these opinions. Further analysis of these two variables was conducted to assess the association between opinion variables, age, and region.

While the bivariate analysis detected significant association between occupation, and FC and education and FC, these variables were not significant in the logistic regression after controlling for other variables.

Table 4 Logistic regression of female circumcision among women age 15–49 and background variables

Variable	OR	95% CI	
		Lower	Upper
Respondents current age			
Age in single years	1.1***	1.06	1.11
Highest educational level			
No education (reference)	1.0		
Primary	1.1	0.71	1.68
Secondary	0.7	0.45	1.14
Higher	0.9	0.59	1.63
Wealth quintile			
Lowest (reference)	1.0		
Secondary	0.8	0.62	1.10
Middle	0.8	0.64	1.09
Fourth	0.7	0.48	1.12
Highest	0.4**	0.28	0.76
Women's occupation			
Not working (reference)	1.0		
Professional	0.9	0.71	1.38
Admin and clerical	1.4	0.84	2.33
Household, domestic, and agriculture	1.2	0.84	1.86
Skilled	1.1	0.89	1.46
Region			
Malé	2.1**	1.30	3.49
North	1.5*	1.02	2.34
North Central	1.1	0.67	1.66
Central (reference)	1.0		
South Central	1.2	0.75	1.95
South	1.6*	1.05	2.47
Opinion on whether female circumcision is required by their religion			
No (reference)			
Yes	2.2***	1.46	3.44
Opinion on whether female circumcision should continue			
No (reference)			
Yes	2.7***	1.72	4.09

* Significant at $p < .05$; ** significant at $p < .01$; significant at *** $p < .001$

3.4 Associations of Opinion Factors

Table 5 shows the crosstabulation of the opinion variables with age and region. We observe that among women who believe FC is required by religion, 47% were age 25–39, and among women who believed FC should continue, 44% were age 25–39. The proportion of women who thought that FC is required by religion is highest in Malé (50%) and the South Region (22%). The same trend is found among women who thought FC should continue with the highest in Malé (48%) followed by the South Region (23%).

Table 5 Cross tabulation of opinion variables and background variables

Variable	Opinion—FC is required by their religion				Opinion—FC should continue			
	%	95% CI		p value	%	95% CI		p value
		Lower	Upper			Lower	Upper	
Age (5-year gaps)								
15–24	15.0	11.2	19.7	<.001	20.2	15.7	25.6	<.001
25–39	46.7	41.1	52.4		43.6	37.8	49.6	
40 and above	38.3	32.4	44.5		36.2	30.2	42.7	
Regions								
Malé	49.8	43.2	56.5	<.001	48.1	40.5	55.7	<.001
North	20.8	16.9	25.4		20.7	16.7	25.4	
Central	6.4	4.8	8.6		7.8	5.9	10.4	
South	22.9	19.1	27.3		23.4	19.0	28.4	

4 DISCUSSION

This study aimed to assess the demographic, economic, and social factors associated with the occurrence of FC among women age 15–49 in Maldives. The characteristics found to be positively associated with occurrence of FC were age, wealth quintile, region, and attitudes towards FC.

The results show that being circumcised is generally reported among older women. Age was a significant and positive predictor of female circumcision in the logistic regression model (Table 4). Our study also found that the majority of the women were circumcised when they were younger than age 5 (Table 2). This corroborates previous research that reported that the occurrence of FC is primarily seen in young girls ranging from birth to age 10 (Elduma 2018; Gebremariam, Assefa, and Weldegebreal 2016; Shell-Duncan, Naik, and Feldman-Jacobs 2016).

The literature highlights that greater availability of and exposure to information in urban versus rural settings creates awareness among the communities and reduces the practice of FC. Yet, the higher odds found in Malé (entirely urban) compared to the Central Region (entirely rural) could be a result of increased rural to urban migration. Malé is now home to nearly half of the women in our sample (Appendix Table 1), with many who may have relocated there in the past few decades (1980–2020) (United Nations Maldives 2020). Many Maldivians from the rural islands chose to relocate to Malé rather than the nearby regional centers (United Nations Maldives 2020).

At the household level, the wealth quintile was significantly associated with occurrence of FC. Women in the highest wealth quintile had significantly lower odds of being circumcised than women from the lowest wealth quintile. However, the other wealth quintiles did not significantly differ when compared to the lowest wealth quintile. This aligns with previous studies that found the main reason for the prevalence of FC to be the economic status of the family (Ahinkorah 2021; Al Awar et al. 2020; Inungu and Tou 2013).

When examining attitudes towards FC among women who heard about circumcision, approximately 10% believed that their religion requires FC and 8% supported the continuance of FC in Maldives. The model shows that women who thought that FC is required by their religion or thought that that FC should continue had more than twice the odds of being circumcised compared to women who did not hold these opinions. Crosstabulations of these opinions by age has shown that nearly half of women age 25 to 39 had these opinions. Since we have seen that circumcision occurs usually at a young age, these women who are in their reproductive prime may favor FC for their newborn daughters. While this study only explored the association between age and region and the likelihood of holding these options, additional factors may affect these opinions, such as educational attainment among women and women's empowerment. Various factors have been shown to have significantly contributed to the levels of opposition to FC, such as higher educational attainment among women, legislation prohibiting the practice, and awareness-raising programs (ARROW and Orchid Project 2020; Dawson et al. 2020; International Centre for Research on Women [ICRW] 2016; Powell and Mwangi-Powell 2017).

5 CONCLUSION AND RECOMMENDATIONS

Based on the nationally representative 2016–17 Maldives DHS, this study identified factors associated with the occurrence of FC in Maldives. The study shows high FC occurrence among older women, those from low economic backgrounds, and those residing in specific regions (Malé, North and South Regions). In addition, the attitudes toward FC were found to be major determinants of FC occurrence. However, it should be noted here that the survey measured the current attitude, where FC had already happened in the past. This could also imply that the women had these views because they were circumcised.

This study demonstrates that further research is crucial to assess the prevalence and practice of FC in Maldives. Research continues to be needed on aspects that can contribute to the elimination and prevention of FC. In this study, we did not find a clear relationship between education or occupation and the occurrence of FC. More research is needed to understand how education and occupation affect FC in Maldives. Additional topics that require further study include the current prevalence and practice of FC in Maldives, girls' and women's experiences of the practice, psychological consequences of FC, and the impact of legal measures to prevent the practice.

The study also shows that policies and legislation focused on eliminating FC are essential because there are still a percentage of women who believe FC is required by their religion and should be continued (10% and 8%, respectively). Bringing an end to FC requires a broad, long-term commitment. Our study found that diverse factors including age, socioeconomic status, region, and attitudes were all associated with FC occurrence. Therefore, actions and interventions that can eliminate FC must be multisectoral, sustained, and community led. Sectors such as education, finance, justice, and health should cooperate to take concerted action.

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APPENDIX

Appendix Table 1 Percent distribution of women aged 15–49 who have heard of female circumcision on MDHS 2017 by selected characteristics

Background characteristics	%	Number
Circumcised among women age 15–49		
No	83.2	4,947
Yes	16.8	996
Age in 5-year groups		
15–19	11.0	655
20–24	15.3	908
25–29	17.5	1,038
30–34	18.3	1,090
35–39	14.8	880
40–44	11.9	709
45–49	11.1	662
Highest educational level		
No education	4.5	267
Primary	23.1	1,375
Secondary	48.6	2,890
Higher	23.8	1,412
Wealth index combined		
Lowest	16.3	969
Second	17.4	1,035
Middle	19.7	1,169
Fourth	22.6	1,342
Highest	24.0	1,429
Region		
Malé	47.6	2,826
North	11.9	709
North Central	10.2	608
Central	6.6	391
South Central	10.5	622
South	13.3	788
Women's occupation		
Not working	49.5	2,944
Professional	23.8	1,412
Admin and clerical	9.0	532
Household, domestic, and agriculture	5.1	302
Skilled	12.7	753
Opinion on whether female circumcision is required by their religion		
No	89.8	5,339
Yes	10.2	604
Opinion on whether female circumcision should continue		
No	91.7	5,449
Yes	8.3	495