

Awareness of Clients Attending Maternal and Child Health Center Regarding Premarital Counseling

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Abstract

Background: Awareness of clients regarding premarital counseling is a global activity aiming to diagnose, treat unrecognized disorders, and reduce transmission of diseases between couples which may affect the quality of marriage and the health of their generation. **Aim:** To assess awareness of clients attending maternal and child health center regarding premarital counseling. **Design:** A descriptive research design was used. **Setting:** This study conducted at El-Shohada maternal and child health center, El-Menoufyia Governorate. **Sample:** Convenient sample include 138 clients. **Tool:** A structured interviewing questionnaire sheet includes five parts: Demographic characteristics, medical history, client's knowledge, attitude and satisfaction regarding premarital counseling. **Results:** Illustrated that, 62 % of the studied clients had unsatisfactory level of total knowledge regarding premarital counseling, 52 % of the studied clients had negative attitude regarding premarital counseling, and 56 % of the studied clients were unsatisfied by premarital counseling. **Conclusion:** It can be concluded that more than three-fifths of the studied clients had an unsatisfactory level of total knowledge about premarital counseling, with more than half of them having a negative attitude and being un-satisfied regarding premarital counseling. Also, there was a highly statistically significant positive correlation between total knowledge, attitude, and satisfaction regarding premarital counseling among the studied clients. **Recommendations:** Design applicable comprehensive health education programs for clients attending maternal and child health care centers regarding premarital counseling in various settings.

Keywords: Awareness of clients, maternal and child health, and premarital counseling.

INTRODUCTION

Premarital counseling (PMC) is a primarily preventive approach for couples before marriage to optimize women's wellness and subsequent pregnancy outcomes. It is one of the most important strategies for the prevention of genetic disorders and congenital

anomalies. Hence, it will save the society and allow clients to enjoy their life. PMC is known to be the major defensive and preventive approach for the couples who are planning for marriage [3].

Benefits of premarital counseling include lowering chances of divorce and also to

increase client's satisfaction after marriage. Typically, clients who participate in premarital counseling demonstrate overall positive psychological health and to have serious relationship problems [18]. Premarital counseling comprises a consultation through which history, medical examination as well as laboratory investigations are done to clients preparing for getting married, so as to detect any hereditary and transmissible diseases. Counseling before marriage can be a valuable and a very indispensable component of preventive health [12].

Premarital counseling service includes interpersonal communication, decreases conflict by addressing expectations within marriage "premarital education", and medical and genetic counseling which explains the basic reproductive health, and family planning issues for teaching clients about male and female reproductive facts, menstruation, ovulation, fertilization, family planning methods, and the common preventable problems for clients also their offspring through a comprehensive group of tests especially for couples in a consanguineous marriage in order to help client take the necessary precautions or treatment (e.g. Rh incompatibility and Down's syndrome) [18].

Premarital counseling is now considered a necessity and obligatory for all clients getting to be married. Its importance comes from its role in early detection and recognition of diseases either genetic or infectious transmitted diseases. It helps in decreasing the incidence of these diseases through their transmission to sexual partners or offspring. This relieves a major load on organizations and healthcare systems. Also, PMC is the appropriate procedure, as it is commonly acceptable from the ethical and religious point of view in addition to its minimal economic, and health requisites [13].

Also, premarital counseling is a very important tool for premarital screening of

unmarried clients can be provided with adequate and valid information on genetic inheritance of the disease and assessed their health-related reproductive risk. It helps people concerned to make important and major life decisions that will benefit family members either now or in the future [16].

Premarital counseling is considered a vital step toward allowing clients to enjoy life and protecting the society, hence minimizing the burden on clients, families, and community and increasing knowledge of the community about hereditary diseases. Despite the success of this center in control of many health problems, attendants' number is still few. It seems that many young couples remain skeptical about the usefulness of PMC and less likely to convince. On the other hand, a medical certificate has often been provided without the medical checkup being carried out [18]

The aim of premarital counseling is a global activity aiming to provide clients with information on ways to improve their relationship and reduce the transmission of diseases to children. At present blood genetic disorders and congenital anomalies affect an estimated number 1 in 33 neonates and result in about 3.2 million birth defects related disabilities every year. The percent up to 7.65 million, nearly 9% of the population, who are suffering from thalassemia, sickle cell disease, was 0.2% [22].

Nowadays client awareness about premarital counseling is of great importance in Egypt because of the high prevalence of divorces. The Central Agency for Public Mobilization and Statistics (CAPMAS) stated in its annual report on marriages and divorces that health education and the media can work together to increase client awareness regarding premarital counseling who are seeking marriage. Also, promotion and protection from reproductive health hazards [21].

Community health nurse has an integral role in providing genetic services, utilizing a variety of communication and data-gathering techniques to collect the information that includes assessing genetic risk, discussing available testing options, and providing appropriate supportive counseling [11]. Also, the community health nurse is very complex as it includes their role as advocator, educator, communicator, consultant, coordinator of care, leader or member of the profession, care giver, empowering agent, researcher user and health promoter, and also a role model as a counselor [17].

Significance of the study

The issue of premarital counseling is of immense significance to prevent congenital malformation in Arab Nations because of the high occurrence of consanguineous marriages. Studies reported that consanguinity rates among the Egyptians throughout the last 40 years ranges between 29% and 39%. Hearing impairment, mental retardation, autosomal recessive osteoporosis and blood disorders such as thalassemia are among diseases that may result from a relative's marriage and can be identified and prevented through premarital counseling [14].

In Egypt, the incidence of consanguineous marriage in the general population was found to be 27.4%. The highest incidence was in the rural areas. First cousin marriages occurred more often than the other types of consanguinity. Therefore, hereditary disorders and congenital malformation is estimated that 2.8% of them live in urban areas and 8.4% of them live in rural, this is almost attributable to consanguineous marriage [11]. Egyptian Ministry of Health introduces premarital screening for genetic carrier services as a main component of marital and child health services since 1946 at Nasser Institute and started to provide such services free of charge for prospective spouses in either MCH centers or specialized health centers. Nowadays, PMC

became compulsory by law in many Arab countries including Egypt [18]. So we need a study to assess awareness of clients regarding premarital counseling in maternal and child health center.

Aim of the study:

The aim of this study is to assess awareness of clients attending maternal and child health center regarding premarital counselling through the following objectives;

1. Assessing client's knowledge regarding premarital counselling.
2. Identifying client's attitude regarding premarital counselling.
3. Apprising client's level of satisfaction regarding premarital counselling.

Research questions:

To fulfill the aim of the present study the following questions were formulated:

1. What is client's knowledge regarding premarital counseling?
2. What is client's attitude regarding premarital counseling?
3. What is the level of client's satisfaction regarding premarital counseling?
4. Is there relation between client knowledge, attitude and their satisfaction?
5. Is there relation between client's knowledge, attitude and their demographic characteristics?

Subject and methods:

Research design:

A descriptive research design was used in this study.

Setting:

The study was conducted at El-Shohada maternal and child health center, El-Menoufyia Governorate.

Sample:

Convenient sample included 138 clients that they are attending the above mentioned maternal and child health center.

Tool for data collection:

The data were collected through using the following tool:

A structured interviewing questionnaire: used in the study, it developed by the investigator after reviewing the national and international related literature to collect the required data. It wrote in simple Arabic language and refilled by the investigator. It divided into five parts.

Part (1): Client's socio-demographic characteristics: it included age, sex, marital status, educational level, occupation, place of residence, relationship between couples, monthly income...etc.

Part (2): Client medical history: It involved past history such as hereditary diseases & chronic illness and present history such as premarital investigations and any infectious diseases.

Part (3): Client's knowledge assessment: It was adapted from (Nasr Eldeen. 2021). to assess clients level of knowledge regarding premarital counselling as; meaning of premarital counseling, premarital counselling program in Egypt, objectives of premarital counselling, kinship marriage, medical health problems result from kinship marriage, who provide premarital counseling...etc. It included 11 questions.

Scoring system for knowledge:

The correct answer was scored as a one grade and the incorrect answer or don't know was

scored zero grade, the total scores of the questionnaire were 11 grades. These scores were summed and were converted into a percent score. It was classified into 2 categories:

□ Satisfactory level if score $\geq 60\%$ (≥ 6.6 grades).

□ Unsatisfactory level if score $<60\%$ (< 6.6 grades).

Part (4): Client's attitude regarding premarital counseling. It Designed and used to assess the attitude of the clients regarding premarital counseling such as; premarital screening and counseling will be very popular in the future, undergoing premarital examination as well as counseling without objection, premarital services are useful for couples, religious leaders should involve premarital counseling as an essential topic in their discussions, premarital counseling must be obligatory, high cost is the main barrier of premarital counseling...etc. It included 19 questions.

Scoring system for attitude:

The total score of client's attitude were 57 grades, each item was evaluated as "Agree" was taken 3 grades, "Neutral" was taken 2 grades and "Disagree" was taken 1 grade. These scores were summed up and were converted into a percentage score. It was classified into 2 categories:

□ Positive attitude if score $\geq 60\%$ (≥ 34.2 grades).

□ Negative attitude if score $<60\%$ (< 34.2 grades).

Part (5): Client's satisfaction regarding premarital counseling; as premarital service provider careful by spouse interest, spouse gets advice and treatment necessary in a way that can understand, privacy fully achieved during the examination or counseling, place of premarital service safe and clean...etc. It included 9 questions.

Scoring system for satisfaction:

The total score of client's satisfaction were 27 grades, each item was evaluated as "Satisfied" was taken 3 grades, "Neutral" was taken 2 grades and "Un satisfied" was taken 1 grade. These scores were summed up and were converted into a percentage score. It was classified into 2 categories:

□ Satisfied if score $\geq 60\%$ (≥ 16.2 grade).

□ Un-satisfied if score $<60\%$ (<16.2 grade).

Content validity: The revision of the tools for clarity, relevance, comprehensiveness, understanding and applicability was done by a panel of five experts in Community Health Nursing and Maternal and Newborn Health Nursing and no modifications done but the expertise recommended rephrasing for some questions and items of the tool.

Tools reliability: Reliability of the tool was tested to determine the extent to which the questionnaire items are related to each other. Testing the reliability of the tools through Alpha Cronbach reliability analysis indicated that:

Tools	Alpha Cronbach
Client's knowledge.	0.837
Client's attitude.	0.825
Satisfaction level of clients.	0.910

II. Operational Item:

The operational item includes preparatory phase, pilot study and field work.

A. Preparatory phase:

It included reviewing of past, current, national and international related literature and theoretical knowledge of various aspects of the study using books, articles, internet,

periodicals and magazines to develop tools for data collection.

B. Pilot study:

The pilot study was carried out on 10% (14) clients of the sample under study to test the applicability, clarity and efficiency of the tool, as well as, to determine the time allowed to fulfill the developed tool. Subjects included in the pilot study was included in the main study sample because there were no modifications.

C. Field work:

1. Data collection was carried out once permission was granted to proceed with the study. After establishing a trustful relationship, the investigator started data collection by introducing herself to the clients and explained the aim of the study and its importance.

2. Informed consent has been obtained from each client prior to data collection. Data pertinent to the study variables were collected through a structured interviewing questionnaire and the tool filled by the investigator.

3. Interviewing the clients was carried out in the waiting area of MCH. Data collection was done within period of 3 months (from the beginning of July to the end of September) in academic year 2021-2022 in El-Shohada maternal and child health center using the developed tool. It took about 20-30 minutes to be fully filled.

4. Data collected done in the morning shift 3 days per week (Sunday, Monday and Tuesday) till the needed sample completed.

III. Administrative Item:

After explanation of the study aim and objectives, an official permission was obtained from the Dean of Faculty of Nursing, Helwan University and the directors of El-Shohada Maternal and Child Health center asking for

cooperation and permission to conduct the study.

Ethical considerations:

An official permission to conduct the proposed study obtained from the Scientific Research Ethics Committee, Faculty of Nursing, Helwan University. Participation in the study was voluntary and subjects gave complete full information about the study and their role before signing the informed consent. The ethical considerations included explaining the purpose and nature of the study, stating the possibility to withdraw at any time, confidentiality of the information where it not be accessed by any other party without taking permission of the participants. Ethics, values, culture and beliefs respected.

IV. Statistical Item:

Upon completion of data collection, data will be computed and analyzed using the computer software of Microsoft Excel Program and Statistical Package for Social Science (SPSS) version 25. Data were presented using descriptive statistics in the form of frequencies and percentage for categorical data, the arithmetic mean (X) and standard deviation

(SD) for quantitative data. Qualitative variables were compared using chi square test (X²). In addition, R- test were used to identify the correlation between the study variables.

Degrees of significance of results were considered as follows:

□ P-value > 0.05 was considered not significant (NS), P-value < 0.05 was statistically significant (S), P-value < 0.001 was highly statistically significant (HS).

Results

Table (1) shows that, 63.8% of the studied clients their age ranged between 20-< 30 years, the Mean \pm SD of age was 27.51 ± 6.13 years. As regard to sex and marital status, 68.8% and 84.1% of them were male and single, respectively. Also, 42.0% of them had secondary education. 28.3% of them had free work. Furthermore, 59.4% of them live in rural areas. 77.5% of the studied clients not had relationship between couple. In addition, 51.4% of the clients had one individual earning income. 55.8% and 52.9% of them had < 3 rooms and 3-5 family members, respectively. Also, 50.7% of them their crowding index ≥ 2 .

Table (1): Frequency Distribution of the Studied Clients According to their Socio-demographic Characteristics (n=138).

Socio-demographic Characteristics	No.	%
Age (year)		
<20	10	7.2
20-<30	88	63.8
30-<40	38	27.5
≥ 40	2	1.5
Mean ± SD	27.51 ± 6.13	
Sex		
Male	95	68.8
Female	43	31.2

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Marital status		
Single	116	84.1
Divorced	20	14.5
Widowed	2	1.4
Educational level		
No read or write	5	3.6
Basic education	29	21.1
Secondary education	58	42.0
University & above	46	33.3
Occupation		
Does not work	34	24.6
Free work	39	28.3
Professional work	21	15.2
Government employee	38	27.6
*Other	6	4.3
Place of residence		
Rural	82	59.4
Urban	56	40.6
Relationship between couples		
Relative	31	22.5
Not relative	107	77.5
Number of individuals earning income		
One	71	51.4
Two	52	37.7
Three or more	15	10.9
Number of rooms		
< 3	77	55.8
3-5	61	44.2
Number of family members		
3 – 5	73	52.9

6 – 8	65	47.1
Crowding index		
<1	5	3.6
1-<2	63	45.7
≥ 2	70	50.7

* Other mean retired

Figure (1) shows that, 56.5% of the studied clients had their source of information about premarital counseling from family and friends.

Also, 29.7% of them their source of information are from internet.

Figure (1): Percentage Distribution of the Studied Clients according to their Source of Information about Premarital Counseling (n=138).

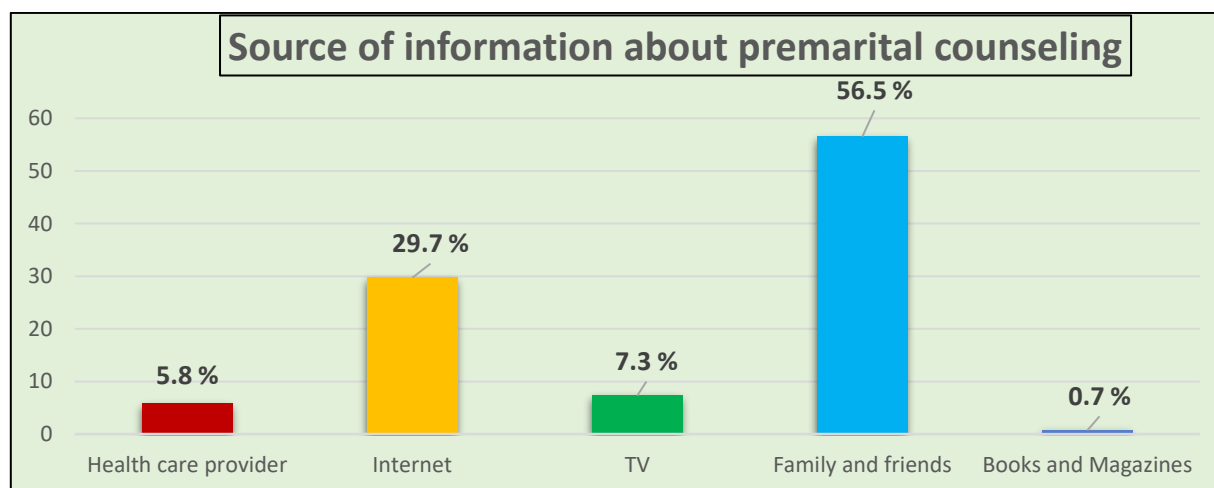


Figure (2) shows that, 62 % of the studied clients had unsatisfactory level of total knowledge about premarital counseling.

While, 38 % of them had satisfactory level of total knowledge about premarital counseling.

Figure (2): Percentage Distribution of the Studied Clients according to their Total Level of Knowledge regarding Premarital Counseling (n=138).

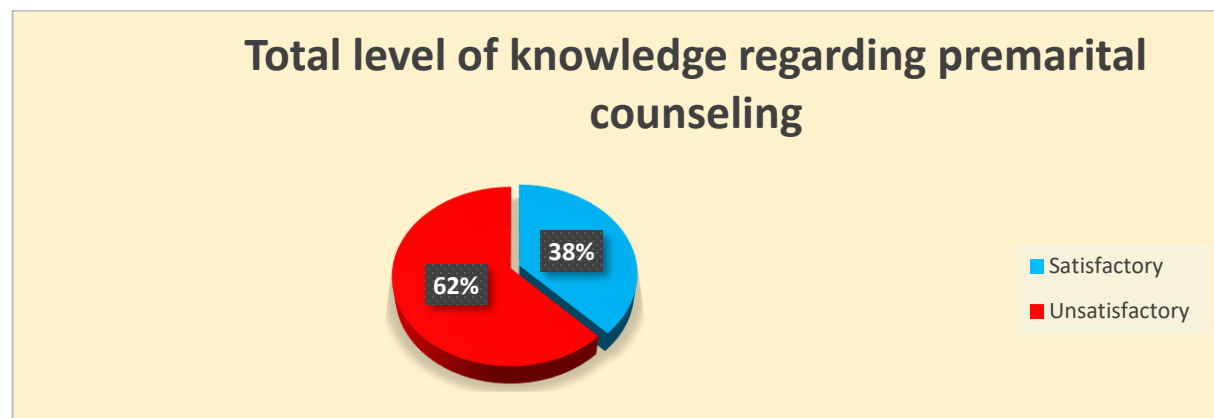


Figure (3): Percentage Distribution of the Studied Clients according to their Total Attitude regarding Premarital Counseling (n=138).

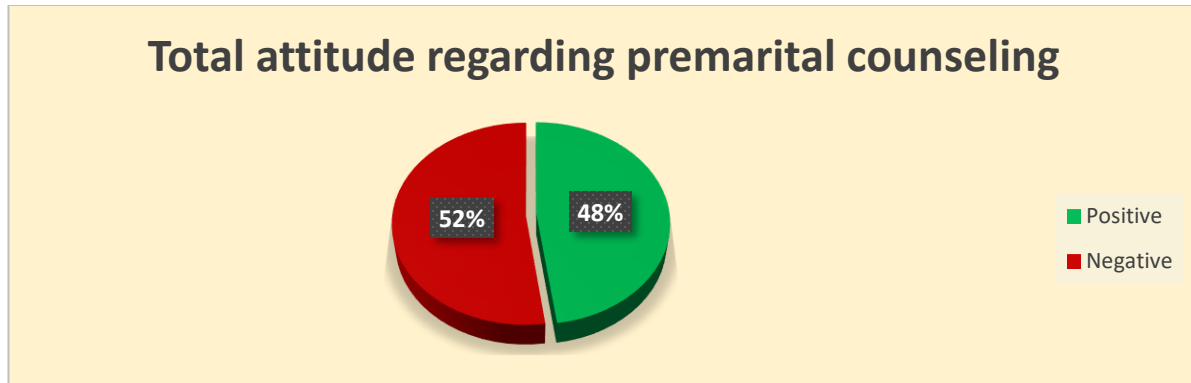


Figure (3) demonstrates that, 52 % of the studied clients had negative attitude regarding premarital counseling. While, 48 % of them had positive attitude.

Figure (4): Percentage Distribution of the Studied Clients according to their Total Satisfaction regarding Premarital Counseling (n=138).



Figure (4) shows that, 56 % of the studied clients were un-satisfied by premarital counseling. While, 44 % of them were satisfied.

Table (2) reveals that, there were highly statistically significant relation between clients' total knowledge regarding premarital counseling and their socio-demographic characteristics as, age, educational level and

monthly income at ($P = < 0.001$). Also, there were statistically significant relation with their marital status and relationship between couples at ($P = < 0.05$). While, there were no statistically significant relation with their sex, occupation, place of residence, number of individuals earning income, number of rooms, number of family members and crowding index at ($P = > 0.05$).

Table (2): Relationship between Socio-demographic Characteristics of the Studied Clients and their Total Knowledge regarding Premarital Counseling (n=138).

Socio-demographic Characteristics		Total knowledge regarding premarital counseling				X2	P- Value
		Satisfactory (n=52)		Unsatisfactory (n=86)			
		No.	%	No.	%		
Age (year)	<20	2	3.9	8	9.3	16.67	0.000**
	20-<30	13	25.0	75	87.2		
	30-<40	35	67.3	3	3.5		
	≥ 40	2	3.9	0	0.0		
Sex	Male	30	57.7	65	75.6	2.240	0.307
	Female	22	42.3	21	24.4		
Marital status	Single	35	67.3	81	94.2	11.06	0.021*
	Divorced	15	28.8	5	8.8		
	Widowed	2	3.9	0	0.0		
Educational level	No read or write	0	0.0	5	8.8	26.40	0.000**
	Basic education	0	0.0	29	33.7		
	Secondary education	12	23.1	46	53.5		
	University & above	40	76.9	6	7.0		
Occupation	Does not work	4	7.7	30	34.9	4.308	0.225
	Free work	10	19.2	29	33.7		
	Professional work	11	21.2	10	11.6		
	Government employee	25	48.1	13	15.1		
	Other	2	3.8	4	4.7		
Monthly income	Enough	36	69.2	40	46.5	15.97	0.000**
	Not enough	0	0.0	46	53.5		
	Enough and save	16	30.8	0	0.0		
Place of residence	Rural	34	65.4	48	55.8	3.011	0.173
	Urban	18	34.6	38	44.2		
Relationship between couples	Relative	5	9.6	26	30.2	10.66	0.017*
	Not relative	47	90.4	60	69.8		
Number of individuals earning income	One	21	40.4	50	58.1	4.088	0.168
	Two	20	38.5	32	37.2		
	Three or more	11	21.1	4	4.7		
Number of rooms	< 3	32	61.5	45	52.3	2.095	0.360
	3-5	20	38.5	41	47.7		
Number of family members	3 – 5	36	69.2	37	43.0	4.128	0.190
	6 - 8	16	30.8	49	57.0		
Crowding index	<1	4	7.7	1	1.2	6.331	0.097
	1-<2	33	63.5	30	34.9		
	≥ 2	15	28.8	55	63.9		

No statistically significant at $p > 0.05$. * Statistically significant at $p < 0.05$. **Highly statistically significant at $p < 0.001$.

Table (3) reveals that, there were highly statistically significant relation between clients' attitude regarding premarital counseling and their socio-demographic characteristics as, age, marital status,

educational level and monthly income at ($P = < 0.001$). Also, there were statistically significant relation with their relationship between couples at ($P = < 0.05$). While, there were no statistically significant relation with

their sex, occupation, place of residence, number of rooms, number of family members number of individuals earning income, and crowding index at ($P = > 0.05$).

Table (3): Relationship between Socio-demographic Characteristics of the Studied Clients and their Total Attitude regarding Premarital Counseling (n=138).

Socio-demographic characteristics		Total attitude regarding premarital counseling				X2	P-Value
		Positive (n=66)		Negative (n=72)			
		No.	%	No.	%		
Age (year)	<20	4	6.1	6	8.3	15.37	0.000**
	20-<30	25	37.9	63	87.5		
	30-<40	35	53.0	3	4.2		
	≥ 40	2	3.0	0	0.0		
Sex	Male	38	57.6	57	79.2	2.097	0.326
	Female	28	42.4	15	20.8		
Marital status	Single	46	69.7	70	97.2	15.68	0.000**
	Divorced	18	27.3	2	2.8		
	Widowed	2	3.0	0	0.0		
Educational level	No read or write	0	0.0	5	6.9	31.40	0.000**
	Basic education	0	0.0	29	40.3		
	Secondary education	20	30.3	38	52.8		
	University & above	46	69.7	0	0.0		
Occupation	Does not work	7	10.6	27	37.5	3.500	0.251
	Free work	13	19.7	26	36.1		
	Professional work	13	19.7	8	11.1		
	Government employee	30	45.5	8	11.1		
	Other	3	4.5	3	4.2		
Monthly income	Enough	46	69.7	30	41.7	15.01	0.000**
	Not enough	4	6.1	42	58.3		
	Enough and save	16	24.2	0	0.0		
Place of residence	Rural	36	54.5	46	63.9	5.914	0.140
	Urban	30	45.5	26	36.1		
Relationship between couples	Relative	6	9.1	25	34.7	11.52	0.015*
	Not relative	60	90.9	47	65.3		
Number of individuals earning income	One	28	42.4	43	59.7	3.714	0.201
	Two	25	37.9	27	37.5		
	Three or more	13	19.7	2	2.8		
Number of rooms	< 3	40	60.6	37	51.4	2.227	0.320
	3-5	26	39.4	35	48.6		
Number of family members	3 – 5	43	65.2	30	41.7	3.500	0.215
	6 – 8	23	34.8	42	58.3		
Crowding index	<1	4	6.1	1	1.4	5.855	0.101
	1-<2	43	65.1	20	27.8		
	≥ 2	19	28.8	51	70.8		

No statistically significant at $p > 0.05$. * Statistically significant at $p < 0.05$. **Highly statistically significant at $p < 0.001$.

Table (4) indicates that, there were highly statistically significant positive correlation between total knowledge, total attitude and total satisfaction regarding premarital

counseling among the studied clients at ($P = < 0.001$).

Table (4): Correlation between Total Knowledge, Total Attitude and Total Satisfaction regarding Premarital Counseling among the Studied Clients (n=138).

Items	Total knowledge	Total attitude
Total knowledge		$r = 0.555$ $P = 0.000^{**}$
Total satisfaction	$r = 0.571$ $P = 0.000^{**}$	$r = 0.547$ $P = 0.000^{**}$

r = correlation coefficient test. P = p-value

** Highly statistically significant at $p < 0.001$.

Discussion

Premarital counselling helps couples prepare for marriage. It provides a good avenue for learning more about each other which includes developing better communication among couples. Premarital counselling helps to ensure that couples have a strong, healthy relationship, and are given a better chance for a stable and satisfying marriage. It can also help couples identify weaknesses that could become bigger problems during marriage. Premarital counselling is meant to equip couples with problem-solving skills to manage problems that may occur in the future through becoming aware of each other's characteristics (8). Therefore, this study was aimed to assess awareness of clients attending maternal and child health center regarding premarital counselling.

Part I: Socio-demographic characteristics of the studied clients.

The results of the current study revealed that more than half of the clients their age ranged between 20-< 30 years with mean age 27.51 ± 6.13 years (table 1). These findings were in agreement with Al-Qahtani et al.(5) in kingdom of Saudi Arabia, about "Perception of premarital counseling among King Khalid University students", (n= 541) who reported

that 64.2% of the clients involved in the study their ages ranged from 18 years to 27 years old.

The results of the current study illustrated that more than two thirds of the clients were male, and the majority of them were single (table 1). These findings were in agreement with Osei-Tutu et al.(19) in Ghana, his study titled "Premarital counseling practices among Christian and Muslim lay counselors in Ghana", (n= 85) who reported that 67% of the participants were male, and 51.2% of them were single.

As regards to level of education, the present study reported that more than two fifth of clients had secondary education (table 1). This result was similar to study done by Ismail et al.(12) in El-Beheira Governorate, titled "Pregnant women's satisfaction with the quality of antenatal care at maternal and child health centers" (n= 350), who reported that more than 36% of them had secondary education. Also, Mohamed, (16), in El-Menoufia, Egypt, about "Intervention program of pre-Marital counseling on nurses working in primary health care services", (n=200) who reported that 60% of nurses had nursing diploma.

As regards to the occupation, the current study revealed that nearly one third of the studied clients have free work (table 1). This result was similar to the result of Alkalash et al. (4), in El-Menoufia, Egypt, about "Awareness, attitude, and satisfaction of Egyptian adults by premarital care services", (n= 202), who reported that 26.2% of the participants were working in business.

The results of the current study represented that more than half of the studied clients live in rural areas. This result is consistent with Nasr Eldeen, (18) in Menoufia Governorate, Egypt, about "Knowledge, attitude and satisfaction about premarital care among attendants of family health facilities", Quweisna District, Menoufia Governorate,

Egypt (n=202), who reported that about 85% of the studied group were from urban areas. From the investigator point of view, this may be due to increasing consanguineous marriage in rural areas than urban areas.

The results of the current study represented that more than three quarters of clients didn't had relationship between couples (table 1). This result supported by Al-Qahtani et al.(5) in kingdom of Saudi Arabia, about "Perception of premarital counseling among King Khalid University students" (n=541), who stated that 21.8% of the clients involved in the study had relationship between couples. The results of the current study revealed that more than half of the studied clients have one individual earning income (table 1). This results agree with the study of Nasr Eldeen.(18), which revealed that 47.5% of participants had one family member as a source of family income. From the investigator point of view, this may be due to more than half of the studied clients live in rural areas, so female working in rural areas don't dominant.

The results of current study revealed that more than half of the studied clients had their source of information about premarital counseling from family and friends and nearly one third of the studied clients their source of information are from internet (Figure 1). These findings were in agreement with Osei-Tutu et al.(19), who reported that 76% premarital advice is usually given by fathers, mothers, uncles, and aunts who are married.

On the other hand, the present finding is disagreement with a study by Kabbash et al.(13) in Tanta, Egypt, about "HIV/AIDS-related stigma and discrimination among health care workers" (n=310), who concluded that 47% of participants, the main source of information about PMC was media.

Part (II): Client knowledge regarding premarital counseling.

According to the research question (1): What is client's knowledge regarding premarital counseling?

The results of current study illustrated that more than three fifths of the studied clients had unsatisfactory level of total knowledge about premarital counseling (figure 2). These findings were not parallel with study done by Fawzy et al.(10), in Ismailia, about "Knowledge, Attitudes and Needs of Individuals Attending Premarital Care", (n=443), who reported that 86% of clients had satisfactory level of total knowledge about premarital counseling. From the investigator point of view, there is not enough attention towards premarital counseling from clients attending maternal and child health care centers.

Part (III): Clients attitude regarding premarital counseling.

According to the research question (2). What is client's attitude regarding premarital counseling?

The results of current study revealed that less than half of the studied clients had positive attitude regarding premarital counseling (Figure 3). This result was disagreeing with a study conducted by Al-Enezi and Mitra,(1) in his study about "Knowledge, attitude, and satisfaction of university students regarding premarital screening programs in Kuwait", (n=809 students), which reported that 85% university students showed positive attitude towards premarital counseling program.

From the investigator's point of view, premarital counseling may help in prevention of marriage in case of positive results were not accepted by the majority of the clients, this may reflect the importance of premarital counseling in spousal education about risky

marriage and may limit its drawbacks on upcoming offspring.

Part (IV): Clients satisfaction regarding premarital counseling.

According to the research question (3). What is the level of client's satisfaction regarding premarital counseling?

The results of current study revealed that more than half of the studied clients were unsatisfied by premarital counseling (Figure 4). Our result were not in line with study of Alkalash et al. (4), which revealed that about 69% of participants were satisfied by premarital counseling. From the investigator's point of view, the clients attending maternal and child health care centers didn't know the nature of premarital care service and the time required to achieve this service and the most important need for them to obtain the final examination report and marriage certificate.

Part (V): Relation and correlation between the studied variables.

According to the research question (5). Is there relation between client's knowledge, attitude and their socio-demographic characteristics?

The results of current study revealed that there was highly statistically significant relation between clients' total knowledge regarding premarital counseling and their socio-demographic characteristics as, age, educational level and monthly income (table 2). This finding was in a line with the study of Nasr Eldeen,(18), which stated that there were statistically significant differences between level of participant knowledge and their age, educational level and monthly income. From the investigator point of view, regarding to sex difference; male clients were more knowledgeable than female about premarital counseling. This was attributed to that; males are more concerned with the prevention of

inherited diseases that may affect their offsprings.

The results of current study revealed that there was highly statistically significant relation between clients' attitude regarding premarital counseling and their socio-demographic characteristics as age, marital status, educational level and monthly income at ($P = < 0.001$) (table 3). These findings in difference with the study of Binshihon et al.(9), in Western Saudi Arabia, about "Knowledge and attitude toward hemoglobinopathies premarital screening program among unmarried population", ($n=1039$), which revealed that there was no statically significant difference between participant's attitude and their age, marital status, educational level and monthly income. From the investigator point of view, this reflects the need of clients characterized by these socio-demographic characteristics; single, male and enough monthly income for premarital counseling to limit genetic diseases.

According to the research question (4). Is there relation between client knowledge, attitude and their satisfaction?

The results of current study revealed that there was highly statistically significant positive correlation between total knowledge, total attitude and total satisfaction regarding premarital counseling among the studied clients at ($P = < 0.001$) (table 4). This finding supported by the study of Kamel et al.(15), in Egypt, about "Knowledge and Attitude of Adolescent Students' Toward Premarital Examination in Secondary Schools at Assiut City", ($n= 879$), which illustrated that a positive Correlation $r=0.319$ between total score of students' knowledge, attitude and their satisfaction about premarital examination with significant difference $p=0.001$.

Also, in referral to the result of present study cleared that there was highly statistically significant positive correlation between total knowledge, total attitude and total satisfaction

regarding premarital counseling among the studied clients (table 4) as the same line with Soltani et al.(22), in Hamedan, Iran, about "Sexual knowledge and attitude as predictors of female sexual satisfaction", (n=480), who said that there were positive correlation between student's knowledge, attitude and satisfaction about premarital examination. From the investigator point of view, this reflects lack of seminars and workshops among maternal and child health care center clients from Health Administrators to improve their knowledge, this negatively affect attitude and satisfaction.

Conclusion

In the light of the results of the current study and answers of the research questions, it could be concluded that:

- More than three fifths of the studied clients had unsatisfactory level of total knowledge about premarital counseling, and more than half had negative attitude regarding premarital counseling, and were un-satisfied by premarital counseling. Also, there were a highly statistically significant positive correlation between total knowledge, total attitude and total satisfaction regarding premarital counseling among the studied clients at ($P = < 0.001$).
- There were highly statistically significant relation between clients' total knowledge, attitude and their socio-demographic characteristics as, age, educational level and monthly income at ($P = < 0.001$).
- There were highly statistically significant positive correlation between total knowledge, attitude and satisfaction regarding premarital counseling among the studied clients at ($P = < 0.001$).

Recommendations

Based on the previous findings, the following recommendations are suggested:

- Increase public awareness about the premarital counseling by health care providers during their attendance in family health facilities for obtaining any health care services.
- Dissemination of educational booklet for clients attending maternal and child health center to enrich their knowledge, attitude and satisfaction regarding premarital counseling service.
- Periodic refreshment and seminars, workshops should be regularly organized in MCH centers for clients in order to equip them with adequate knowledge, attitude and satisfaction regarding premarital counseling.

Recommendation for future research:

- Design applicable comprehensive health education programs for clients attending maternal and child health care centers regarding premarital counseling in various settings.

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