Female Genital Mutilation as Perceived by Old and Young Egyptian Women: A Comparative Study

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Abstract

Background: Female genital mutilation is a persistent issue of global concern that carries various health risks for women and girls. Female genital mutilation is a traditional harmful practice that has been prevalent for many years; despite of continuous efforts, the decline of the practice is unsatisfactory. **Aim:** To assess the difference between old and young women's knowledge, attitude, and beliefs toward female genital mutilation. **Design:** A descriptive-comparative research design was utilized. **Setting:** The study was conducted at the Barnasht family health center in Elaiaat district, Giza Governorate. **Sample:** A convenience sample of 588 old and young women over a period of three months. **Tools for data collection**: **Tool I**: A structured interviewing knowledge questionnaire that consists of two sections: (1): Demographic characteristics of young and old women; (2): Knowledge regarding female genital mutilation. **Tool II**: Beliefs assessment questionnaire. **Tool III** : Attitude scale toward female genital mutilation. **Results:** The majority of the young and older women had a poor level of knowledge, while the minority of them had a fair level of knowledge regarding female genital mutilation. Moreover, nearly three-quarters of the young women had a positive attitude, while more than half of the older women had a negative attitude toward female genital mutilation. The majority of young women had negative beliefs, while the majority of older women had positive beliefs about female genital mutilation. **Conclusion:** A highly statistically significant difference was found between young and old women's total knowledge, attitude, and beliefs. **Recommendations:** It is advised that, raise awareness of the families and young women regarding the complications and consequences of Female Genital Mutilation. Child rights should be empowered among national media, especially regarding Female Genital Mutilation.

Keywords: Female genital mutilation, Perception, Old and Young Women

Introduction

Female genital mutilation (FGM) is a global gendered health concern that is widely recognized as a human rights violation and a form of violence against women and girls. This practice has affected almost 200 million women and girls. It includes "particular or whole removal of the external female genital organs or other harm to the female genital organs for cultural, religious, or other non-medical reasons" and can have major consequences for sexual, reproductive, and urinary health **(Axelsson & Strid, 2020).**

Female genital mutilation is deeply embedded in custom and cultural heritage, and it is frequently mistakenly assumed to have a religious origin or to be a requirement of specific religious rites, which is not the case. In most nations and cultures, female genital mutilation is thought to help women keep their virginity before marriage and to ensure faithfulness during marriage. Other widespread ideas include improved hygiene, aesthetic appeal, and fertility. When it comes to social integration and disfigurement, many women embrace them in exchange for perks such as the promise of social acceptance and an increased marriage prospect. For example, elderly women frequently believe they have benefited from female genital mutilation and that it is crucial to their status, and as a result, they allow it to be performed on their daughters out of fear of social isolation and stigma **(Van Rossem & Meekers, 2020).**

According to **Ahinkorah et al., (2021),** there are four different types of FGM: type 1, which involves the partial or complete removal of the prepuce and/or clitoris; type 2, which involves the partial or complete removal of the prepuce and the labia minora, with or without excision of the labia majora. Type 4 covers any additional harmful procedures to the female genitalia for non-medical purposes, such as piercing, pricking, and scraping. Type 3 entails limiting the vaginal entrance through the construction of a covering seal.

Female genital mutilation involves a number of risks; in particular, it is frequently carried out by midwives or other non-medical personnel who frequently disregard the anatomy of this crucial area. Razor blades are used, and most often no anesthetic is used **(Arafa, Mostafa, & Eshak, 2020)**. Numerous risks of negative health consequences have been linked to various types of female genital mutilation. Nearly all the female patients who have undergone the procedure have experienced bleeding and severe pain. Bleeding, social anxiety, trauma, and infection are urgent health issues that can also result in an increase in mortality, premature death, disability, miscarriage, stillbirth, sexually transmitted diseases, bacterial infections during and after pregnancy, an increased risk of newborn deaths, and a decline in the sensitivity of the female genitalia to the sexual act **(Khosla et al., 2013).**

Female genital mutilation not only has harmful effects on one's health, but it also establishes a severe kind of discrimination against women because it exemplifies gender inequality. Therefore, progress toward ending the practice of circumcising girls may enhance women's rights, maternal health, and a decrease in infant mortality **(Gele et al., 2012).** Despite overwhelming evidence from science that female genital mutilation causes serious problems for women's health, it is still widely practiced in Egypt. Young women, old women, and older relatives are most influential in the decision to mutilate the girl **(Koukkula & Klemetti, 2019).** Even though the mother has refused to subject her child to the procedure due to the persisting custom of FGM, the family elders will nevertheless carry out the procedure behind the mother's back **(Costello, 2015).**

Female genital mutilation has a long history in Egypt, which is also one of the nations with the highest prevalence of the practice. The custom, which dates back to the pharaonic era, is strongly rooted in the country's culture and traditional socioeconomic values. FGM has a long history, but it is also widely accepted that it is mandated by religion, which has contributed to the practice's survival in the traditional Egyptian community. Type I, which has a prevalence of about 74% among Egyptian females, is the most often documented form of FGC, followed by type II, while types III and IV are quite uncommon **(UNICEF, 2021 & Ali, 2021).**

Because female genital mutilation is more of a social convention than a religious practice, support for its abolition needs to come from powerful individuals and organizations in the larger community because it might be simpler for individuals and families to stop the practice. Due to ignorance and misperceptions, young women who are in charge of caring for and securing the welfare of their children may, despite their best intentions, expose their daughters to this damaging practice. As a result, it is essential that inaccurate information be given and cultural myths and prejudices about the procedure be dispelled. To protect girls' and women's health and rights, it is essential to have a thorough understanding of the health effects of FGM **(Ahanonu & Victor, 2014; Jiménez-Ruiz & Almansa Martínez, 2017).**

Egypt has made ongoing efforts to prevent female genital mutilation over the years. The National Council for Population, the Ministry of Health and Population, and the National Council of Childhood and Motherhood have all spearheaded programs and plans to end FGM in the nation in coordination with UNICEF. Numerous projects and programs have been put in place with the goal of eradicating misconceptions about FGM and increasing public knowledge. Despite the efforts, there has been only a 7% decline in the prevalence of female genital mutilation among ever-married women between 2003 and 2014, indicating a

slow but steady decline of the practice in Egypt **(UNICEF, 2021).**

The roles of community health nurses and gerontological nurses are intertwined in order to assist people in preventing female genital mutilation and its negative impacts. By discussing female genital mutilation with women from communities where it is practiced, spreading awareness of the harmful effects of FGM on the psychological and physical health of women and girls, and providing support services for victims, community health nurses and gerontological nurses play a critical role in protecting girls from this harmful practice. In cases where FGM is suspected, health assessments are conducted, and referrals to gynecologists, pediatricians, and other specialists may be made **(Royal College of Nursing, 2015 & McCrae, 2016).**

According to evidence from earlier studies, the mother and grandmother are primarily responsible for deciding whether or not to undergo FGM, with the father playing a far less important role **(Pashaei et al., 2016 & Ali, 2021).** Younger and older women who are less educated about FGM,in general , are more likely to support the procedure. Young women's research has revealed a lack of understanding and unfavorable opinions concerning FGM and women who have had genital mutilation **(Ghazy et al., 2021).** The knowledge, attitudes, and beliefs of old and young women that might influence a daughter's FGM were the focus of this study.

Significance of the study

According to the World Health Organization, between 100 and 140 million women have been cut worldwide, with roughly 91.5 million of them occurring in Africa. They also predict that every year in Africa, three million females undergo circumcision. Egypt has the world's highest total number, with 27.2 million women having undergone FGM **(Ghazy et al., 2021).** All young women were aware of female genital mutilation, according to numerous studies, although many of them only had a basic awareness of the practice and its harmful effects. Due to the influence of significant persons, particularly young or older women and elder relatives, who are largely responsible for the decision to mutilate the girl, FGM is still practiced today **(Ndikom, Ogungbenro, & Ojeleye, 2017).**

Community health nurses as well as gerontological nurses are in a good position to draw attention to the risks associated with this harmful and illegal technique and to engage with families and communities to ensure that the practice is made unacceptable. Both community health nurses and gerontological nurses work as public health advocates in their neighborhoods, creating plans and policies for addressing local health problems. They can work within their communities, collaborating with local child welfare agencies and other health care providers, to develop guidelines that transcend culture to ensure the safety and provide treatment for girls involved in female genital mutilation. Finally, nurses can help women change their attitudes and beliefs about FGM by increasing their awareness about the procedure. Elderly women can have a significant impact on family health decisions and act as change agents by educating others about the risks and negatives of female genital mutilation procedures **(Nowak, 2016).**

The findings of this study may be regarded as a preliminary understanding of the knowledge, attitudes, and beliefs of old and young women regarding female genital mutilation, and this understanding provides a plan for healthcare professionals and policymakers to encourage the community to stop these harmful practices. The knowledge, attitudes, and beliefs of young and older women who have the greatest influence on the decision to mutilate a girl are crucial because they are the ones who make this decision. It is crucial to identify these women's knowledge, attitudes, and beliefs regarding female genital mutilation because they will contribute to the reduction and elimination of this practice as well as the improvement of women's reproductive health. Therefore, the study was carried out.

Aim

The aim of the current study was to assess the difference between old and young women’s

knowledge, attitude, and beliefs toward female genital mutilation.

Research Questions

To achieve the aim of the current study, the following research questions were developed:

Q.1: What is the difference between old and young women's level of knowledge toward female genital mutilation?

Q.2: What is the difference between old and young women's attitude levels toward female genital mutilation?

Q.3: What is the difference between old and young women's beliefs regarding female genital mutilation?

Subject and Methods

Research design

A descriptive-comparative research design was utilized in the current study. A descriptive-comparative research design is intended to describe the differences among groups in a population without manipulating the independent variable. It is appropriate for the study because a non-experimental causal-comparative design enabled the identification of the relationship among the variables **(Cantrell, 2011 & Kühne, 2018).**

Setting

One family rural governmental health center in Elaiaat district, Giza governorate was randomly selected by using the tossing technique. This research was carried out at the family health center of Barnasht village. Family health services are provided through outpatient clinics such as vaccination clinics, dental clinics, obstetrics and gynecology, emergency clinics (first aid for minor emergencies, various injections, dressings, etc.), family planning clinics, and family outpatient clinics: medical clinics, treatment, safety programs (infection control, employee health, and safety), medical services (pharmacy, clinical laboratory, and x-ray room), paramedical services (laundry, kitchen) and family file cabinets.

Sample

A convenience sample of 588 young and old women who were available at the time of data collection was recruited for the study. Data were collected according to the following inclusion criteria: old women aged from 65 to 75 years old, and young women aged from 20-55 years old. According to the new age classification, the young age is from 25 to 44, the middle age is 44-60, and the elderly age is 60-75 years old **(Dyussenbayev, 2017).**

Study Tools

Three tools were utilized to collect data for the current study, after conducting an extensive evaluation of the associated national and international literature.

Tool I: A structured interviewing knowledge questionnaire: it was developed by the researchers based on the studies done by **Abdou et al., (2020), Al Awar et al., (2020),** and **Belda & Tololu (2017)** and divided into two sections: **Section (1):** Demographic characteristics of young and old women, which include personal data such as age, educational level, marital status, number of daughters, circumcision of daughters and family decision maker. **Section (2): Knowledge** regarding female genital mutilation which includes (10) questions such as definition, types, causes, harms, and complications. **Scoring system**: Regarding knowledge scores, "two" scores were given for a completely correct answer, "one" score was given for an incomplete correct answer, and "zero" for an incorrect or unknown answer. The higher scores reflect higher levels of knowledge about female genital mutilation. The total knowledge scores were categorized into three levels: a) poor knowledge (less than 50 percent); b) fair knowledge (50%-75%); c) good knowledge (more than 75 percent).

Tool II: Beliefs Assessment Questionnaire: It was developed by the researchers based on the studies done by Abdou et al., (2020), and Mohammed et al., (2018) to assess the beliefs of old and young women regarding female genital mutilation, which includes (8) questions such as Do you believe a circumcised female is more chaste? Do you think

that a circumcised female is cleaner and healthier than an uncircumcised girl? Do you think that a circumcised female is less sexually aroused than an uncircumcised woman? **The scoring system** was graded on a scale of one (for No) to two (for Yes). The total beliefs scores were categorized into two levels: a) negative belief is ≤ 50%, and b) positive belief is > 50%.

Tool III: Attitude Scale of old and young women toward female genital mutilation: It was adopted from (**Farhat, 2000**) Institute of Postgraduate Studies for Childhood - Department of Psychological and Social Studies, Ain-Shams University to assess the attitude of young and old women toward female genital mutilation. The standardized scale consists of 41- questions that covered four dimensions: deprivation of enjoying sexual pleasure (16 - items), prevention of sexual perversion (10 - items), circumcision pain (9 - items), and circumcision is an inherited custom (6 - items). Old and young women's **attitude scale scoring system: it is a** 5-point Likert scale ranging from (1 strongly disagree, 2 disagree, 3 neutral, 4 agree to 5 strongly agree. except reverse phrases were scored as (5 strongly disagree, 4 disagree, 3 neutral, 2 agree to 1 strongly agree). Total attitudes scores are classified as follows: negative attitude < 40%, neutral attitude from 40 - 60 %, and positive attitude > 60%. The validity and reliability for this scale is (0.95).

Tools validity and reliability

Study tools were sent to a panel of five experts staff in the Faculty of Nursing – Cairo University; three professors in the field of community health nursing and two professors in the field of gerontological nursing. Each expert on the panel was asked to examine the instruments for face and content validity. Modifications were made based on of panel's judgment of the clarity of the sentences and the appropriateness of the content. The content validity index was calculated to be 95%. Test-retest and Cronbach's alpha reliability measurements were used to measure the internal consistency of all questions in the three tools, and it showed a value of 0.85 for knowledge, and 0.75 for beliefs.

Procedure

Data were collected from December 2022 through February 28, 2023. The current study was conducted through the following two phases:

Phase I: Preparation:

A review of related literature covering various aspects of the problem was carried out, using available books, journals, and the internet to get acquainted with the research problem, An official approval was granted from the research ethics committee of the Faculty of Nursing at Cairo University to proceed with the study. As well as The director of the Barnasht Family Health Center granted official permission for the fieldwork and data collection. Young and old women signed a consent form to participate in the study.

Phase II: Interviewing and assessment:

All young and old women were invited to participate in the current study voluntarily. Young and old women who met the inclusion criteria and were willing to participate in the study were recruited. The researchers explained the aim of the study to the participants to gain their cooperation and formal consent through individual interviewing with each participant, which took nearly 30 minutes to complete data collection. Old and young females were interviewed in the same day at a separate room in the family health center. The researchers attended with participants while they filled out the tools to ensure an individualized response. They filled out the tools except for those who could not read or write, their responses were documented by the researchers. The researchers met the young and old women twice per week from 9 a.m. to 1 p.m. The total sample after 3 months was 588 (294 young women and 294 old women).

Pilot study

Once permission to begin the proposed research was granted, a pilot study was conducted on 58 young and old women to determine the time required to answer the questions; the feasibility, objectivity, and ability of the tool to elicit the desired information, as well as the appropriateness of the content, and

wording. According to the results of the pilot study, each participant took nearly 30 minutes to complete the questionnaire. Based on its outcome, modifications have been carried out. Old and young women involved in the pilot study were excluded from the total sample.

Ethical considerations

The current study was carried out with the approval of the ethical committee from the faculty of nursing at Cairo University (approval number 2022-75). All participants were informed about the purpose and benefits of the study. All participants were informed that their participation was voluntary and that the data collected was used only for the purpose of the study. Participants' privacy was ensured. Confidentiality was assured by the coding of the data and the anonymity of the participants. The researchers informed them that the data they provided would not be utilized for any other reason. Before the distribution of the tools, the old and young women were informed that their answers would not influence their relationship with the medical staff in the center and that no harm would happen to any of them when involved in the study.

Statistical Analysis

The Statistical Package for Social Science (SPSS) version 25 was used to analyze the data. The mean and standard deviation were used to express numerical data. Quantitative data were expressed as frequency and percentage. For quantitative data, a comparison between two variables was done using the t-test, and for comparison between more than two variables, the ANOVA test was used. Relations between different numerical variables were tested using Pearson correlation. A probability (p-value) less than 0.05 was considered significant, and less than 0.001 was considered highly significant.

Results

The statistical findings will be presented in the following order: The first section is devoted to the description of the demographic characteristics of the study sample. The 2nd, 3rd, 4th, and 5th, sections present the result that answered the research questions in relation to study variables.

Section I: Demographic characteristics of the study sample: Table (1) Figures 1 & 2,

Table 1 reveals that 60.5% of young women aged from 30 to less than 40 with a mean age of 32.45±5.84 years and 76.5% of old women aged from 65 to less than 70 years with a mean age of 68.28±2.65 years. All of the old women couldn't read or write, while 57.5% of the young women had secondary school. As regard occupation, 71.1% and 85.7% of young women and old women were unemployed, respectively. Also, the same table clarifies that 52% and 70.7% of young women and old women were married, respectively. In terms of the number of daughters, 55.1% of young women have 1-2 daughters, whereas 42.9% of old women have 5-7 daughters. A highly statistically significant difference was found between young and old women's demographic data (P = 0.00).

Figure 1 indicates that 25.2 % of young women and 100 % of old women circumcised their daughters, respectively.

Figure 2 indicates that fathers were named as the decision-maker in the family by 68% of young women and 63.9% of old women, respectively.

Section II: Differences between young women and old women's knowledge toward female genital mutilation. (Tables 2 - 3& figure 3). ***This part answered the first research question.***

Table 2 reveals that 98.6% and 88.8% of young women and old women knew the definition of female genital mutilation, respectively. Highly statistically significant differences were found between young women and old women (P = 0.00). Concerning the number of types of female genital mutilation, table (2) also shows that 86.7% and 58.5% of young and old women, respectively, mentioned one type. As regard types of female genital mutilation, 90.1% and 68.4% of the young women and old women mentioned removal of the clitoris, respectively.

In terms of the reasons for female genital mutilation, table 2 shows that 84.7% of young women said tradition, while 61.6% of older women said religious reasons. Regarding the benefits of female genital mutilation, 65.3% of the young women mentioned that it has no benefits, while 48.3% of the older women mentioned purity. A highly statistically significant difference was found between young women's and old women's knowledge (P = 0.00).

Table 3 clarifies that 93.9% and 84.4% of young and old women reported that female genital mutilation is most commonly culturally inherited in rural areas, respectively. 77.6% and 63.6% of the young and old women said that both physical and psychological harms were forms of female genital mutilation, respectively. As regards, the harms of female genital mutilation, table (3) also shows, 67% of the young women reported bleeding, while 50% of the old women reported continuous pain.

Regarding the harms of female genital mutilation after marriage, table 3 reveals that 84.7% of young women mentioned frigidity, while 55.4% of the older women mentioned fear of sexual relations. The table also clarifies that 75.2% of the young women reported that bleeding to death was a complication of female genital mutilation, while 69.7% of the older women reported edema as a complication of female genital mutilation. A highly statistically significant difference was found between young and old women's knowledge (P = 0.00).

Figure 3 indicates that 82% and 95% of young and older women, respectively, had a poor level of knowledge, while 18% and 5% of young and older women, respectively, had a fair level of knowledge. ***(first research question answered).***

<u>Section III:</u> Differences between young and old women's attitudes and beliefs toward female genital mutilation. (Table 4) This part will answer the second and third research questions.

In relation to total attitude level, table (4) indicates that 73.8% of the young women had a positive attitude regarding female genital mutilation, while 59.9% of the older women had a negative attitude regarding female genital mutilation. There was a highly statistically significant difference between young and old women's total attitude levels (P value = 0.00).

Also, the same table reveals that 77.2% of the young women had negative beliefs regarding FGM, while 79.6% of the older women had a positive belief regarding female genital mutilation. There was a highly statistically significant difference between young and old women's total beliefs (P value = 0.00).

<u>Section IV:</u> The difference between total knowledge scores, total belief scores, and total attitude & attitude dimensions scores among young women and old women. (Table 5).

Table 5, summarize that there were highly statistically significant differences found between the young and old women's total beliefs scores, total attitude scores, and attitude dimensions scores regarding female genital mutilation (P = 0.000).

<u>Section V:</u> Relations between variables under the study. Tables (6-10)

Table 6 indicates a highly statistically significant positive correlation between attitude dimensions (B, C, and D) and total knowledge, while a statistically significant negative correlation was found between total knowledge scores and total beliefs scores among young women. Also, a highly statistically significant positive correlation was found between total attitude scores and total knowledge scores, while a statistically significant negative correlation was found between total belief scores and total attitude scores among young women (P = 0.000).

Table 7 indicates a highly statistically significant positive correlation between attitude dimensions (A and C) and total knowledge and total beliefs, while a statistically significant negative correlation was found between total attitude scores and total belief scores among old women (P = 0.000).

Table 8 illustrates a highly statistically significant correlation between attitude dimension (C) and young women's age, while a statistically significant negative correlation was found between attitude dimension (B and A) and young women's age (P = 0.000).

Table 9 indicates a highly statistically significant positive correlation between the study sample's educational level, age category, occupation, marital status, and presence of a circumcised daughter (P = 0.00).

Table 10 illustrates a highly statistically significant correlation between total attitude, knowledge, and belief scores and old women's occupation, as well as a highly statistically significant correlation between total attitude, knowledge, and belief scores and old women's marital status (P = 0.00). Also, the same table illustrates that there was no statistically significant correlation between total attitude, knowledge, and belief scores and young women's occupation, marital status, or responsible person for family decisions.

Table 1. Frequency and percentage distribution of the study sample demographic characteristics (age, educational level, occupation, marital status, and the number of daughters) (n=588).

Demographic data	Young women (n=294)		Old women (n=294)		Chi square	
	No.	%	No.	%	χ2	P
Age (in years)						
20 < 30	90	30.6	0	0	95.8	.00**
30 < 40	178	60.5	0	0		
40 -55	26	8.9	0	0		
Mean± SD	32.45±5.84		0			
55 < 65*	0	0	0	0		
65 < 70	0	0	225	76.5		
70 - 75	0	0	69	23.5		
Mean± SD	0		68.28±2.65			
Educational level						
can't read or write	3	1	294	100	576.12	.00**
Primary	76	25.9	0	0		
Secondary school	169	57.5	0	0		
University	46	15.6	0	0		
Occupation						
Employed	85	28.9	42	14.3	18.57	.00**
Unemployed	209	71.1	252	85.7		
Marital status						
Married	153	52	208	70.7	40.08	.00**
Divorced	73	24.9	19	6.5		
Widow	68	23.1	67	22.8		
Number of daughters						
1-2	162	55.1	90	30.6	126.3	.00**
3-4	117	39.8	78	26.5		
5-7	15	7.1	126	42.9		

*Age from 55 < 65 years not included in the study. *Statistically significant ≤ 0.05
**Highly significance at ≤0.001 levels

Figure 1. Percentage distribution of young and old women's circumcised daughters (n= 588).

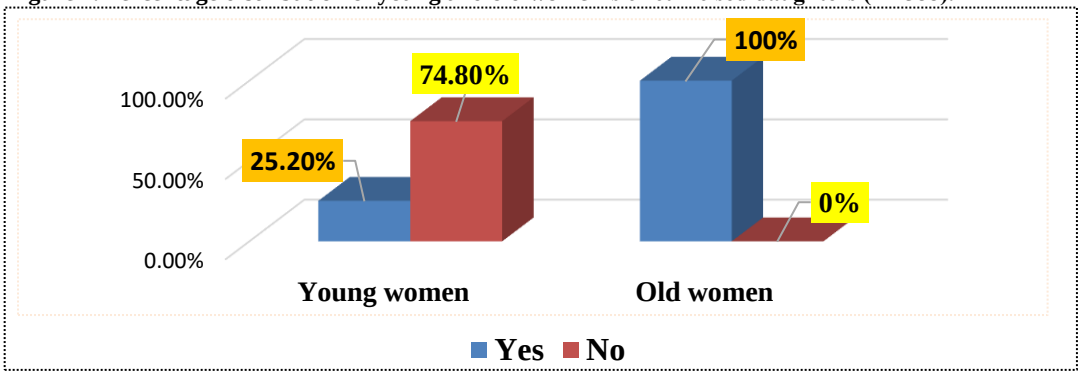

Figure 2. Distributions of demographic characteristics of the study sample regarding the responsible person for family decision toward daughter circumcision (n= 588).

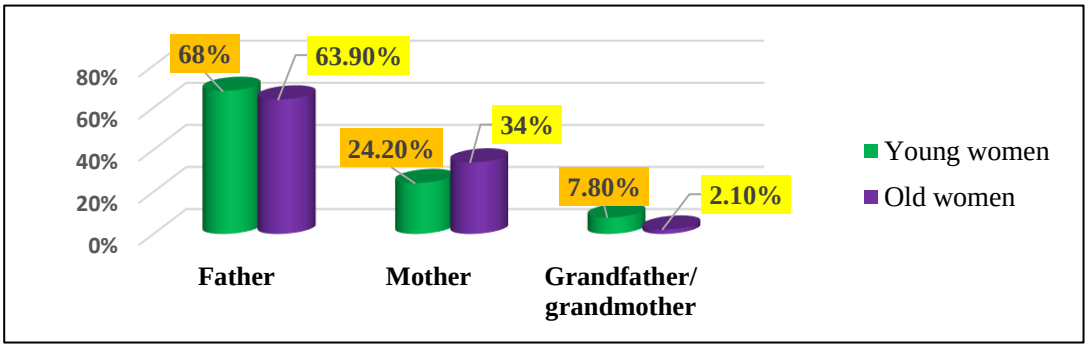

Table 2. Frequency and percentage distributions of the study sample general knowledge regarding female genital mutilation among the study sample (n= 588).

Knowledge	Young women		Old women		Chi square	
	No.	%	No.	%	χ2	p
Definition of female genital mutilation (FGM)						
Yes	290	98.6	261	88.8	24.26	.00**
No	4	1.4	33	11.2		
Number of types of female genital mutilation						
One	255	86.7	172	58.5		
Two	17	5.8	44	15	77.47	.00**
Three	12	4.1	75	25.5		
Four	10	3.4	3	1		
Types of female genital mutilation						
Removal of the clitoris	265	90.1	201	68.4		
Total excision	21	7.1	22	7.5	59.05	.00**
Suture excision	8	2.7	71	24.1		
Causes of female genital mutilation						
Traditional	249	84.7	80	27.2		
Medical	22	7.5	33	11.2	211.38	.00**
Religious	23	7.8	181	61.6		
Benefits of female genital mutilation						
Chastity	38	12.9	109	37.1		
Purity	39	13.3	142	48.3	289.67	.00**
It protects the wife	25	8.5	43	14.6		
No benefits	192	65.3	0	0		

*Statistically significant ≤ 0.05 **Highly significance at ≤0.001 levels

Table 3. Distributions of the study sample knowledge scores regarding the cultural heredity of female genital mutilation, harms, and complications (n= 588).

Variables	Young women		Old women		Chi square	
	No.	%	No.	%	$\chi 2$	p
Female genital mutilation is more culturally inherited in:						
Urban	18	6.1	46	15.6	13.75	.00**
Rural	276	93.9	248	84.4		
Form of Harms of female genital mutilation						
Physical	51	17.3	97	33	19.34	.00**
Psychological	15	5.1	10	3.4		
Both	228	77.6	187	63.6		
Harms of female genital mutilation						
Continuous pain	24	8.2	147	50	181.26	.00**
Dyspareunia	37	12.6	39	13.3		
Frequent inflammation	22	7.5	46	15.6		
Urine retention	2	0.7	2	0.7		
Bleeding	197	67	53	18		
Depression	12	4	7	2.4		
Harms of female genital mutilation after marriage						
Infertility	7	2.3	25	8.5	164.16	.00**
Frigidity	249	84.7	98	33.3		
Fear from sex	34	11.6	163	55.4		
Difficult vaginal delivery	4	1.4	8	2.7		
Complications of female genital mutilation after marriage						
Bleeding till death	221	75.2	40	13.6	247.34	.00**
Edema	35	11.8	205	69.7		
Inflammation	33	11.2	43	14.6		
Urinary problems	5	1.7	6	2.1		

*Statistically significant ≤ 0.05
**Highly significance at ≤0.001 levels

Figure 3. Percentage distribution of young and old women's total knowledge scores toward female genital mutilation (n= 588).

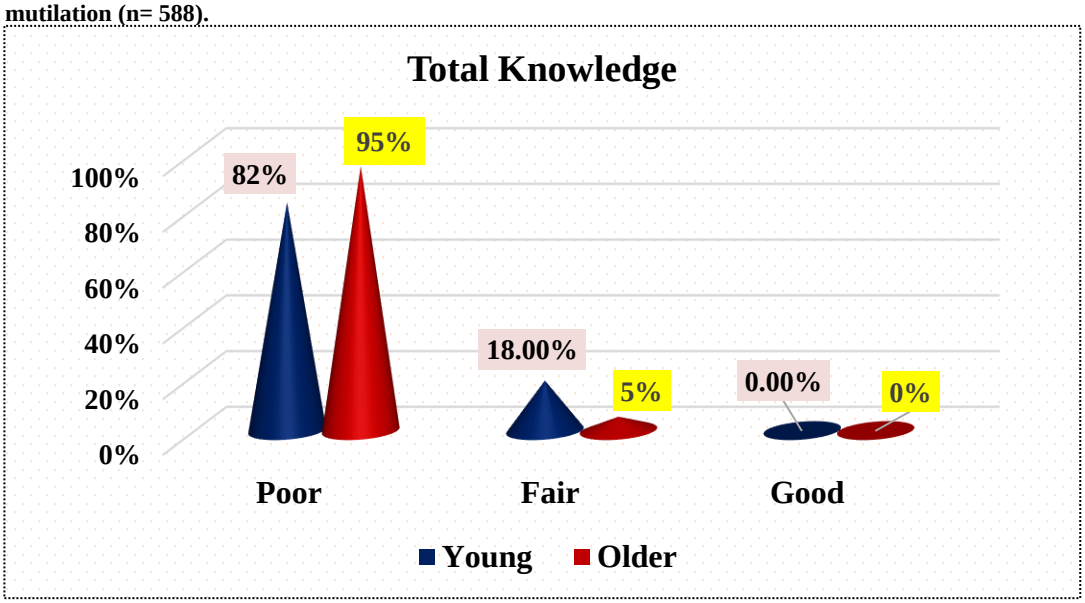

Table 4. Differences between the study sample's total attitude and beliefs level (n= 588).

Variable	Young women		Old women		Chi square test	
	No.	%	No.	%	$\chi 2$	p
Total attitude levels						
- Negative <40%	17	5.8	176	59.9	301.12	.00**
- Neutral 40-60%	60	20.4	97	33		
- Positive >60%	217	73.8	21	7.1		
Total beliefs levels						
- Negative ≤ 50%	227	77.2	60	20.4	189.83	.00**
- Positive > 50%	67	22.8	234	79.6		

*Statistically significant ≤ 0.05 **Highly significance at ≤0.001 levels

Table 5. Differences between the study sample's mean scores of total knowledge, total beliefs, total attitude & attitude dimensions (n= 588).

Dimensions	Young women		Old women		Independent t test	
	Mean	SD	Mean	SD	t	P
Total knowledge	3.5476	.82791	2.6395	.84616	13.15	.21
Attitude dimensions:						
A. Deprivation of enjoying sexual pleasure	18.2925	2.10707	17.8095	3.42314	2.06	.00**
B. Prevention of sexual perversion	38.7483	7.42640	28.2993	4.34504	20.82	.00**
C. Prevention of sexual perversion	29.6429	3.69369	22.8469	4.78055	19.29	.00**
D. Circumcision is an inherited custom	59.0068	6.59351	42.8095	11.16665	21.42	.00**
Total attitude	145.6905	16.27524	111.7653	17.99382	23.98	.001**
Total beliefs	10.4014	2.36776	13.9490	1.57436	21.39	.00**

*Statistically significant ≤ 0.05 **Highly significance at ≤0.001 levels

Table 6. Correlations between attitude dimensions, total attitude, total beliefs & total knowledge among young women (n= 294).

Young women	Pearson Correlation	Total knowledge	Attitude A	Attitude B	Attitude C	Attitude D	Total attitude
Attitude dimensions:							
A. Deprivation of enjoying sexual pleasure	r	.057					
	P	.334					
B. Prevention of sexual perversion	r	.652**	-.113				
	P	.000	.053				
C. Circumcision pain	r	.572**	.169**	.724**			
	P	.000	.004	.000			
D. Circumcision is an inherited custom	r	.442**	.362**	.606**	.822**		
	P	.000	.000	.000	.000		
Total attitude	r	.614**	.263**	.851**	.912**	.915**	
	P	.000	.000	.000	.000	.000	
Total beliefs	r	-.591**	.015	-.863**	-.654**	-.514**	-.748**
	P	.000	.802	.000	.000	.000	.000

*Statistically significant ≤ 0.05 **Correlation is highly significant at the 0.001 level (2-tailed)

Table 7. Correlations between attitude dimensions, total attitude, total beliefs & total knowledge among old women (n= 294).

Old women	Pearson Correlation	Total knowledge	Attitude A	Attitude B	Attitude C	Attitude D	Total attitude
Attitude dimensions:							
A. Deprivation of enjoying sexual pleasure	r	.486**					
	P	.000					
B. Prevention of sexual perversion	r	-.046	.180**				
	P	.435	.002				
C. Circumcision pain	r	-.168**	.016	.227**			
	P	.004	.791	.000			
D. Circumcision is an inherited custom	r	-.077	.299**	.258**	.772**		
	P	.188	.000	.000	.000		
Total attitude	r	-.011	.423**	.496**	.803**	.945**	
	P	.852	.000	.000	.000	.000	
Total beliefs	r	.340**	.008	-.489**	-.401**	-.378**	-.458**
	P	.000	.896	.000	.000	.000	.000

*Statistically significant ≤ 0.05
**Correlation is highly significant at the 0.001 level (2-tailed)

Table 8. Correlations between the study sample's age and total knowledge, total beliefs, total attitude & attitude dimensions (n= 588).

Pearson Correlation with age	Young women		Old women	
	r	p	r	p
Total knowledge	-.025	.670	-.012	.839
A. Deprivation of enjoying sexual pleasure	-.161**	.006	.018	.761
B. Prevention of sexual perversion	-.478**	.000	.013	.828
C. Circumcision pain	.218**	.000	.049	.399
D. Circumcision is an inherited custom	.043	.459	.009	.884
Total attitude	-.061	.296	.023	.698
Total beliefs	.082	.162	.033	.570

*Statistically significant ≤ 0.05
**Correlation is highly significant at the 0.001 level (2-tailed)

Table 9. Correlations between demographic characteristics of the study sample and presence of circumcised daughter (n= 588).

Demographic data	Circumcised daughter				Chi square	
	Yes		No			
	No.	%	No.	%	χ2	p
Educational level						
Can't read or write	295	80.2	2	0.9	346.73	.00**
Primary	22	6	54	24.5		
Secondary school	41	11.1	128	58.2		
University	10	2.7	36	16.4		
Age category						
Younger	74	20.1	220	100	351.5	.00**
Older	294	79.9	0	0		
Occupation						
Employed	62	16.8	65	29.5	13.11	.00**
Unemployed	306	83.2	155	70.5		
Marital status						
Married	243	66	118	53.6	21.44	.00**
Divorced	38	10.3	54	24.5		
Widow	87	23.6	48	21.8		
Responsible person for family decision						
Father	237	64.4	151	68.6	7.29	.03*
Mother	118	32.1	53	24.1		
Grandfather/grandmother	13	3.5	16	7.3		

*Statistically significant ≤ 0.05

**Correlation is highly significant at the 0.001 level (2-tailed)

Table 10. Correlations between demographic characteristics of the study sample and their total knowledge, total beliefs & total attitude scores (n= 588).

Variable	Occupation		Marital status		Responsible person for family decision	
	Young women	Old women	Young women	Old women	Young women	Old women
Knowledge						
F	1.342	23.80	.206	35.187	.468	.941
p	.248	.000**	.814	.000**	.627	.391
Beliefs						
F	.110	17.897	.097	44.817	.181	2.067
p	.740	.000**	.907	.000**	.834	.128
Attitude						
F	.004**	66.076	1.205	36.846	.433	5.798
p	.948	.000**	.301	.000**	.649	.003**

*Statistically significant ≤ 0.05

**Correlation is highly significant at the 0.001 level (2-tailed)

Discussion

Female genital mutilation persists despite its illegality and negative health consequences due to social pressure on women to conform to social norms, peer acceptance, fear of criticism, and religious reasons. Implementing interventions aimed at religious leaders and their followers, as well as older and younger women, will aid in the abolition of the practice **(Sakeah et al., 2019).**

In terms of demographic characteristics of old and young Egyptian women, all of the old women can't read or write, whereas more than half of the young women have a secondary school education, and more than half & more than two-thirds of both young and old women are married, with mean ages of 32.45 ± 5.84 & 68.28±2.65 for young and old women respectively.

These findings were supported by **Belda & Tololu (2017),** who conducted a study on the knowledge, attitude, and practice of young women towards female genital mutilation in Ethiopia and discovered that nearly half of the young women were illiterate; this suggests a clear division in society regarding women's education. Two-thirds of young women were married, with a mean age of 33.

According to the current study's findings, all of the study participants were from rural areas, and one-quarter of the young women and all of the elderly women circumcised their daughters. This finding is supported by a previous study conducted by **Rashad & Sharaf (2021),** who reported that more than half of the respondents lived in rural upper and lower Egypt and that one-third of the interviewed women had circumcised their daughters.

On the other hand, **Al Awar et al., (2020)** investigated the prevalence, knowledge, attitude, and practices of female genital mutilation among 1035 citizens of the United Arab Emirates and discovered that only 13.7% of daughters had undergone female genital mutilation, which may indicate a decrease in the prevalence of the practice. This decrease has also been reported by **Kandala, Ezejimofor, Uthman, Komba, (2018) & Alkhalaileh, Hayford, Norris, and Gallo, (2018).**

According to the current study, more than two-thirds of young and old women reported their fathers as the person in charge of making family decisions. This result conflicts with **Hanafy et al., (2019)** which determined that young girls are the primary decision-makers for female genital mutilation in the family, the study compared the sexuality of Egyptian women exposed to female genital mutilation to those who were not. On the same line, **Mahmoudi & Hosseini (2021)** conducted a survey in Iran about attitudes towards female genital mutilation and discovered that 64% of circumcised women claimed that their young women made the decision to engage in the practice, whereas only 12.5% and 22% of cases, old women and fathers, respectively, were the decision-makers. The disparities between the two studies brought attention to the part that women played in this cruel deed.

Regarding the types of female genital mutilation, the majority and more than half of young and old women, respectively, specified one type, when asked why they performed female genital mutilation, the majority of young women reported tradition, whereas more than half of older women reported a religious motivation. Three-quarters of the young women who underwent female genital mutilation reported bleeding until death, whereas more than two-thirds of the older women experienced edema as a consequence.

At the same line, **Al Awar et al., (2020)** found that type I was the most prevalent, followed by type II and type III, and that more than two-thirds considered female genital mutilation a custom, the minority considered it a religious ritual, and roughly one-fifth considered it a Sunna or recommended act. Only a third of the circumcisions had been done in a sterile, clean setting. All these complications as pain, infection, bleeding, problems during delivery and urination, as well as emotional distress were reported by almost one-third of the participants. These facts ought to be sufficient to frighten the authorities into taking action to protect those

who undergo this surgery covertly and in unsanitary settings.

On the other hand, type III was discovered to be the most common by **Yassin, Idris, and Ali, (2018),** who examined the traits of female sexual dysfunctions and obstetric difficulties connected to female genital mutilation in Sudan. These variances could be explained by racial sentiments that differ between populations. Due to the high incidence of complications connected with type III female genital mutilation, this may be a sign of shifting attitudes regarding the practice.

In terms of the benefits and harms of female genital mutilation, less than half of the older women stated purity, whereas more than one-third mentioned chastity. In terms of harms, the majority of young women indicated frigidity, whereas more than half of older women mentioned fear of sexual intercourse. The study also revealed that more than two-thirds of the young women indicated that bleeding to death was a consequence of female genital mutilation.

These findings were supported by **Ahmed, Shabu & Shabila (2019),** who conducted a qualitative study to assess women's perspectives and experiences of female genital mutilation in Iraqi Kurdistan Region and discovered that, female genital mutilation is supposed to benefit women by managing their sexual desire, as well as increasing cleanliness and sanitation. However, noted drawbacks of female genital mutilation included decreased libido and psychological issues. According to **Ahmed, Kareem, Shabila, and Mzori (2018),** who conducted a study to examine knowledge and perspectives of female genital cutting among local religious leaders in Erbil governorate, Iraqi Kurdistan region, FGM resulted in pain and bleeding as direct effects, and decreased sexual desire and psychological problems as long-term effects. These data support the notion that female genital mutilation can lead to a various complication.

The current study revealed that the majority of the young and older women had poor level of knowledge, while the minority of them had fair level of knowledge regarding female genital mutilation. This goes with **Abdou et al., (2020)** in a similar study in Egypt who found that, female genital mutilation remains common in Egypt. Poor knowledge and unfavorable attitude had a positive significant correlation, and both were among the predictors of females' intention to practice mutilation and recommended awareness campaigns and law enforcement to reduce the practice of female genital mutilation in Egypt.

On the other hand, **Belda & Tololu (2017)** in Ethiopia reported that 48.2% of mothers had good knowledge regarding female genital mutilation and its complications, 42.4% had fair knowledge, and 9.4% had poor understanding. From the researchers' point of view, these differences may be due to sociodemographic characteristics and cultural diversities.

According to the current study, more than half of older women had a negative attitude towards female genital mutilation, compared to nearly three-quarters of young women who had a positive attitude. This finding supported the study done by **Melese et al., (2020)** who studied Knowledge, attitude, practice, and predictors of female genital mutilation in Northwest Ethiopia and found that more than half of the participants had favorable attitudes against female genital mutilation.

According to a study by **Ghazy et al., (2021)** about the effect of an educational program on young women's knowledge and attitudes about the practice in Tanta City. The mean scores of all attitudes, both immediately after the intervention and three months later, significantly improved concurrently. The majority of the studied sample showed a significant improvement in their opposition to female genital mutilation both immediately and three months after the educational sessions. However, **Hussein, Adem,** and **Mohammed**, (**2013**) discovered that over two thirds of women have a negative attitude regarding female genital mutilation. Also, **Abdelmoaty, Sabry** and **Elamir, (2020)** found that females demonstrated more negative attitude towards FGM. The possible explanation for this difference between

two studies might be due to the time gap and different sociodemographic background.

The current study revealed that more than three-quarters from the young women had negative beliefs regarding female genital mutilation, while the majority of the grandmother had a positive belief regarding FGM. More than half of rural Egyptians, according to a previous study by **Mohammed**, **Seedhom**, and **Mahfouz** (**2018**) on female genital mutilation, believed that the practice should continue. The study also examined present awareness, beliefs, and future intentions. Women supported the practice of female genital mutilation more than men did. Additionally, about half of those living in rural areas said female genital mutilation could be outlawed in Egypt. More than half of people living in rural areas said that men preferred that their wives undergo female genital mutilation. More than half of people living in rural areas thought female genital mutilation should be made illegal.

This was inconsistent with a study done by **Abathun, Gele, and Sundby, (2017)** which discovered that more than half of the young boys surveyed desired to marry women who had not undergone female genital mutilation. This means that young males were given unrestricted access to information regarding the negative impact of female genital mutilation on sexuality. Only one-fifth of them, according to **Abu Sabeeb** and **Hatamleh** (**2016**), thought that having their male genitalia cut would boost their likelihood of getting married, while nearly two-thirds were unsure how this would affect their chances of getting married.

As regards beliefs toward female genital mutilation, the majority of young women had negative beliefs regarding female genital mutilation whereas the majority of old women had positive believes. There was also a highly statistically significant difference between young and old women regarding total attitude level (P value = 0.00), moreover, a highly statistically significant correlation between attitude dimension (C) and young women's age while a statistically significant negative correlation was found between attitude dimension (B) and young women age (P=0.000). A highly statistically significant correlation between total attitude, knowledge, beliefs scores, and old women's occupation was also found.

These results support those of **Van Rossem et al. (2015),** who investigated the relationship between Egyptian women's social positions and their attitudes towards female genital mutilation and investigated whether the spread of anti-FGM attitudes is related to the observed improvements in women's positions over time. They found that the advancement of women's social positions has undoubtedly aided in the spread of anti-FGM attitudes in Egyptian society. This revolution was driven by educated, less conventional women, and it was from this base that the anti-FGM movement spread to many areas of Egyptian society. In this respect, **Arafa, Mostafa, a**nd **Eshaka**, (**2020**), also reported that, female genital mutilation prevalence has been showing a declining trend throughout the previous decades. Major risk factors for female genital mutilation have been identified as low parental education and rural living. It was discovered that social, religious, and hygienic motivations helped the practice persist.

The current study found highly statistically significant differences found between the young women and old women's total beliefs scores, total attitude scores, and attitude dimensions scores regarding female genital mutilation (P=0.000). This finding is consistent with **Hanafy et al., (2019)** who reported in an Egyptian study of sexual consequences of female genital mutilation: A comparative study that the tradition of female genital mutilation is retreating as evidenced by the fact that, younger women had less exposure to female genital mutilation, and 73% of women who had been circumcised claimed they would not do the same to their daughters. Similarly, **Moamen et al. (2013)** discovered that 40% of participants who had been circumcised, as well as all the uncircumcised women, opposed having their daughters circumcised.

Additionally, the current study found a highly statistically significant positive correlation between attitude dimensions (B, C, D) and total knowledge while a statistically

significant negative correlation were found between total knowledge scores and total beliefs scores among young women, furthermore, a highly statistically significant positive correlation was found between total attitude scores and total knowledge scores, while a statistically significant negative correlation was found between total beliefs scores and total attitude scores among young women (P=0.000). A highly statistically significant positive correlation between attitude dimensions (A, C) and total knowledge and total beliefs, while a statistically significant negative correlation was found between total attitude scores and total beliefs scores among old women (P=0.000).

In this respect, **Ali, (2012)** in a Sudanese study to examine midwives' knowledge and attitude found that almost all the midwives in our community are practicing female genital mutilation, due to very low level of awareness regarding complications of female genital mutilation. Most of the Sudanese respondents did not consider the practice to be detrimental and insisted on continuing to engage in it out of cultural necessity. Similar findings were made by **Melese et al., (2020),** who discovered that female genital mutilation practice had a strong correlation with customs, beliefs, values, and attitude.

A highly statistically significant positive correlation between educational level, age category, occupation, marital status & presence of a circumcised daughter (P= 0.00). These findings go with Arafa, Mostafa, and **Eshaka**, (**2020**), who concluded in a systematic review of the prevalence and risk factors of female genital mutilation in Egypt, that low parental education and rural residence are the top risk factors for female genital mutilation and recommended future studies to investigate the knowledge and attitude of religious preachers regarding female genital mutilation and initiatives empowering the social position of women throughout education to make them the key agents of change.

These findings are also consistent with **Rashad & Sharaf, (2021)** who suggested that maternal education had a favorable impact on the sentiment toward the female genital mutilation practice and added that maternal education did not discourage the actual implementation of the female genital mutilation practice in Egypt. It did not reduce either the probability of having a circumcised daughter or the motivation to perform female genital mutilation in the future. However, their results suggest maternal education had a favorable impact on the sentiment toward this practice. The poor quality of education in Egypt on protecting human capital and the influence of traditionalism in opposition to education may be responsible for the unexpected results. The study's comparative analysis of older and younger women's knowledge, attitudes, and female genital mutilation practices will undoubtedly shed light on this practice, which is still common in Egypt despite the ban on legal and valid legislation. The very small sample size and recall bias in the self-reported questionnaire may restrict the generalizability of the results.

Finally, female genital mutilation is based on androcentric views that come from deeply ingrained cultural beliefs and can be seen as a type of cultural care, supported by six justifying factors: social, hygiene-aesthetics, sexual, religious-spiritual, and health-economics. Certain populations interpret this tradition as a type of healthcare delivered within a cultural framework in anticipation of a variety of ostensible individual, gender, and communal health requirements. Such wants are driven by an androcentric network of beliefs about health and feminine sexuality. The majority of these principles are founded on beliefs and false pretences and may be challenged and dismissed in nursing consultations. Such premises were used to keep female genital mutilation alive as a type of cultural healthcare **(Jiménez-Ruiz & Almansa Martnez, 2017).**

As a result, the nursing discipline, as part of primary healthcare systems, represents a fundamental cornerstone as an active participant in the process of social change and the abolition of this destructive practice, by establishing a balance between respect for cultural differences and consideration of the human rights of women and girls who are directly affected by female genital mutilation.

Conclusion

The study results concluded that a highly statistically significant difference was found between young and old women's total knowledge, attitude, and beliefs. The majority of the young and older women had a poor level of knowledge, while the minority of them had a fair level of knowledge regarding female genital mutilation. Moreover, nearly three-quarters of the young women had a positive attitude, while more than half of the older women had a negative attitude toward female genital mutilation. The majority of young women had negative beliefs, while the majority of older women had positive beliefs about female genital mutilation.

Recommendations

In light of the current result, the following recommendations were suggested:

1- Empowerment health education program by community and gerontological health nurses for young and old women to raise their knowledge regarding female genital mutilation.

2- Future studies should look at not only the assessment of knowledge acquisition, attitude, and beliefs but also should include ongoing health education sessions for an extended period of time and with a larger sample size in a different community setting.

3- Child rights should be empowered among national media, especially regarding female genital mutilation.

4- Using media-based health education programs for complications and consequences of female genital mutilation.

5- Raising decision-maker's awareness of their role in the prevention and resolution of female genital mutilation by community and gerontological health nurses.

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