International Egyptian Journal of Nursing Sciences and Research (IEJNSR)

Original article

Received 2020-11-12
Accepted 2020-12-3
Published2021-1-4

Effect of an Educational Program on Mothers' Knowledge and Attitudes about Female Genital Mutilation at Tanta City

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ABSTRACT

Background: Female Genital Mutilation or Cutting (FGM/C) is a worldwide problem. Egypt has the world's highest total number with 27.2 million women having undergone FGM. Health education has proven to decrease the willingness to circumcise future daughters. **Aim of the study**: To evaluate the effect of an educational program on mothers' knowledge and attitudes about female genital mutilation in Tanta city. **Materials and method:** A Quasi experimental research design was utilized. The study was carried out in maternal and child health care centers in Tanta City, affiliated with the ministry of health. **Sample**: A purposive sample of 85 mothers who had at least one daughter at age 5-11 years who attended the previous settings included in the study. Three tools were used in this study to collect data Tool (I): Structured interview sheet to collect socio-demographic characteristic, Tool II: Questionnaire interview sheet to collect knowledge of mother related to female genital mutilation, Tool III: Structured interview schedule was developed by the researcher for measuring Attitude of mothers towards female genital mutilation. The program was evaluated 3 times during the study period; before the program, immediate, and three months post -program. **Results:** the results of this study showed that before the implementation of the educational program about female genital mutilation studied sample had low scores of knowledge and attitude. After the implementation of the program, there was a significant improvement in the total knowledge and attitude score of the studied sample. There was a significant positive correlation between levels of total knowledge of the studied sample and their total attitude towards FGM immediate and three months post intervention (P< 0.0001, 0.004) respectively. **Conclusion**: the health education program about female genital mutilation was effective and improved the knowledge and attitude of the studied sample regarding FGM. **Recommendation**: Continued effort should be made regularly basis to increase awareness of the community regarding health consequences of FGM practice and empowering the existing positive attitude and discouraging negative attitude towards FGM.

Key words: female genital mutilation, educational program, knowledge, attitude

INTRODUCTION

Female genital mutilation is a widespread cultural practice and affects

millions of young women. The World Health Organization (WHO) and the United Nations (UN) agencies have been defined female genital mutilation (FGM) as "the partial or total removal of the female external genitalia or other injuries to the female genital organs for non-medical reasons". [1] FGM/C has been documented in 29 countries in Africa and the Middle East, and almost half of the cases are in Egypt and Ethiopia. The prevalence of FGM/C in these countries ranges from 0.6% to 98% of the female population. In Egypt, the data show that, 92% of women surveyed in Egypt have been cut by the age of 15, slightly before or at puberty. [2, 3]

Progress towards FGM abandonment may therefore contribute to Millennium Developmental Goals concerned with the empowerment of women (MDG 3), an improvement of maternal health (MDG 5), and a reduction in child mortality (MDG4). Therefore, for the perfect health and human rights of women and children, the United Nations has stigmatized all forms of the practice, and rejecting the medicalization of the practice. [4]

Many countries in which the practice is highly prevalent several efforts have been undertaken to prevent FGM for example, criminalized FGM with new laws and legislation. [5] Also, they have been believed in education and health promotion to encourage people to stop FGM. For non-combative ways to stop FGM include Public education campaigns and alternative sources of income for FGM practitioners. Some successful strategies have included promotion of alternative rites of passage for girls in the community, group discussions and media campaigns aimed at raising awareness, and promotion of a development package aimed at eliminating FGM and reducing poverty. [6] There is limited information on best practices for preventing FGM; however, there seems to be a consensus among health professionals that education is the best strategy. [7]

SIGNIFICANCE OF THE STUDY

Worldwide Female genital mutilation/ cutting (FGM/C) has come to be recognized as a form of gender based violence, a violation of bodily integrity and children's rights and a serious problem in parts of Africa. [8]

The World Health Organization (WHO) estimates that between 100 and 140 million women have been cut worldwide, of which about 91.5 million in Africa. They also estimate that in Africa about three million girls are circumcised every year. [9] Egypt has the world's highest total number with 27.2 million women having undergone FGM. [10]

Research has indicated that the less knowledgeable people are about FGM in general, the more likely they are to support the practice of FGM. Research involving mothers has shown a lack of knowledge and negative attitudes toward FGM and genitally mutilated women. Health education has proven to decrease the willingness to circumcise future daughters. [11]The aim of the current study is to evaluate the effect of an educational program on mother's knowledge and attitudes about female genital mutilation at Tanta city

RESEARCH HYPOTHESIS

Mothers will exhibit more knowledge and positive attitude of female genital mutilation if they exposed to an educational program about female genital mutilation

SUBJECT AND METHODS

Research design:

A Quasi experimental research design was utilized to achieve the purpose of the current study.

Setting:

The study was carried out in maternal and child health care centers (MCH centers) with Tanta City, affiliated to the Ministry of Health. There are seven maternal and child health centers representing five districts, one

MCH center was randomly selected to represent each district.

Subjects:

A purposive sample of 85 mothers who had at least one daughter at age 5-11 years was selected from the previous settings. The study sample was calculated using a power analysis Medcalc program (single proportion). The level of significance was determined at 95% with study power 90% and with a 5% margin of error. The mothers attended to MCH centers for antenatal care, family planning, well-baby clinic and vaccination clinic according to schedules of work for each MCH centers.

Tools of data collection:

The data of this study were collected via three tools:

Tool (I): Structured interview sheet to collect **socio-demographic characteristics**: such as age, residence, marital status, religion, education, occupation, and family income, type of family.

Tool (II): Questionnaire interview sheet to collect knowledge of mother related to female genital mutilation. It included; knowledge of mothers about definition of FGM, factors contributing to the practice of FGM, types of FGM, the health consequences of FGM (physical, social, psychological, sexual, and economic consequences), legal measures against FGM, religious views about FGM, and source of information. **Scoring system of mother's knowledge was done as follows:**

- The correct and complete answer was awarded 3 points, the correct and incomplete was awarded 2 points, the incorrect answer was awarded 1point, don't know was awarded zero.
- Yes was awarded 1 point, no was awarded zero.

The total score amounted to 53 points. From the questions related to knowledge, the following rating was applied:

- A score from < 50% correct answers will indicate poor knowledge.
- A score from 50 %-< 70% correct answers will indicate fair knowledge.
- A score from 70%-100% correct answers will indicate good knowledge.

Tool (III): structured interview schedule that developed by the researcher for measuring the Attitude of mothers towards female genital mutilation. For the subjective parameters (attitude, beliefs and opinions) about FGM and its sociocultural correlates, a 5-point Likert scale would be used (agree, strongly agree, disagree, strongly disagree, undecided).

The Score of attitude:

Each item of attitude was awarded points as follows:

Disagree and strongly disagree items was awarded 1point, undecided items were awarded 2 points, agree and strongly agree was awarded 3 points for positive statements, on the contrary for the negative statements; disagree and strongly disagree items was awarded 3 points, undecided items were awarded 2 points, agree and strongly agree was awarded 1 point.

The total score of attitude amounted 87 points that classified into three categories as follows:

- Negative < 33% of the total attitude score.
- Undecided 33-66% of the total attitude score.
- Positive > 66% of the total attitude score.

Validity and reliability

- The tools were tested for its face and content validity by a group of 5 experts in the field of Community Health Nursing and Obstetric and Gynecological Nursing at Tanta and Alexandria faculty of nursing. Content validity index for the tools indicated good content validity (CVI=94.29%).
- Reliability of the tool was ascertained where the researcher

obtains data from 10 mothers. The Cronbach's alpha reliability correlation coefficient of the tools indicated a positive correlation (r=0.877).

Methods of data collection:

The official permission to conduct the study was obtained from the faculty of Nursing Tanta University, from the directorate of health affairs in Tanta and the director of MCH centers to proceed with the proposed study. The purpose of the research was explained to all mothers before starting to fill the structured interview schedule to gain their approval, cooperation and confidence. Five hours of teaching were implemented for the mothers one hour each month for Five months. Mothers were present all 5 sessions of the program (300 minutes). Each session was taking about 30-60 minutes. Three assessments were done on the mothers to test their knowledge and attitude towards FGM. The first time, before implementation of the program using tool I, tool II, tool III, asecond time, immediately after implementation of the program using tool II, tool III and third time, three months after implementation of the program using tool II and tool III. The researcher used different teaching methods like lecture, brain storming, story- telling and group discussion. The audiovisual material used in this study included PowerPoint presentation, films, posters, pictures and booklets. Data were collected over a period of 10 months starting from December 2014 to September 2015.

Ethical Considerations

Oral witnessed consent was obtained from every mother included in the study after explanation of the aims of the study and assuring them of confidentiality of collected data and explaining that it will only be used for study purpose. Confidentiality and anonymity of individual response was guaranteed by statement in the cover page.

Statistical analysis*:-*

The collected data were organized, tabulated and statistically analyzed using SPSS software (Statistical Package for the Social Sciences, version 16, SPSS Inc. Chicago, IL, USA). For quantitative data, the range, mean and standard deviation were calculated. For qualitative data, comparison between two groups and more was done using Chi-square test (χ^2). For comparison between means of two groups of parametric data of independent samples, student t-test was used. For comparison between more than two means of parametric data, F value of ANOVA test was calculated, where scheffe test was performed to compare between each two means if F value was significant for comparison between more than two means. Correlation between variables was evaluated using Pearson's correlation coefficient (r). Significance was adopted at $p<0.05$ for interpretation of results of tests of significance (Dawson B D 2001).

RESULTS:

Table (1): showed that the age of the studied sample ranged from 22-62 years with a mean of 35.70±8.16 years. The majority (83.5%) of the studied sample were resident in urban areas. The majority (90.6%, 97.6%) of them was married and Moslems respectively. Regarding educational level, about 42% of the studied sample were university graduates, and more than one third of them (38.8%) were secondary education, while 9.4% of them were illiterate. Concerning family income, more than two thirds (67.1%) were housewife and considering their family income enough to their needs. More than three quarters of the studied sample (77.6%) mentioned that they had a nuclear family and 14.1% had extended family.

Figure (1): represented that that the majority (80%) of the studied sample had received information about female genital mutilation from family and relatives; followed by nearly one half (49.4%) received their information from television. Slightly less than one third (31.8%) of them gain their information from their friends.

Table (2): indicates that there was a significant improvement in levels of total knowledge of the studied sample among pre, immediate post and 3 months post intervention. The differences were statistically significant ($\chi 2$= 289.541, p= 0.0001). There was a significant improvement in the mean scores of total knowledge of the studied sample about FGM. Where the mean score of their total knowledge improved from 17.53±6.70 pre-intervention to 49.46±3.34 immediate post intervention and 42.55±5.92 three months post intervention. The differences were statistically significant. (F= 790.926, p= 0.0001).

Table (3): showed that there was a significant improvement of the total attitude levels and mean scores of the studied sample against female genital mutilation. The highest mean scores of attitude were observed among the studied sample immediate post intervention (82.76±7.57) and 3 months post intervention (82.67±7.65). The differences were statistically significant. (F= 131.891, p= 0.0001)

Table (4): illustrated that, there was a significant positive correlation between levels of total knowledge of the studied sample and their total attitude towards FGM immediate post intervention (P= 0.0001). There was a significant relationship between levels of total knowledge and that of attitude, where 95.2% of the studied sample who had good knowledge had a positive attitude, immediate post intervention (P=0.007). There was a positive significant correlation between levels of total knowledge of the studied sample and their total attitude towards female genital mutilation 3months post intervention (P= 0.004). There was no significant relationship between levels of total knowledge and that of attitude where 96.2% of the studied sample who had good knowledge had a positive attitude 3months post intervention.

Figure (2): portrayed that the mean change of scores of knowledge was highest immediate post intervention than pre-intervention (31.93±6.88), and the mean change of scores of attitude was highest immediate post intervention than pre-intervention (23.52±132.6).

Figure (3): demonstrated that The majority (94%) of the studied sample recommended health education campaign for mothers and fathers for prevention of FGM. More than one half (55%) of them recommended establishing centers for Islamic circumcision with highly trained doctors. About one third (37%, 35%, 32%) of the studied sample recommend sexual education, application of laws, and women empowerment for prevention of FGM respectively. While one fifth (21%) of them recommended that practitioners should stop FGM.

Table (I): Distribution of the studied sample regarding to their socio-Demographic characteristics (n=85).

Variables	N	%
Age years:		
<30	20	23.5
30-<40	43	50.6
40-<50	19	22.4
≥50	3	3.5
Range	22-62	
Mean±SD	35.70±8.16	
Residence:		
Urban	71	83.5
Rural	14	16.5
Marital status:		
Married	77	90.6

Divorced	2	2.4
Widow	6	7.1
Religion:		
Moslem	83	97.6
Christian	2	2.4
Educational levels:		
Illiterate/ Read & write	10	11.8
Basic education	4	4.7
Secondary	33	38.8
University	38	44.7
Occupation:		
Working	26	30.6
Housewife	57	67.1
Retired	2	2.4
Family income:		
Enough	57	67.1
Enough and spare	15	17.6
Not enough	13	15.3
Types of family		
Nuclear family	66	77.6
Extended family	12	14.1
Single parent family	7	8.3

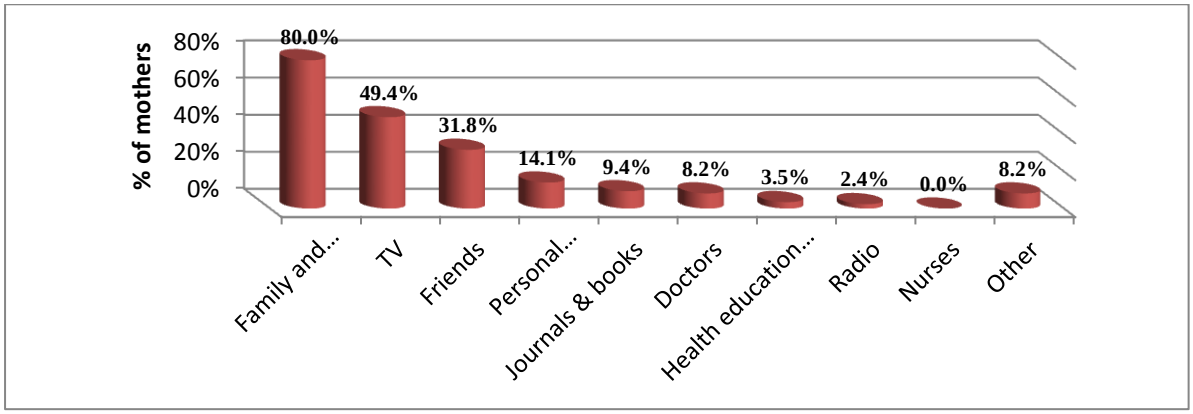

Figure (1): Distribution of the studied sample regarding their sources of information of about FGM (n=85).

Table (2): Distribution of levels and mean scores of total knowledge of the studied sample concerning female genital mutilation (FGM) pre, immediate post and 3 months post intervention (n=85).

Levels of total knowledge	Knowledge of the studied sample pre, immediate post and 3 months post intervention (n=85)						χ^2	P
	Pre		Immediate post		3 months post			
	n	%	n	%	n	%		
Levels of total knowledge:								
Poor	85	100	0	0	3	3.5	289.541	0.0001*
Fair	0	0	2	2.4	30	35.3		
Good	0	0	83	97.6	52	61.2		
Total knowledge scores:								
Range	10-29		36-53		29-52			
Mean±SD	17.53±6.70		49.46±3.34		42.55±5.92			
F value	790.926							
P	0.0001*							
Scheffe test	I vs II, P=0.0001* I vs III, P=0.0001* II vs III, P=0.0001*							

***Significant (P<0.05)**

Table (3): Distribution of levels and mean scores of total attitude of the studied sample towards female genital mutilation (FGM) pre, immediate post and 3 months post intervention (n=85).

Total attitude towards female genital mutilation (FGM) and its scores	Attitude of the studied sample pre, immediate post and 3 months post intervention (n=85)						χ^2 P
	Pre (I)		Immediate post (II)		3 months post (III)		
	N	%	n	%	n	%	
Total attitude level:							
Negative	29	34.1	0	0	0	0	106.693
Undecided	26	30.6	5	5.9	6	7.1	0.0001*
Positive	30	35.3	80	94.1	79	92.9	
Total attitude scores:							
Range	33-87		56-87		56-87		
Mean±SD	59.25±15.47		82.76±7.57		82.67±7.65		
F value	131.891						
P	0.0001*						
Scheffe test	I vs II, P=0.0001* I vs III, P=0.0001* II vs III, P=0.998						

***Significant (P<0.05)**

Table (4): Correlation and relationship between levels of total knowledge of the studied sample and their attitude towards female genital mutilation (FGM) immediate post intervention and 3 months post intervention (n=85).

Attitude towards FGM immediate post intervention	Levels of total knowledge of the studied sample immediate post intervention (n=85)				χ^2 P	Levels of total knowledge of the studied sample 3 months post intervention (n=85)						χ^2 P
	Fair (n=2)		Good (n=83)			Poor (n=3)		Fair (n=30)		Good (n=52)		
	n	%	n	%		n	%	n	%	n	%	
Total attitude:												
Undecided	1	50	4	4.8	7.201 0.007*	0	0	4	13.3	2	3.8	2.846 0.241
Positive	1	50	79	95.2		3	100	26	86.7	50	96.2	
r	0.455					0.312						
P	0.0001*					0.004*						

***Significant (P<0.05)** **r=Correlation Coefficient**

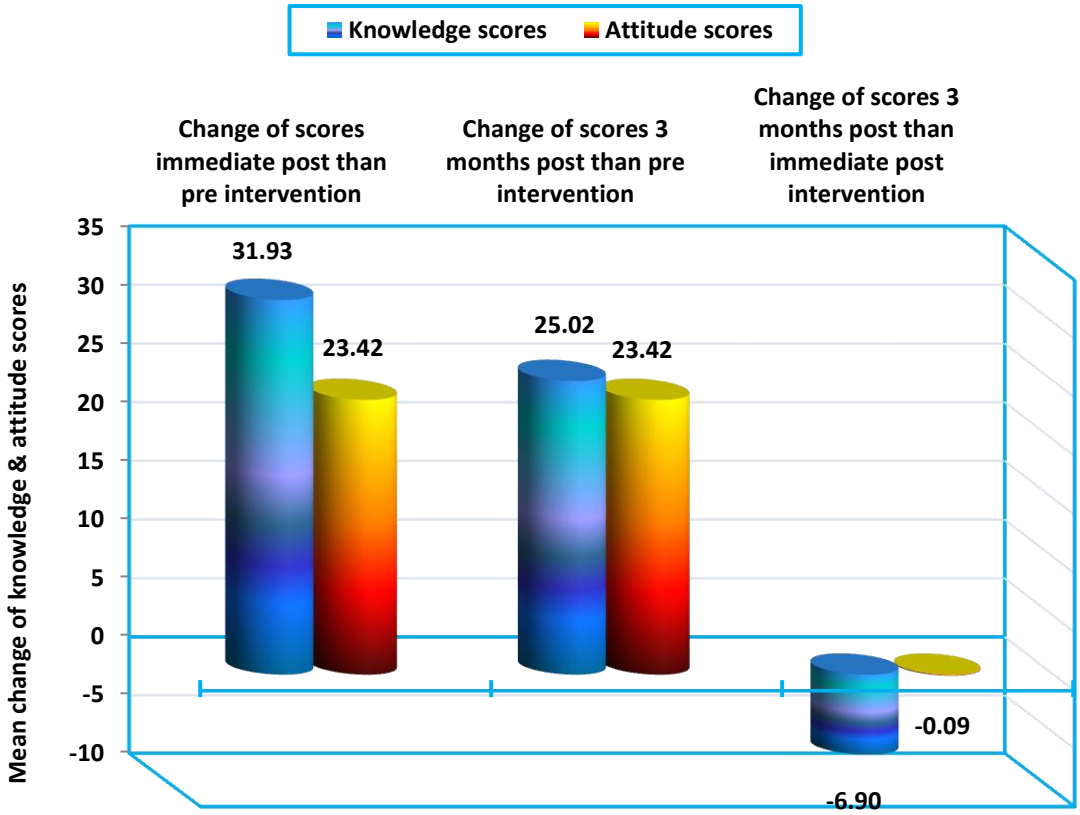

Figure (2): Mean change of scores of knowledge and attitude about female genital mutilation (FGM) among the studied sample immediate and 3 months post intervention than pre intervention (n=85).

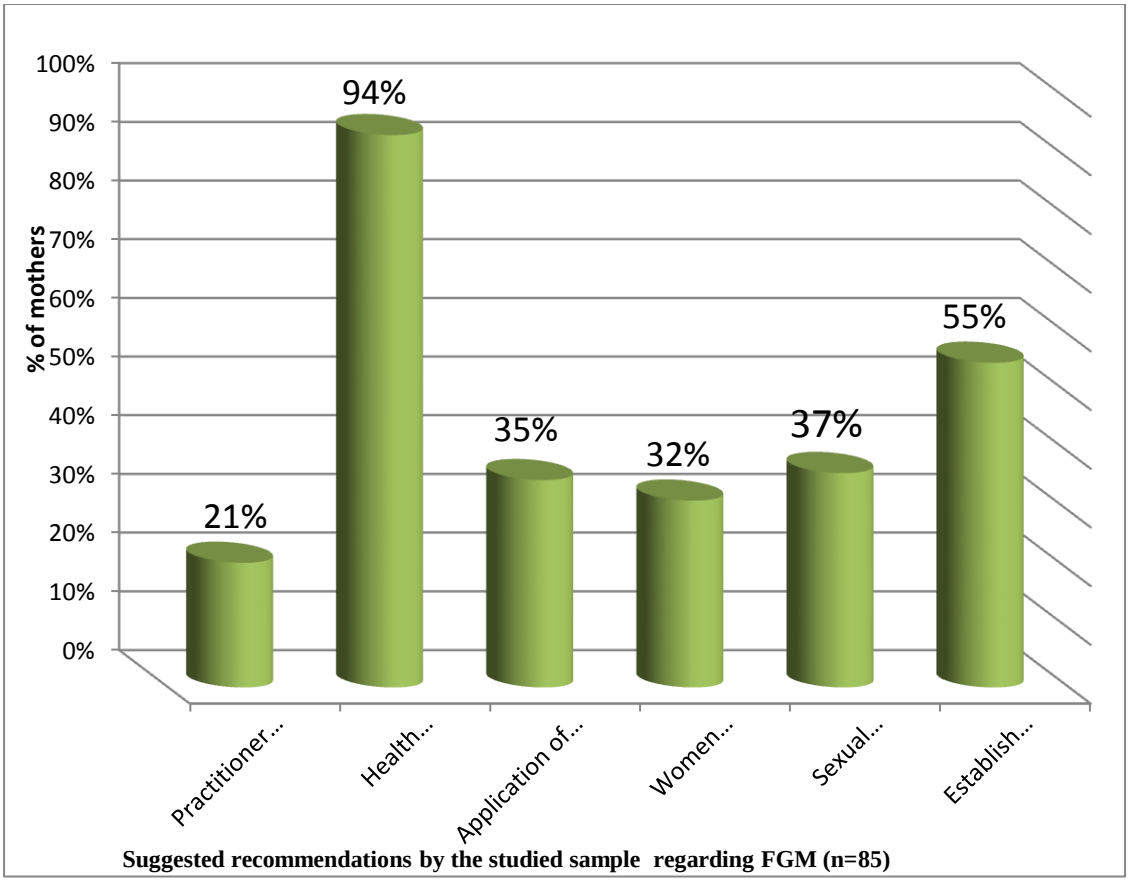

Figure (3): Suggested recommendations for prevention of female genital mutilation (FGM) by the studied sample (n=85).

DISCUSSION

The results of the present study indicated that the total knowledge of the studied sample about FGM/C was poor in pre-intervention. Immediately after the sessions of this program, there was a significant improvement in the total knowledge of the studied sample, as the most of them had a good knowledge (table 2). This means that the studied sample understood the knowledge provided to them through the educational program. In three months post intervention, less than two-thirds of the studied sample still have a good knowledge. Moreover, the present study showed a significant improvement in the total mean scores of FGM/C knowledge immediately and three months post intervention.

From the researcher point of view, the topic of FGM/C was very important for them, so they retain knowledge in their memory for a long time. This program gave the studied sample the chance to discuss this topic openly because Egyptians still have strong taboos about the free discussion of such topics.

The same findings were observed by **Gaheen M (2011)** who studied the effect of the educational program on the knowledge and performance of school nurses in secondary schools towards adolescent's reproductive health in Tanta city, and noticed that there was a significant increase in school nurses' knowledge regarding FGM/C immediately and three months post intervention. [13] The results of this study are also, supported by **Ibrahim W, and Ibrahim J (2007)**, in their study about the effect of an educational program on secondary school female student's knowledge and attitude towards FGC in Alexandria, stated that

there was a significant improvement in female knowledge regarding FGM/C after implementing the educational program. [14]

The present study revealed that after the educational sessions, the most of the studied sample showed a significant improvement in positive attitude against FGM/C (i.e discouraging FGM/C) immediate and three months post intervention. Simultaneously, there was a significant improvement in the mean scores of total attitude immediately and three months post intervention (table 3). These findings reflect the impact of the educational program on the studied sample attitude toward FGM/C. Where, the studied sample had the opportunity to share their own experiences, ideas, beliefs and cultural values as much as possible. Besides, using an interactive method of learning, helped to reduce anxiety and enhanced communication and education about FGM/C than passive learning alone which is needed to change attitudes toward such harmful practice. These results are consistent with **Ibrahim W and Ibrahim J (2007)** who found a significant improvement in female attitude toward FGM/C after implementing the educational program. [14]

Furthermore, this study showed a highly significant positive correlation between levels of total knowledge of the studied sample and their total attitude toward FGM/C immediate and three months post intervention (P= 0.0001, 0.004) respectively. Also, There was a significant relationship between levels of total knowledge and that of attitude, where 95.2% of the studied sample who had a good knowledge had also a positive attitude (P=0.007) immediate post intervention (table 4). From the researcher point of view, this is true since knowledge is the prerequisite to attitude. The studied sample with a good knowledge about the harmful effects of FGM/C are more likely to refuse it and in turn not engage/or participate in its practice. This implies that educating mothers about the harmful effects of FGM/C will help them to develop a positive attitude to stop its practice.

Analysis of the results of this study illustrated that there was an improvement in the mean scores of knowledge and attitude immediate post intervention than pre-intervention. Also, there was an improvement in the mean scores of knowledge and attitude three months post intervention than pre-intervention. However, there was a decline in the mean scores of knowledge and attitude three months than immediate post intervention (figure 2). These findings underscore the importance of the periodic and continuous educational programs to maintain knowledge and attitude toward FGM/C.

This study tried to identify the possible means of prevention, which was suggested or recommended by the studied sample. Accordingly, more than one-half of the studied sample who still supporting FGM/C recommended establishing centers for Islamic circumcision (Sunaa type) with highly trained doctors to prevent risks of the secret nature of this practice. Nevertheless, the majority of the studied sample suggested continuing health education through religious, nongovernmental organizations (NGO), community leaders, mass media, health personnel, and seminars; for teaching community at large to increase awareness and subsequently, enhancing behavioral change over time (figure 3). The same was reported by **Adeniran et al., (2015) who stated** that 43.1% of the participants suggested education as the top priority interventions to stop FGM/C. [15]

The current study findings emphasize the importance of public education, and information dissemination in the change of women's attitudes toward FGM/C through the mass media, religious leaders, and opinion leaders. Policies that would ensure the implementation of the

legislation against FGM/C should also be put in place by the government. In the most influenced countries/regions, women's organizations and advocates argue that such interventions may be more effective in changing women's attitudes against FGM/C practice than pure legislations against FGM/C. Earlier studies have also recommended that development and implementation of legislation against FGM/C solely, is not an effective way to reduce its prevalence. They suggest adequate educational and awareness raising campaigns are necessary to inform the general public about the risks of this ritual. [16, 17-19]

Conclusion and Recommendations

Based on the findings of the present study; it can be concluded that: The educational program was effective, and knowledge and attitude of the studied sample toward FGM/C were improved. A significant improvement was observed in the mean scores and levels of knowledge and attitude among the studied sample in the immediate post-program and three months post-program in comparison to that in pre-program. These agree with the research hypothesis of the present study which stated that; Mothers will exhibit more knowledge and positive attitude of FGM/C, if they exposed to an educational program about FGM/C. Continued efforts should be made on a regular basis, particularly for household decision makers; to increase their awareness regarding the health consequences of FGM/C practice, empowering the existing positive attitude, and discouraging negative attitude toward FGM/C, through integrating FGM/C into health, hygiene, literacy and other awareness programs.

Acknowledgment

This research article would not have been possible without the support of many people. The authors wish to express their gratitude to all people who share or help in this research.

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