

## Effect of Educational Program on Mothers' Knowledge and Attitude Regarding Female Circumcision at Giza Governorate, Egypt

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**Abstract:** There is widespread consensus among many individuals, countries and organizations that female genital circumcision is a human rights abuse. Mothers have an essential role to play in the elimination of violence against women and prevention of circumcision, as they play an essential role in decision making. The present research aimed to assess the effect of educational program on mothers' knowledge and attitude regarding female circumcision at Giza governorate villages, Egypt. A quasi experimental research design was utilized at August 2017 - January 2018 at four villages at Giza governorate. Convenience sample include the 100 mothers. Researcher used Pre designed questionnaire sheet contains three parts (characteristics of mothers, knowledge and attitude) Results revealed that mean age of studied mothers was  $39.27 \pm 4.76$  years. Also, 14% of them attended previous training program. There was high positive correlation between mothers' knowledge and their attitude ( $p < 0.01$ ). In addition, educational level and training program had high frequency positive effect on mothers' knowledge and attitude Conclusions: the current study concluded that more than three quarters of studied mothers had unsatisfactory knowledge at pre intervention, while majority of them had satisfactory knowledge at post intervention. Also, more than two thirds of studied mothers had negative attitude at pre intervention, while the majority of them had positive attitude at post intervention. Finally, educational training program improve mothers' knowledge and attitude regarding female circumcision.

**Key words:** Female Circumcision • Mothers • Knowledge • Attitude • Education program

### INTRODUCTION

Worldwide Female circumcision 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. 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 [1].

The practice of female genital circumcision has persisted due to cultural and traditional beliefs. Female genital mutilation is generally practiced as a matter of social convention and is interlinked with social acceptance, peer pressure, the fear of not having access to resources and opportunities as a young woman and to secure prospects of marriage [2]. The practice is often performed on girls between the ages of 0–9 years, thus making it one of the most horrific child tortures of our

time. It is a painful surgical procedure usually carried out without anesthesia, which often results in serious psychological and medical complications for the girls and women [3].

A significant body of literature has reported immediate, short and long-term health consequences, such as severe pain, hemorrhage, acute urinary retention, septicemia, anemia resulting from blood loss, recurrent urinary tract infections and vulvar ulcers. Women and girls living with female genital mutilation are more likely to experience psychological problems as a result of the procedure and have a psychiatric diagnosis than women without genital mutilation [4].

In Egypt, Female circumcision remains nearly universal: over 95 % of women between 15 and 49 years old are circumcised and this proportion remains fairly constant across all cohorts and own calculations [5]. WHO distinguishes four types of female circumcision. In Egypt types I (clitoridectomy) and II (clitoridectomy)?+?

(partial) removal of the labia minora) are the most frequent ones. Type III (infibulations) is fairly rare, as is type IV (other forms). The practice usually takes place before puberty. The median age at circumcision is 10 years of age and almost all girls are cut before their 13<sup>th</sup> birthday [6].

According to UNICEF there is a correlation between educational level and practicing female genital mutilation since the daughters of uneducated mothers are more likely to be cut related to cultural ideals of femininity and modesty [7]. Therefore, engendering knowledge about the causes and effects of female genital mutilation and planning effective policy interventions are strategies to eliminate genital mutilation [8].

Community health nurse and obstetric nurse should collaborate together regarding female genital mutilation. Community health nurse should apply three levels of preventions including; health promotion & health education to increase awareness of mothers regarding biopsychosocial hazards, the risk of female circumcision. In secondary level of prevention, community health nurse and obstetric nurse contribute for early detection, early diagnosis and proper treatment and prevent complication. Community health nurse should detect girls who have been circumcised and follow them if they develop any biopsychosocial hazards. Obstetric health nurse provides immediately nursing care to girls who has been exposed to circumcision. In tertiary level of prevention involves biopsychosocial rehabilitation for victims after health problem [9].

**Aim:** The current study aimed to assess the effect of educational program on mothers' knowledge and attitude regarding female circumcision at Giza governorate villages, Egypt.

#### **Research Hypothesis:**

H<sup>1</sup>: Educational program had positive effect on mothers' knowledge regarding female circumcision.

H<sup>2</sup>: Educational program had positive effect on mothers' attitude regarding female circumcision.

### **MATERIALS AND METHODS**

**Research Design:** A quasi experimental research design was utilized at August 2017 - January 2018

**Research Setting:** The study was carried out at Giza governorate, Egypt consists of 12 centers. The study was conducted in four (4) villages at 4 centers. The researcher divided Giza governorate into 4 directions; East, west,

south and north. The researchers selected one village from each direction randomly. The four selected villages were; Atfeeh village in east, El-Matania village in west, Abo-Galeb in north and Kafr- Amr in south. These villages are the bigger villages in the Giza Governorate.

**Sample:** Convenience sample include one hundred (100) mothers selected from four selected villages. Twenty-five (25) mothers were selected at convenience from each center. The mothers who have girls aged from 6-15 years old.

Setting and enthusiastic to participate at the study regardless their age, educational level and employment.

**Tools for Data Collection:** Pre designed questionnaire sheet was designed by the researchers after reviewing the related literature [10, 11]. It was written in Arabic language for gathering the data in relation to the following parts:

**Part I:** Characteristics of the mothers such as age, educational level, monthly income and employment

**Part II:** Mothers' knowledge related to female circumcision, which consisted of seven close end questions in form of multiple choice questions as types of female circumcision complications, the possibility of eradication of female circumcision and the best method that may encourage female circumcision's eradication... etc. and two open ended questions as Bio psychosocial problems related female circumcision ...etc. The right answer was scored as a single point and wrong answer was scored as a zero point. These scores were summed and converted into a percent score. It was classified into two categories; Satisfactory knowledge if score > 60% and unsatisfactory if score 60% or less.

**Part III:** Likert rating scale was used to assess the mothers' attitude related female circumcision. It was adapted by the researchers from Abathun *et al.* [12]. This scale was consisted of six items as circumcision decreases promiscuity, not circumcision considered stigma at my society and husband prefer wives subjected to circumcision...etc. The total score was 18 grades. Each item was assigned a score according to mothers' attitude; responses were agree, uncertain, disagree and were scored 3, 2 and 1, respectively. The scoring was reversed for negative items. These scores were summed and converted into a percent score. It was classified into two categories; Positive attitude if score >60% and Negative attitude if score 60% or less.

## Procedures

**Assessment Phase:** Before training, the researchers assessed the needs of the selected mothers. During the first session, the researcher clarified the aim of the study and components of the tools. The educational program was prepared and designed according to the mothers' level of knowledge and attitude about female circumcision.

**Intervention and Evaluation Phase:** The selected mothers were distributed into four groups. Each group educated for five sessions each session about 45 minutes in the form of seminar, asking open questions with researchers and studied mothers were provided with knowledge regarding female circumcision. Researchers used innovative learning methods as Power Point with attractive colors and illustration photo, colored Leaflets, videos, simulation, reflective thinking.

**1<sup>st</sup> Session:** The researchers introduced the selected mothers to each other. Researchers informed selected mothers about the aim of study, structure and training method of the sessions. The expectations of selected mothers about training session were well-known and asking mothers to complete the predesigned questionnaires.

**2<sup>nd</sup> Session:** Concept of female circumcision, classification and types of circumcision were clarified and debated. The selected mothers were qualified in ways of how take the decision related to female circumcision.

**3<sup>rd</sup> Session:** The selected mothers were informed about the possibility of eradication of female circumcision and biopsychosocial health problem may occur post female circumcision.

**4<sup>th</sup> Session:** The best method that may encourage female circumcision's prevention, female circumcision is hygienic for vagina and bio psychosocial problems related female circumcision was educated to the selected mothers.

**5<sup>th</sup> Session:** The researcher allows to the selected mothers to ask questions and give feedback about the educational program, also asked to complete the pre designed questionnaires. The sessions ended after researchers responded to the mothers' questions. At the end of the intervention, mothers completed questionnaires.

**Pilot Study:** The pilot study was conducted on 10 studied mothers who represent 10% of total sample at the previously mentioned settings in order to test the applicability of the constructed tools and the clarity of the included tools. Also, to assess the reliability and validity of developing tool before using at the study. The pilot also served to estimate the time needed for each subject to fill in the questionnaire.

**Validity and Reliability:** A group of five experts in the Community Health Nursing Departments ascertained the content's validity to assess the layout, format, accuracy, consistency and relevancy of the tools. Reliability pretesting was carried out through Cronbach's Alpha for total tool was 0.847.

Data collected from the studied sample was revised, coded and entered using Personal Computer (PC). Computerized data entry and statistical analysis were fulfilled using the Statistical Package for Social Sciences (SPSS) version 24. Data were presented using descriptive statistics in the form of number and percent. Pearson correlation coefficient was used to measure of linear correlation between two sets of data. A linear regression model is a linear approach to modeling the relationship between a scalar response and one or more explanatory variables.

**Ethical Consideration:** Consents was obtained from selected mothers after explanation of the purpose and nature of the study to gain cooperation and trust of mothers. The submission of the answer to the questionnaire was considered as consent to take part in the study. Confidentiality of the study sample' data was sustained throughout the study by making the mothers' data nameless.

## RESULTS

Table (1) reveals that the mean age of studied mothers was  $39.27 \pm 4.76$  years, 39% of them had preparatory education. According to the monthly income, 81% of studied mothers had not enough income. Regarding the employment, 37% of them were employee. Related to training program, 86% of studied mothers unattended training program about female circumcision.

Table (2) detects that 29, 19 and 14% of studied mothers had correct knowledge at pre intervention while 87, 79 and 80% of them had correct knowledge

Table 1: Percentage distribution of demographic data among the selected mothers (n=100)

Demographic data	No.	%
<b>Age</b>		
25 - <30	4	4.0
30 - <35	19	19.0
35 - <40	48	48.0
40 or more	29	29.0
Mean ± SD 39.27 ± 4.76		
<b>Educational level</b>		
Not read and write	9	9.0
Read and write	21	21.0
Preparatory education	39	39.0
Secondary education	21	21.0
Bachelor	10	10.0
<b>Monthly income</b>		
Enough	19	19.0
Not enough	81	81.0
<b>Employment</b>		
Employee	37	37.0
Unemployed	63	63.0
<b>Attended training program</b>		
Yes	14	14.0
No	86	86.0

Table 2: Percentage distribution of knowledge level of theselected mothers regarding female circumcision (n=100)

	Pre test		Post test		T. test P value
	No.	%	No.	%	
Knowledge Regarding Female Circumcision					
Definition	29	29.0	87	87, 0	11.968 <0.01**
Types	22	22.0	82	82, 0	12.477 <0.01**
Complications	19	19.0	79	79, 0	10.923 <0.01**
Types of complications	14	14.0	80	80, 0	13.008 <0.01**
Possibility of prevention	30	30.0	89	89, 0	15.601 <0.01**
Best method for prevention	35	35.0	93	93, 0	14.092 <0.01**
Hygienic care of vagina	28	28.0	91	91, 0	12.173 <0.01**
Effect onwomen health	24	24.0	86	86, 0	17.061 <0.01**
Bio-psychosocial problems	21	21.0	78	78, 0	15.602 <0.01**

Table 3: Percentage distribution of selected mothers regarding their attitude level about female circumcision (n=100)

Female circumcision Items	Pre test				Post test				t. test P value
	Positive attitude		Negative attitude		Positive attitude		Negative attitude		
	No.	%	No.	%	No.	%	No.	%	
Criminalization of female circumcision	33	33.0	67	67.0	89	89.0	11	11.0	16.421 <0.01**
Decreasing promiscuity	30	30.0	70	70.0	92	92.0	8	8.0	15.407 <0.01**
Stigma if female not circumcised	38	38.0	62	62.0	88	88.0	12	12.0	14.308 <0.01**
Husband prefer circumcised female	41	41.0	59	59.0	96	96.0	4	4.0	16.092 <0.01**
Good sexual practice of circumcised female	36	36.0	64	64.0	83	83.0	17	17.0	13.002 <0.01**
Support the continuity of process	29	29.0	71	71.0	85	85.0	15	15.0	17.886 <0.01**

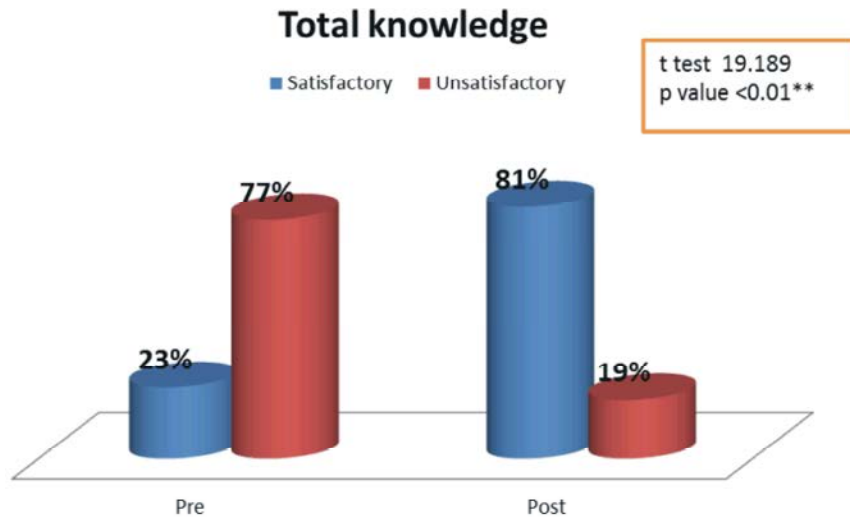


Fig 1: Percentage distribution of studied mothers regarding their total knowledge level about female circumcision (n=100)

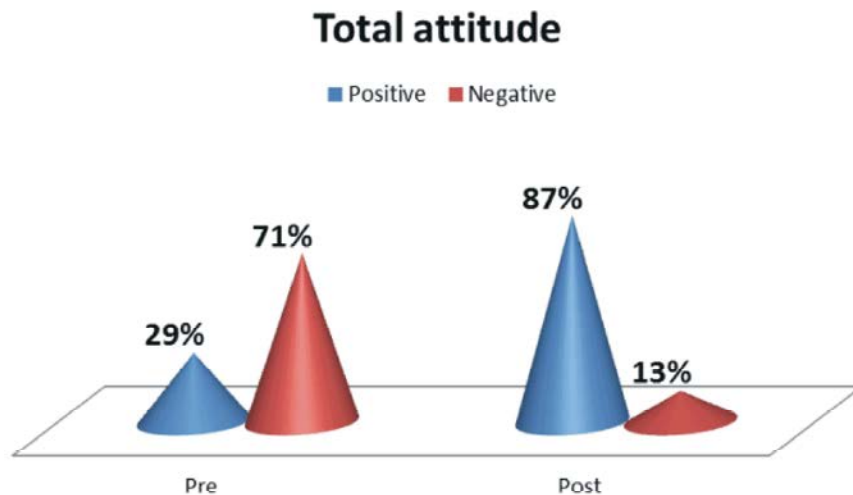


Fig. 2: Percentage distribution of studied mothers regarding their total attitude level about female circumcision (n=100)

Table 4: Correlation between total knowledge level and total attitude at post intervention

Total post	r	P value
Knowledge	0.745	<0.01**
Attitude		

Table 5: Multiple Linear regression model for knowledge post intervention

Item	Unstandardized Coefficients		Standardized Coefficients	
	B		Beta	t. test
Educational level	.297		.219	5.908
Training program	.302		.276	6.007
Age	.198		.132	2.011
Attitude level	.299		.216	7.106
ANOVA				
Model		R <sup>2</sup>	F	P. value
Regression		0.36	10.141	<0.01**

a. Dependent Variable: total knowledge

b. Predictors: Educational level, Training program, Age and Attitude level

Table 6: Multiple Linear regression model for attitude post intervention

Item	Unstandardized Coefficients		Standardized Coefficients	
	B		Beta	t. test
Educational level	.367		.312	8.147
Training program	.401		.352	9.011
Employment (Employee)	.305		.274	7.036
Knowledge level	.412		.389	8.101
ANOVA				
Model		R <sup>2</sup>	F	P. value
Regression		0.41	12.685	<0.01**

a. Dependent Variable: Total attitude

b. Predictors: Educational level, Training program, Employment (Employee) and knowledge level

about definition of female circumcision, complications and types of female circumcision complications post-intervention, respectively ( $p < 0.01$ ). Also, 21% of studied mothers had correct knowledge about bio psychosocial problems related female circumcision at pre intervention, while 78% of them at post intervention ( $p < 0.01$ ).

Table (3) notices that 67 and 62% of studied mothers had negative attitude at pre intervention while, 89 and 88% of them had positive attitude at post intervention about criminalization of female circumcision and stigma of female circumcision if not done ( $p < 0.01$ ). Also, 64 % of studied mothers had negative attitude pre intervention, while 83% of them had positive attitude post intervention about female circumcision as a good practice ( $p < 0.01$ ).

Figure (1) shows that 77% of studied mothers had unsatisfactory knowledge at pre intervention, while 81% of them had satisfactory knowledge at post intervention ( $p < 0.01$ ).

Figure (2) displays that 71% of studied mothers had negative attitude at pre intervention, while 87% of them had positive attitude at post intervention ( $p < 0.01$ ).

Table (4) reveals that there was high positive significant correlation between mothers 'knowledge and their attitude post intervention ( $p < 0.01$ ).

Table (5) detects high significant model through F test value as 10.141 ( $p < 0.01$ ). This model explain 36% of the variation in innovation scale detected through R2 value 0.36. Also, explained that, educational level, training program and attitude level had high frequency positive effect on mothers' knowledge ( $p < 0.01$ ). While, age had slight positive effect on mothers' knowledge ( $p < 0.05$ ).

Table (6) states that high significant model detected through F test value as 12.685 ( $p < 0.01$ ). This model explained that 41% of the variation in innovation scale detected through R2 value 0.41. Also, It explained that, educational level, training program, employment (Employee) and knowledge level had high frequency positive effect on mothers' attitude ( $p < 0.01$ ).

## DISCUSSION

Female circumcision remains an endless female's health problem in many communities and cultural groups, transcends religion, despite the concerted efforts and laws forbidding the practice. It is among the traditional practices which are not only prejudicial and harmful to the life of a child but also discriminatory against to the girl child [13]. This study aimed to assess the effect of

educational program on mothers' knowledge and attitude regarding female circumcision at Giza Governorate villages.

After analyzing the collected data and according to mothers' knowledge about female circumcision, the current study determined that more than three quarters of studied mothers had unsatisfactory knowledge at pre intervention, while majority of them had satisfactory knowledge at post intervention. These results attributed to effective educational program used illustrative teaching methods and preparing training material dependent on mothers' knowledge level at pre intervention. The current results in cohort with the study by Waggiallah and Almosaad [14] who studied Knowledge, attitude and practice among mothers towards female circumcision in Ombada province Khartoum state on 368 mothers and founded that all mothers aware about female circumcision and its consequences without any intervention. Also, the current research supported by Khalil and Orabi [15] who investigate the effectiveness of an educational program at changing the knowledge, attitudes and practices of 30 school teachers towards FGM at Egypt. As well as, Marcusán *et al.* [16] who studied female genital mutilation/cutting, changes and trends in knowledge, attitudes and practices among health care professionals in Gambia during 2016 on 1288 subjects and found that educational program has effective change on knowledge, attitudes and future practices of female teachers towards female circumcision. Also, the current study consistent with Moges *et al.* [17] in Ethiopia who studied knowledge, attitude and practice of women in relation to female genital mutilation on 255 subjects and reported that majority of women have poor knowledge of the health effects of female genital mutilation and need educational training to improve their knowledge level.

From the researchers point of view, the agreement between the result of current study and the other studies refer that that the female circumcision is considered as an international problem related to family culture regardless the residence of them and females need more awareness regarding female genital mutilation as well as more community mobilization for increase knowledge about female genital mutilation.

According to mothers 'attitude level about female circumcision, the present study detected that more than two thirds of studied mothers had negative attitude at pre intervention, while the majority of them had positive attitude after post intervention. The researchers allowed mothers to ask questions and provided feedback during sessions. Also, researchers used medical terms easy to understand and used new educational method.

The current results agree with the study by Pashaei *et al.* [18] on 300 daughters at risk of female genital mutilation. The study reported that the education training had positive effect on daughters' attitude toward female genital mutilation.

In addition, the current research was similar with Holmes *et al.* [19] who studied female genital mutilation in England during 2017 and found that more than three quarters of studied subjects had positive attitude related female genital mutilation post intervention. Also, the current study cohort with Asekun-Olarinmoye and Amusan [20] who studied the impact of health education on attitudes towards female genital mutilation (FGM) in a rural Nigerian community on 400 mothers who had a positive impact on the attitude of respondents towards female mutilation after education program.

Regarding factors affecting mothers' knowledge, the current study presented that educational level and attitude level had high frequency positive effect on mothers' knowledge. While, age had slight positive effect on mothers' knowledge. These current results supported with the study performed by Cappon *et al.* [21] who studied knowledge, attitude and practices regarding female genital mutilation at Belgium on 820 subjects and reported that females 'qualifications had positive effect on their knowledge about female circumcision.

As well as, the current study cohort with the study which done by Belda *et al.* [22] about knowledge, attitude and practice of mothers towards female genital mutilation in Ethiopia on 384 women and the study detected that maternal age was another variable which has very significant association with knowledge of mothers.

From the researcher point of view, it is a logic result that the level of education of females affect positively on their attitude regarding female genital mutilation as a type of violence against girls.

Related to factors affecting mothers' attitude, the present study explained that, educational level, training program, employment and knowledge level had high frequency positive effect on mothers' attitude. The results congruent with the study which done by Van Rossem *et al.* [23] who studied women's position and attitudes towards female circumcision in Egypt and stated that improvement of women's social position and better education level improve their attitude level regarding female circumcision. Also, the current study cohort with the study conducted by Ndikom *et al.* [24] who studied perception and practice of female genital cutting among mothers in Nigeria on 106 subjects and the study stated that female knowledge level had high correlation with their attitude about female mutilation.

## CONCLUSION

The study concluded that more than three quarters of studied mothers had unsatisfactory knowledge at pre-intervention, while majority of them had satisfactory knowledge at post intervention. Also, the study detected that more than two thirds of selected mothers had negative attitude at pre-intervention, while the majority of them had positive attitude at post intervention. Finally, educational training program improve mothers' knowledge and attitude related female circumcision.

### Recommendation:

- Continuous educational programs for mothers about female genital circumcision in Family health centers.
- Further researches can be conducted with increasing sample size and included different setting.
- Further comparative researches about comparing between mothers' awareness in relation to their residence

**Conflict of Interest:** Not present

**Funding:** Self-funding, without any external source.

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