

Couples' Knowledge regarding Premarital Care

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1. ABSTRACT

Background: Premarital care (PMC) is a global activity aiming to prepare the future couples to healthy marital life by diagnoses, treating unrecognized disorders, and reduce transmission of diseases to couples. **Aim:** This study aimed to explore couples' knowledge regarding premarital care. **Study design:** A descriptive study was utilized. **Setting:** The study was carried out in Mansoura New General Hospital, Maternal and Child Care Center in Talkha and Mahallah Damna hospital, Dakahlia governorate, Egypt. **Sample type:** A purposive sample was utilized of 110 couples. **Tools:** A structure interview questionnaire was used to assess the knowledge regarding PMC. **Results:** The results highlighted that less than half of couples had correct knowledge about the importance of PMC, more than half of couples had partial correct knowledge about types of medical examination and less than half of couples had incorrect knowledge about diseases detected by premarital examination. **Conclusion:** The present study questions were answered in which less than one third of studied couples had good knowledge about premarital care. **Recommendations:** Provide specific health education to couples to increase knowledge about importance of premarital care during their attendance for the health certification before the marriage as well as broadcasting information about the premarital care program through different types of mass media.

Keywords: Couple, Knowledge, Premarital care.

2. Introduction

Premarital care is a part of each couple's wedding plan that provides an opportunity for prevention, management and treatment of diseases. Nowadays, premarital screening and counseling (PMSC) became compulsory by law in many Arab countries including Egypt (Ismail & Rogo, 2021). The main objectives of PMC are limiting the frequency and spread of inherited genetic disorders that aimed to plan for a healthy family, decreases burden of having newly affected children. In addition to raise the awareness and knowledge of the community regarding genetic disorders and appropriate methods for the selection of the equitable services (Hamed, Eshra, Ali & Khalil, 2022).

Furthermore, PMC equips prospective couples for developing strategies that facilitate a healthy, happy relationship learn about each other's expectations and prevents future divorce, it helps families to avoid psychosocial problems that result from the presence of the affected child in the family (Osei-Tutu et al., 2020). As well as it

disseminates awareness regarding reproductive performance, especially in certain conditions like consanguineous marriage and history of congenital disorders or suspicion of serious infection (Mohamed, Lamadah & Hafez, 2015).

PMC considered as the primary health care (PHC) method for marriage, conception planning for couples and recognize other health risk factors that influencing outcomes of pregnancy and promote the health and wellbeing of a woman and her partner. It can recognize and alter medical, behavioral, and other known health risk factors that influencing outcomes of pregnancy hence, it is considered as a step towards saving society and allowing people to enjoy life (Omar, Hasaneen, Hassen & Mostafa, 2021).

Mawadda program came up at the sixth Youth Forum that took place at Cairo University in July 2018 to identify reasons behind the high divorce rates in Egypt that had become a phenomenon (Essam, 2020). It aims to qualify the Egyptian youth to marry of both sexes and

preparing them to start a successful life psychological, social, religious aspect of marriage, as well as provides information on family planning, reproductive health and gender-based violence and legal rehabilitation of couple to build a partnership based on love, respect and responsibility. As well as educating young people who are about to get married by presenting successful models in work and family life (**United Nations Population Fund Agency (UNFPA), Egypt, 2021**).

Components of the premarital care according to integrated standards of practice, settled by Ministry of Health and Population (**Ministry of Health and Population (MOHP), 2005**) are premarital counseling, premarital history taking and examination, premarital investigations and premarital immunization. (**Alkalash, Badr&Eldeen, 2021; Farahat ,Shaheen, Mohamed &Mohaseb, 2014**). In Egypt, many of prospective couples don't know the benefits of PMC consequence of inadequate preparation for marriage. Although, the services are available, yet, the utilization is still actual little due to many factors. One of them is lack of knowledge and negative attitude toward PMC. So, it is very important and urgent to inform and motivate all prospective couples about the preparation of marriage and the services that provide premarital care and examination (**Cox, Fleckenstein& Sims-Cox, 2021**).

Nurses play crucial role in PMC as they the heart of health care system, so they play an integral role in PMC services that include assess genetic risk, provide information, discuss available testing options and provide appropriate supportive counseling (**Abd Elfattah, Soliman& Amin, 2015**). In addition, they ensure that the couples are aware of concerns relevant to their situation and help them make decisions that fit lifestyle and belief system (**Mccann, 2022**). Nurses can provide access to health facilitates for couples in need to contact people within specialized services and facilitate easy movements for referred couples. She also plays an important role in follow-up the referred cases (**Chitayat et al. 2011; Slomp, Morris, Price, Elliott & Austin, 2022**).

2.1 Significance of the study

Premarital care is considered a primary health care for reproductive health of women and their child. It is of immense significance to prevent congenital malformation in Arab Nations because of the high occurrence of consanguineous marriages and has a great importance to substance marriage and reduces high prevalence of divorces in Egypt. 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 which may result from marriage among relatives can prevent via premarital care (**Kabbash et al., 2019**).

The Egyptian Central Agency for Public Mobilization and Statistics (CAPMAS) reported that the rate of divorce increase between 39.3 and 60.7% from 1996 and 2017. In addition about 200,000 married couples get a divorce every year, 542 couples every day and research suggests that 38% of all divorces are comprised of newlywed couples married between one and three years (**Essam, 2020 ; Mendoza, Tolba&Saleh, 2020**). Also, there are barriers and challenges to premarital care program in the Middle East countries as a shortage of primary health care facilities, lack of capacity building and training of the health personnel to provide quality services at PHC, mass media does not disseminate a clear message to the target audience, insufficient information and lack of knowledge on sexuality, reproduction and family planning among young women and men (**Salama, 2020**).

However, number of attendants' couples is still limited and many couples are unconvinced about the worth of PMC (**Utami, Supinganto, Setyawati& Budiana, 2021**), there are scanty and few studies have been performed in Egypt to explore couples' knowledge of couples regarding premarital care so, this study will be conducted.

2.2 Aim of the study

This study aimed to explore couples' knowledge regarding premarital care

2.3 Research question

What is couples' knowledge regarding premarital care?

3. Method

3.1 Study design: A descriptive study was utilized which define a population at a specific point or period of time without attempting to draw any interference.

3.2 Setting: The study was conducted in marriage clinic at three setting in Dakahlia governorate, Mansoura city, Egypt. The first setting is Mansoura New General Hospital in which marriage clinic opened 3days/week (Saturday -Sunday-Monday), nearly 10 couple/ day visit marriage clini,the second setting is Maternal and Child Care Center in Talkha in which marriage clinic is opened daily from Saturday to Thursday , nearly 5-7 couple/day

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visit marriage clinic and the third setting is Mahallah Damna hospital in which marriage clinic is opened 2days/week (Monday– Thursday) ,nearly 5-7 couple/ day visit marriage clinic.

3.3Sample type: A purposive sample was utilized.

Study subjects: 110 couples according to the following **inclusion criteria:**

Couples who received PMC

Couples free from psychological problem.

Exclusion criteria:

Couples who refused to participate in the study.

Sample Size Calculation

Based on data from literature (**Abou El-yazed et al., 2014**), considering level of significance = 5%, Power = 80%, Type of test = two-sided

Formula of calculating sample size isn = $[2(Z\alpha/2 + Z\beta)^2 \times p(1-p)] / (p1 - p2)^2$

Where

n = sample size required in each group,

p = pooled proportion (proportion of event in group 1 + proportion of event in group 2)/2

p1-p2 = difference in proportion of events in two groups

Z α /2: This depends on level of significance, for 5% this is 1.96

Z β : This depends on power, for 80% this is 0.84

n = $[2(1.96 + 0.84)^2 \times 0.654 (1-0.654)] / (0.18)^2 = 109.5$

Based on above formula the total sample size required is 110 couples

3.4Tools of data collection:

One tool was used for data collection. This tool was developed by the researcher after reviewing the national and international relevant literatures.

Part (1)Socio- demographic data of couples such as age, residence, level of education ,occupation, smoking, parents' consanguinity, sequence of marriage, consanguineous marriage ,duration of engagement and basis of marriage .

Part (2): Couples' personal and family history such as personal medical history (hypertension, diabetic, thyroid, hearing and visual problems), surgical history and genetic history for hereditary diseases (thalassemia and G6PD deficiency).Family history of chronic diseases(hypertension, diabetic, cardiac diseases, kidney disorder, liver diseases and tumors disease),

family genetic history for hereditary diseases (sickle cell anemia , thalassemia, G6PD deficiency and mental retardation) and family congenital malformation history (heart defects , neural tube defects and clubfoot).

Part (3): Couples' knowledge regarding premarital care. This tool was developed by the researcher after reviewing the national and international relevant literatures (**Al-Shroby et al., 2021; Bansiwal, Mittal&Jyotsna, 2018**). It consists of 12 questions related knowledge of couples regarding premarital care (definition of PMC, importance, component, types of medical examination, types of premarital laboratory investigations, definition of premarital counseling, diseases detected by premarital examination, suitable time, sources of information, places of providing, provider of PMC and barriers for not full utilizing PMC.

Scoring system: Each question had three alternative answers: "correct", "partial correct" and "not correct/wrong". The respondent scored 3:1 point for every response respectively. The total score of couples' knowledge regarding premarital care was calculated on the basis of the number of questions answered in which more than 75% considered good knowledge, 50–75% of the considered fair and less than 50% considered poor knowledge (**Al-Shroby et al., 2021**).

3.5Validity of the study tools:

The tools were reviewed by three juries of experts from the Woman's Health and Midwifery Nursing Department in Faculty of Nursing, Mansoura University **prof.Dr.Hanan El-sayedMohamed,Assist.prof.samia Ibrahim Osman,Assist .prof..Amal Youssef** in Faculty of Nursing, Mansoura University.These experts assessed the tools for clarity, relevance, application, comprehensive, and understanding. Validity according to their comment's modification was considered as certain sentences were simplified to be easily understood by the women.

3.6Reliability:

The Cronbach's alpha value (internal consistency) of the Couples' satisfaction regarding PMC was 0.893, and of the Couples' experience regarding PMC 0.889, and of the Total Knowledge regarding PMC was 0.901and found to be for knowledge and so the tool was reliable.

Pilot study: After preparing the tools, a pilot study was excluded from study and conducted prior to data collection on 10% equaled 11 couples to evaluate the clarity and applicability of tool ,ensure that questions were consistently delivered to

couples and that they carry out intended meaning that were designed to achieve. It also helped to estimate what needed to complete the questionnaire to be clear and relevant. Also, to estimate the time needed to complete interview for about 15 - 20 minutes to collect socio-demographic data, personal, family history of couples and knowledge questionnaire regarding premarital care after receiving PMC.

3.7 Ethical Considerations

The Ethics Committee of the Faculty of Nursing, Mansoura University granted official permission and an official letter from the Faculty of Nursing, Mansoura University was directed to the director in the previous mentioned study settings after describing the study's aim.

The research's purpose was explained to the subjects, and signed permission to participate in the study was acquired. Participation in the study was entirely optional, and all participants were free to leave at any moment. Throughout the study, anonymity, privacy, safety, and confidentiality were strictly maintained. The study participants were informed that the findings were utilized as part of the required research for their Master's degree, as well as for publishing, education and research process.

3.8 Filed work:

- After taking written consent from director in the previous mentioned study settings. the study data collection conducted for over a period of nine months from beginning of January 2022 to the end September 2022. Then the researcher attended the previously mentioned setting 3days per week (Saturday-Monday- Thursday) for every setting respectively for data collection from 9 A.M. to 2 P.M until the end of complete data of studied sample (110).
- The researcher introduced herself to couples, explained the aim of the study and obtained the couples' consent to participate in the study after assuring the confidentiality of data.
- The researcher interviewed each couple individually for about 15 - 20 minutesto collect socio-demographic data, personal, family history of couples and knowledge questionnaire regarding premarital care after receiving PMC.

3.9 Data Analysis phase:

The data were collected by questionnaires and structured tools, coded, computed and statistically analyzed using SPSS (statistical

package of social sciences),for windows version 20.0 (SPSS, Chicago, IL). Continuous data were normally distributed and were expressed in mean \pm standard deviation (SD). Categorical data were expressed in number and percentage. Chi-square test (or fisher's exact test when applicable) was used for comparison of variables with categorical data. The reliability (internal consistency) test for the questionnaires used in the study was calculated. Statistical significance was set at $p < 0.05$.

4. Results

Table one. Shows that the majority (80%) of couples aged (<30 years) with mean (28.7 \pm 5.7), less than two thirds (62.7%) of couples were from rural, less than half (48.2%) of couples were university education, and two-thirds (66.4%) of couples worked. Also, there were three quarter (74.5%) of couples had passive smoking.

Table two. Illustrates that majority of couples didn't have medical diseases and surgical history for any operation (80%&93%) respectively. Also (97.3%) of couples didn't have genetic history for hereditary diseases.

Table three. Illustrates that less than half (47.2 %) of couples didn't have family history for medical diseases .Also it illustrates that majority (91.8% & 96.3%) of couples didn't have family history for genetic and congenital malformation respectively.

Table four. Reveals that more than half (59.1%) of couples had correct knowledge regarding to definition of premarital care and less than half (49.1 %) of couples had correct knowledge about importance of premarital care. Also, (60.9%) of couples had partial correct knowledge about medical examination and more than two thirds (68.2%) of couples had partial correct knowledge about laboratory investigations. More than half (51.8%) had incorrect knowledge regarding to definition of premarital counseling and (40.0%) of couples had incorrect knowledge about diseases detected by premarital examination, meanwhile (79.1 % and 76.4) had partial correct knowledge about suitable time of PMC and barriers for not full utilizing PMC respectively.

Table five. Reveals that there was highly statistical significant relation between total knowledge score of PMC and residence and occupation ($p < 0.001$) as couples from urban and working. Also there were statistical significant relation between total knowledge score PMC and age as 18<30, education as university education, level, sequence of marriage as first marriage and consanguineous marriage that had positive consanguineous marriage ($P = 0.004$ & $P = 0.003$ &

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P=0.013 and P=0.023) respectively. While there were no statistical significant relation between total knowledge score PMC and smoking and parents' consanguinity ($p = 0.085$ & 0.824) respectively

Figure one. Shows that less than three quarter of couple didn't have parents' consanguinity

Figure two. Shows that less than half of couple had correct knowledge regarding PMC component.

Figure three. Shows that the relatives and friends were the most frequent source of information about premarital care among couple followed by mass media and internet.

Figure four. Shows that more than three quarter, more than half of couple had partial correct knowledge regarding places, providers of PMC respectively.

Figure five. Shows that more than half of couple had fair knowledge, while less than one third had good knowledge about premarital care.

Table 1. Number and distribution of the socio-demographic characteristics of studied couples (N =110)

	N	%
Age		
18-<30	88	80.0
30 or More	22	20.0
Mean ±SD	28.7 ±5.7	
Residence		
Rural	69	62.7
Urban	41	37.3
Education		
Illiterate	2	1.8
Basic education	7	6.4
Secondary education	30	27.3
Intermediate education	13	11.8
University education	53	48.2
Postgraduate studies	5	4.5
Occupation		
House wife	37	33.6
Working	73	66.4
employment position (n=73)		
Private sector	59	80.8
Governmental sector	14	19.2
Smoking		
Active	28	25.5
Passive	82	74.5

Figure 1. Distribution of Parents' consanguinity among couples

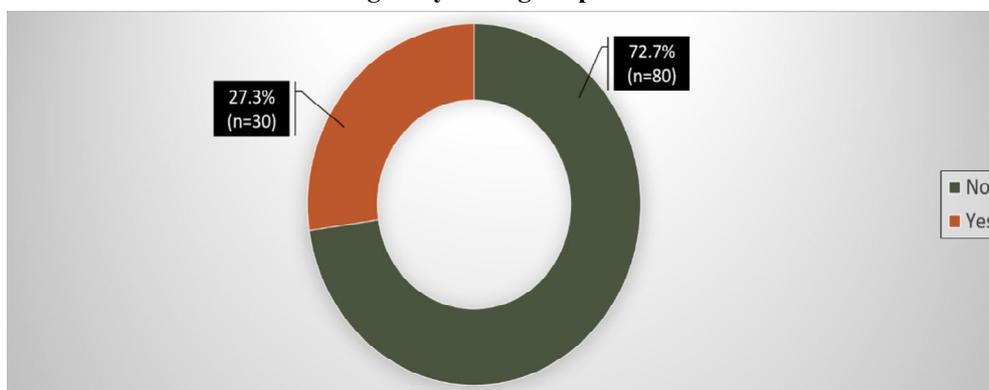


Table 2. Number and distribution of personal history of couples (N =110)

	N	%
Medical history		
None	88	80.0
Hypertension	5	4.5
Diabetic	2	1.8
Thyroid problems	4	3.6
Hearing problems	5	4.5
Visual problems	6	5.5
Surgical history		
No	93	84.5
Yes	17	15.5
kind of surgery did you have (n = 17)		
Orthopedic operation	11	64.7
Nose and ear operation	1	5.9
Appendectomy	2	11.8
Hemorrhoid surgery	1	5.9
Cesarean section	1	5.9
Cholecystectomy	1	5.9

Table 3. Number and distribution of family history of couples (N =110)

	N	%
Medical disease		
None	52	47.2
Hypertension	28	25.5
Diabetes	24	21.8
Heart disease	15	13.6
Kidney disorder	8	7.3
Liver Diseases	7	6.4
Tumors disease	12	10.9
Genetic diseases		
None	101	91.8
Sickle Cell Anemia	2	1.8
Thalassemia	3	2.7
G6PD Deficiency	1	0.9
Mental Retardation	3	2.7
Congenital malformation diseases		
None	106	96.3
Heart defects	2	1.8
Neural tube defects	1	0.9
Clubfoot	1	0.9

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Table 4. Number and distribution of Couples' knowledge regarding premarital the couples (N =110)

	Incorrect		Partial correct		Correct	
	n	%	N	%	N	%
Definition of premarital care	12	10.9	33	30.0	65	59.1
Importance of premarital care	18	16.4	38	34.5	54	49.1
Types of medical examination	3	2.7	67	60.9	40	36.4
Types of premarital laboratory investigations	0	0.0	75	68.2	35	31.8
Definition of premarital counseling	57	51.8	20	18.2	33	30.0
Diseases detected by premarital examination	44	40.0	32	29.1	34	30.9
Suitable time of PMC	5	4.5	87	79.1	18	16.4
Barriers for not full utilizing PMC	9	8.2	84	76.4	17	15.5

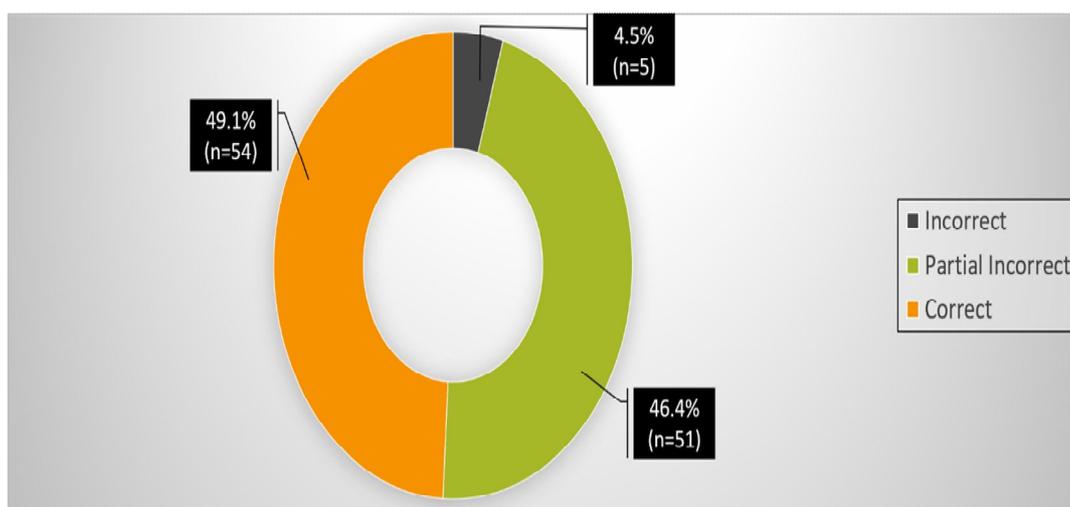


Figure 2. Distribution of component of premarital care among couples (N=110)

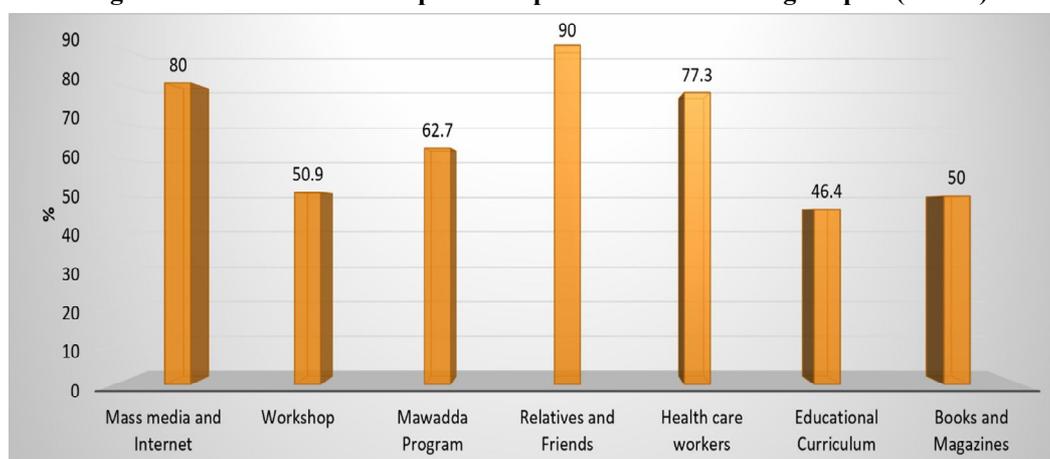


Figure 3. Distribution of sources of information about PMC among couples (N=110)

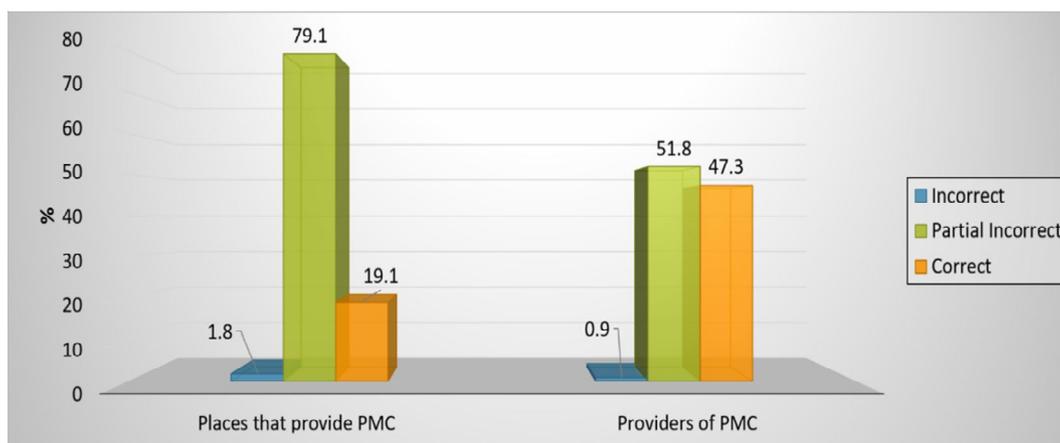


Figure 4. Distribution of places and providers of PMC among couples (N=110)

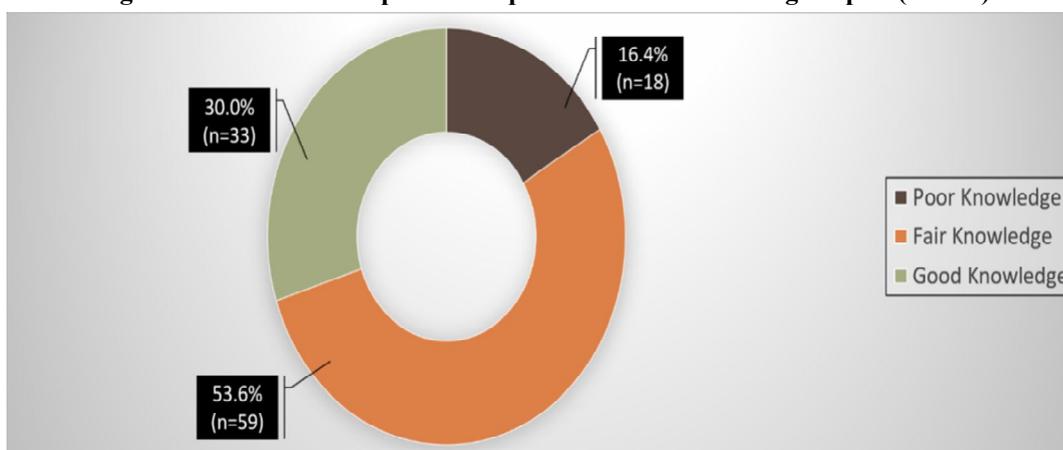


Figure 5. Number and distribution of couples'

Table 5. Distribution of sample according the relation between socio-demographic characteristics and total knowledge score (N=110)total knowledge score (N=110)

	Poor (n=18)		Fair (n=59)		Good (n=33)		Significant test	
	n	%	N	%	N	%	X ²	P
Age								
<30	9	50.0	49	83.1	30	90.9		
30 or More	9	50.0	10	16.9	3	9.1	10.889	0.004*
Residence								
Rural	12	66.7	47	79.7	10	30.3		
Urban	6	33.3	12	20.3	23	69.7	22.195	<0.001**
Education								
Illiterate	0	0.0	2	3.4	0	0.0		
Basic education	3	16.7	4	6.8	0	0.0		
Secondary education	4	22.2	23	38.9	3	9.1		
Intermediate education	2	11.1	9	15.3	2	6.1		
University education	9	50.0	19	32.2	25	75.7		
Postgraduate studies	0	0.0	2	3.4	3	9.1	26.343	0.003*
Occupation								
House wife	15	83.3	19	32.2	3	9.1		
Working	3	16.7	40	67.8	30	90.9	28.877	<0.001**
Smoking								

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Active	4	22.2	11	18.6	13	39.4		
Passive	14	77.8	48	81.4	20	60.6	4.921	0.085
Parents' consanguinity								
No	14	77.8	43	72.9	23	69.7		
Yes	4	22.2	16	27.1	10	30.0	0.385	0.824
Sequence of marriage								
First marriage	18	100.0	57	96.6	27	81.8		
Second marriage	0	0.0	2	3.4	6	18.2	8.554	0.013*
Consanguineous marriage								
No	13	72.2	41	69.5	31	93.9		
Yes	5	27.8	18	30.5	2	6.1	7.515	0.023*

5. Discussion

The present study aimed to explore couples' knowledge regarding premarital care. This aim was achieved through the present study findings which revealed that less than one third of studied couples had good knowledge regarding PMC. Therefore, the findings of the present study answered the research questions.

The present study results showed that more than one quarter of the studied couples didn't have parental consanguinity due to the real rate of consanguineous marriage in Egypt, which ranges from the range one quarter to two-third. This finding was in agreement with **Yousifa (2018)** who studied the "Perception and Satisfaction of Premarital Screening and Genetic Counseling among Future Couples of Governmental Outpatient Clinics" in Port Said, Egypt. who reported that more than one quarter of the studied future couples didn't have parental consanguinity. The agreement between the results might be due to the study being conducted in the same country where people have the same culture and customs

On the contrary, this finding wasn't in accordance with **Moussa et al. (2018)** who investigated "Knowledge and Attitude towards Premarital Screening and Genetic Counseling Program among Female University Students" in Saudi Arabia. That reported less than two third of studied female had parental consanguinity.

Regarding to personal and family history of couples, the present study findings showed that the majority of the studied couples didn't have personal and family history of hereditary diseases. This finding was congruent with **Ali et al., (2018)** who conducted their studies on "Perception about Premarital Screening and Genetic Counseling among Males and Females Nursing Students" in Mansoura, Egypt. Their findings observed that the majority of the studied males and females didn't have personal and family history of hereditary diseases.

Regarding couples' knowledge regarding PMC, the present study revealed that more than half of studied couples had correct knowledge about definition. This finding was compatible with **Mohamed (2015)** who studied Premarital care: Health promotion program for female students in Ain Shams University Hostel that reported more than half of female students had correct knowledge about PMC definition.

Also, the present study findings reported that less than half of studied couples had correct knowledge about importance of PMC due to couples had a respectable thought of the value of PMC. These results were in agreement with the study conducted by **(Hamed, Eshra, Ali & Khali) 2022** who studied " Knowledge, Perception, and Attitude of Future Couples towards Premarital Screening" in the Qebly Maternal and Child Health (MCH) center in Shebin El-Kom city in Menoufia Governorate that reported around half of future couple know objective of PMS.

On the other hand, these findings disagreed with **Al Kindi et al., (2019)** who studied Awareness and Attitude towards the Premarital Screening Program among High School Students in Muscat in Oman that reported the majority of student had good knowledge about the importance of premarital screening.

The current study finding showed that less than two third of studied couples had partial correct knowledge about types of medical examination. These results were in agreement with **Farahat, Shaheen, Mohamed & Mohaseb (2014)** who studied Knowledge and attitude of students in Menoufia University, ShebinElkom city toward premarital care that showed more than two third of studied students had partial correct knowledge about types of medical examination.

The current study clearly showed that more than two third of studied couples had partial correct knowledge about premarital laboratory investigation. These results were compatible with

the finding of the study conducted by **Ibrahim et al., (2011)** who study An educational program about premarital screening for unmarried female students in King Abdul-Aziz University, Jeddah that reported about two-thirds of female had insufficient information about PMC laboratory investigation. From the researcher point of view, this may be due to improbably application of PMC investigations.

These findings were contrary with **Osman, Baraia & Abdelati, (2021)** who studied Awareness and attitude of university students regarding premarital counseling and examination in Suez Canal University at level four from diversity of faculties that reported the majority of them had correct knowledge about PMC laboratory investigation which done before marriage.

The present study findings revealed that more than half of studied couples had incorrect knowledge about definition of premarital counseling due to PMC services hadn't being applied correctly and completely. These results were in agreement with **Farahat, Shaheen, Mohamed & Mohaseb (2014)** who reported half of studied student didn't know the definition of premarital counseling. These results were on the contrary with **Hebatallah, Kamilia, Sahar & Amal (2019)** who studied Evaluation of Nursing Students' Concept Concerning Premarital Counseling and Examination which was conducted at Faculty of Nursing Ain-Shams University in Egypt that reported more than two third of studied students had correct knowledge about the definition of PMCEs.

The present study showed that more than one third of studied couples had incorrect knowledge about diseases detected by premarital examination. These findings were in agreement with **Kabbash, Attalla & Atlam (2019)** who studied Perception of Importance of Premarital Counseling among Medical Students of Tanta University in Egypt that found the majority of students had correct knowledge about diseases detected by premarital examination.

The present study showed that more than three quarter of studied couples had partial correct knowledge about suitable time of PMC; this may be illustrated as PMC is actually considered as a necessary and essential step to complete the process of marriage preparation and paper work. These results were in agreement with **Al Kindi, Al-Rujaibi & AlKendi (2012)** who reported that the majority of university students had correct knowledge about suitable time of PMC. Also, these results were in the line with **Abou Elyazid, Abd**

Elmonem, Hamad & Abd Elghani (2014) who illustrated that less one third of studied participants had incorrect knowledge about suitable time of PMC.

The current study showed that less than one quarter of studied couples had correct knowledge about places that provide PMC. This result was in agree with the study conducted by **Hamed, Eshra, Ali & Khali (2022)** who reported less than one third of studied couples had correct knowledge about different options of places performing premarital screening. This is in disagreement with **Hebatallah, Kamilia, Sahar & Amal (2019)** that illustrated that less than two third of studied sample had correct knowledge about places offering premarital counseling and examinations.

The current study illustrated that the relatives and friends were the most frequent source of sources of knowledge among studied couple followed by mass media and internet, that reflects the major role of relatives and friends in spreading and dissemination the information among communities and importance mass media and internet of the as a source of information. These result were congruent with **Yousifa (2018)** that indicated that the main source of information among future couples about premarital screening was family and friends then mass media and interne in the second rank. Also, these findings were in the same line with **Moussa et al. (2018)** who reported the main source of information of PMC were from relatives and family then media. On the contrary, this finding was inconsistent with **Ali et al. (2018)** who indicated that the main source of students' information on PMS was school/faculty.

Regarding total couples' knowledge score of PMC, The present study documented that less than one third had good knowledge about PMC. This might be due to couples' concepts & beliefs that PMC is a routine step to finish marriage preparation & paper work, also lack of awareness about PMC and its effects in marital status. These findings were compatible with **Hamed, Eshra, Ali & Khali (2022)** who mentioned less than one third of studied couples had adequate knowledge about premarital screening. These results were in disagreement with **Osman, Baraia, & Abdelati (2021)** who revealed the majority of studied students had satisfactory total knowledge score regarding premarital counseling.

Regarding the relationship between total couples' knowledge score of PMC and socio-demographic characteristics, the study findings revealed that there were no statistical significant differences between total knowledge score and

parents' consanguinity. Similarly to a study conducted by **Al-Shroby et al. (2021)** who reported that was no statistical significant differences between total knowledge score with parents' consanguinity.

Also, the current study findings revealed that there were statistically significant differences between couples' total knowledge score with age and education level in addition to highly statistical significant differences between total knowledge score and residence. These findings were in agreement with study done by (**Yousifa., 2018**) that reported there were statistically significant differences between couples' total knowledge score with age and education level in addition to highly statistical significant differences between total knowledge score with residence.

6. Conclusion

Based on the present study findings, it is concluded that less than one third of studied couples had good knowledge while more than two third had fair and poor knowledg about premarital care. Additionally, there was highly statistical significant relation between total knowledge score of PMC and residence and occupation and there were statistical significant relation between total knowledge score of PMC and age, education level, sequence of marriage and consanguineous marriage

7. Recommendations

Based on the study findings, the study is recommending the following:

- Grasp attention of couples to take information about PMC from specialised health care workers rather than other sources of information to increase knowledge about PMC.
- Raise awareness of couples about importance and components of PMC through booklet or brochure.
- Provide health education to couples about importance of physical examination and laboratory investigations during PMC for early detection of genetic disorders that decrease divorce rates and increase marital stability.
- Broadcasting of information about the premarital care program through different types of mass media and public education program regarding tests and complications of consanguinity marriage.
- Provide premarital counseling session to all couples during their attendance to marriage clinic in different medical settings.
- Holding of gatherings, workshops, symposia, and instructional classes for future couples to

expand their information about premarital care

- Empower couples to more effectively navigate courtship about healthy relation through premarital care.

Further study

- Increasing knowledge of the community regarding PMC and screening in collaboration with adequate religious support, government policy, education and counseling.
- Increasing awareness for health care providers about components and importance of premarital care and must be applied in correct manner to achieve good aim as decreasing divorce rate.
- Indicating further research to implement an analysis on the effect of premarital care on health outcomes among couples and children, after implementation for further support the evidence of its effectiveness.

Incorporate the benefits of premarital care in high school and university curriculum

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The researchers reported that they had no possible conflicts of interest.

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11. References

- AbdElfattah., H., Soliman1, S.M., and Amin,F.M., (2015):** Premarital Genetic Counselling among Female Adolescents Students, *Journal of American Science*:11(6): 173–181.
- AbouElyazid, H., Abdelmonem, N., Hamad, S., &Abd El-Ghani, A. (2014).** comparative assessment of knowledge and attitude towards premarital care services among medical and non-medical students of Al-Azhar University. Department of community and Occupational Medicine, Faculty of Medicine for Girls, Al Azhar University. *AL-AZHAR ASSIUT MEDICAL JOURNAL*. AAMJ, 12(4).

- Ali, M., Elshabory, N., Elzeblawy Hassan, H., Zahra, N., & Alrefai, H. (2018). Perception about Premarital Screening and Genetic Counseling among Males and Females Nursing Students. *J Nurs Heal Sci*.15-16
- Alkalash, S. H., Badr, S. A., & Eldeen, A. G. N. (2021). Awareness, attitude, and satisfaction of Egyptian adults by premarital care services. *Menoufia Medical Journal*, 34(4), 1284.
- Al-Kindi, R. M., Kannekanti, S., Natarajan, J., Shakman, L., Al-Azri, Z., & Al-Kalbani, N. I. (2019). Awareness and attitude towards the premarital screening programme among high school students in Muscat, Oman. *Sultan Qaboos University Medical Journal*, 19(3), e217.
- Al-Kindi, R., Al Rujaibi, S. & Al Kendi, M. (2012). Knowledge and attitude of university students towards premarital screening program. *Oman medical journal*, 27, 291.
- Al-Shroby, W. A., Sulimani, S. M., Alhurishi, S. A., Dayel, M. E. B., Alsanie, N. A., & Alhraiwil, N. J. (2021). Awareness of Premarital Screening and Genetic Counseling among Saudis and its Association with Sociodemographic Factors: a National Study. *Journal of Multidisciplinary Healthcare*, 14, 389
- Aluko, J. O., Makanjuola, O. J., & Diorgu, F. C. (2021). Perception and Acceptance of Pre-Marital Fertility Screening among Final Year Students of College of Health Sciences at a University in North Central, Nigeria. *Journal of Gynecological Research and Obstetrics*, 7(1), 001-004
- Bansiwal, R., Mittal, P., & Jyotsna, Y. S. (2018). Need of premarital care. *International Journal of Reproduction, Contraception, Obstetrics and Gynecology*, 7(1), 258.
- Chitayat, D., Langlois, S., Wilson, R. D., Audibert, F., Blight, C., Brock, J. A., ...& Siu, V. (2011). Prenatal screening for fetal aneuploidy in singleton pregnancies. *Journal of obstetrics and gynaecology Canada*, 33(7), 736-750.
- Cox, D. W., Fleckenstein, J. R., & Sims-Cox, L. R. (2021). Comparing the self-reported health, happiness, and marital happiness of a multinational sample of consensually non-monogamous adults with those of the US General population: additional comparisons by gender, number of sexual partners, frequency of sex, and marital status. *Archives of Sexual Behavior*, 50(4), 1287-1309.
- Essam, A. (2020). Mawadda: Marriages Made To Last. [online] EgyptToday. Available at: <<https://www.egypttoday.com/Article/15/81627/Mawadda-Marriages-Made-To-Last>> [Accessed 12 July 2021].
- Farahat, T. M., Shaheen, H. M. E., Mohamed, H. M., & Mohaseb, M. M. M. (2014). Knowledge and attitude of students in Menoufia University, ShebinElkom city toward premarital care in 2012. *Menoufia Medical Journal*, 27(2), 347.22
- Hamed, E. M., Eshra, D. M., Qasem, E., & Khalil, A. K. (2022). Knowledge, Perception, and Attitude of Future Couples towards Premarital Screening. *Menoufia Nursing Journal*, 7(2), 1-21.
- Hebatallah, J., Kamilia, R., Sahar, M., & Amal, F. (2019). Evaluation of Nursing Students' Concept Concerning Premarital Counseling and Examination. *Egyptian Journal of Health Care*, EJHC Vol.10 No.2
- Ibrahim, N. K. R., Al-Bar, H., Al-Fakeeh, A., Al Ahmadi, J., Qadi, M., Al-Bar, A. & Milaat, W. (2011). An educational program about premarital screening for unmarried female students in King Abdul-Aziz University, Jeddah. *Journal of infection and public health*, 4(1), 30-40.
- Ismail, M., & Rogo, I. S. (2021). Assessment of Awareness of Premarital Genetic Screening for Sickle Cell Disease among Tertiary Institution Students in Katsina Metropolis, Katsina State, Nigeria. *Assessment*, 3(1).
- Kabbash, I. A., Attalla, A. O., & Atlam, S. A. E. (2019). Perception of Importance of Premarital Counseling among Medical Students of Tanta University, Egypt. *Egyptian Journal of Community Medicine*, 37(2) 18
- McCann, D. (2022). Thinking under fire: Mentalizationbased couple therapy for high conflict and domestically abusive couples'. *Journal of Clinical Psychology*, 78(1), 67-79.
- Mendoza, J. E., Tolba, M., & Saleh, Y. (2020). Strengthening Marriages in Egypt: Impact of Divorce on Women. *Behavioral Sciences*, 10(1),
- Ministry of Health and Population [MOHP] (2005). Standards of Practice for Integrated MCH/RH Services: First Edition. Available

- at
<http://www.drguide.mohp.gov.eg/newsite/E-Learning>.
- Mohamed, H. A. A., Lamadah, S. M., & Hafez, A. M. (2015).** Improving knowledge and attitude of medical and non-medical students at El Minia University regarding premarital screening and counseling. *American Journal of Nursing Science*, 4(5), 270-279.
- Moussa, S., Al-Zaylai, F., Al-Shammari, B., Al-Malaq, K. A., Rashed Al-Shammari, S., & Al-Shammari, T. F. (2018).** Knowledge and attitude towards premarital screening and genetic counseling program among female university students, Hail region, Saudi Arabia. *International Journal of Medical and Health Research*, 4(1), 1-6.
- Omar, A. M., Hasaneen, S. T., Hassen, S. G., & Mostafa, M. M. (2021).** Effect of Premarital Orientation Program Regarding Sexual and Reproductive Health: A step to Increase Rural Adolescents' Female Awareness. *Assiut Scientific Nursing Journal*, 9(24.0), 116-124.
- Osei-Tutu, A., Oti-Boadi, M., Akosua Affram, A., Dzokoto, V., Asante, P., Agyei, F. and Kenin, A., 2020.** Premarital Counseling Practices among Christian and Muslim Lay Counselors in Ghana. *Journal of Pastoral Care & Counseling: Advancing theory and professional practice through scholarly and reflective publications*, 74(3), pp.203-211.
- Osman, H. T., Baraia, Z. A. A., & Abdelati, I. H. (2021).** Awareness and attitude of university students regarding premarital counseling and examination. *Trends in Nursing and Health Care Journal*, 3.
- Rouh Al Deen, N., Osman, A. A., Alhabashi, M. J., Al Khaldi, R., Alawadi, H., Alromh, M. K., ...& Akbulut-Jeradi, N. (2021).** The prevalence of β -thalassemia and other hemoglobinopathies in Kuwaiti premarital screening program: An 11-year experience. *Journal of Personalized Medicine*, 11(10), 980.
- Salama, R. (2020).** Review of implementation, barriers and challenges of premarital care program in the middle east countries. *International Journal of Medical Research & Health Sciences*, 9(12):(2319-5886), pp.69-78. [online] Available at: <http://www.ijmrhs.com> [Accessed 21 December 2020].
- Slomp, C., Morris, E., Price, M., Elliott, A. M., & Austin, J. (2022).** The stepwise process of integrating a genetic counsellor into primary care. *European Journal of Human Genetics*, 1-10.
- United Nations Population Fund Agency (UNFPA), Egypt, (2021):** Premarital manual. Egypt. *Indian Journal of Pediatrics*; 71:797-801.
- Utami, K., Supinganto, A., Setyawati, I., & Budiana, I. (2021).** effectiveness of reproductive and sexual health programs for prospective brides (catin) in improving catin's knowledge and attitudes of catin in gunungsari public health center in 2018 (Effectivity of Premarital Counseling on Health Reproduction Knowle. *Dinasti International Journal of Education Management And Social Science*, 2(4), 606-613.
- Yousifa., 2018,** "Perception and Satisfaction of Premarital Screening and Genetic Counseling among Future Couples of Governmental Outpatient Clinics". *IOSR Journal of Nursing and Health Science (IOSR-JNHS)*, vol. 7, no.4pp. 18-2