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Awareness of Importance of Premarital Counseling among Students of Kafr El-Sheikh University, Egypt

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ABSTRACT

Background: Premarital counseling is a fundamental component of preventive healthcare, designed to identify and mitigate potential genetic, congenital, and psychosocial risks within couples considering marriage. Objective: To assess awareness of university students about importance of premarital counseling. Methods: A crosssectional study was conducted on university students from two medical and two nonmedical faculties at Kafr el-Sheikh University. A structured self-administered questionnaire was used to collect data about awareness. The questionnaire consisted of two parts: a socio-demographic section based on the modified Fahmy and El-Sherbini scale, and a 16-item assessment of students' awareness of premarital counseling. Results: Total of 280 students were included with average age of 22.5 years and 82.1% were females. Approximately 92.0% were non-medical students, 71.8% single, 58.5% urban and 76.8% had positive consanguinity. The study reported that 29.6% of students heard about premarital counselling. Approximately 63.9% of students thought that marriage plans wouldn't be affected by the results of the premarital counselling. Approximately 34.3% of the students thought that premarital screening should be mandatory. The most common reason for refusing premarital counselling was "not to interfere with God's will" (27.4%) and "fear of test results" (13.7%). The following were significant predictors of students' awareness about premarital counselling: marital status, college, and socioeconomic status. Conclusions: Medical students and engaged students had higher levels of awareness of premarital counseling and its services. Health education campaigns should target university students to highlight the importance of premarital counseling. Educational elective curriculum can be added for students in nonmedical faculties.

INTRODUCTION

Marriage is a fundamental social institution that necessitates careful consideration and preparation.¹ With seven years remaining to achieve the Sustainable Development Goals' target of universal access to sexual and reproductive healthcare services that include family planning, information, education, and national integration, premarital screening emerges as a critical public health concern.²

Premarital counseling (PMC) is a comprehensive intervention involving a detailed medical history, physical examination, and laboratory testing for couples preparing for marriage. Its primary objective is to identify potential genetic and transmissible diseases. Additionally, it addresses infection treatment, teratogen risk mitigation, and family life education that includes sexual health and relationship

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counseling.³ Premarital screening empowers healthcare professionals to educate couples about fostering healthy families and the promotion of optimal offspring health.⁴

Nine of ten children born with a serious congenital disorder are in low- and middle-income countries. Congenital disorders can contribute to long-term disability, which takes a significant toll on individuals, families, health care systems, and societies. Some congenital disorders can be prevented. Vaccination, adequate intake of folic acid or iodine through fortification of staple foods or supplementation, and adequate care before and during a pregnancy are examples of prevention methods.⁵

The Egyptian Demographic Health Survey revealed that 31% of married women have consanguineous marriages, with a higher prevalence in rural areas. Consequently, hereditary diseases and congenital malformations are estimated to affect 2.8% of urban and 8.4% of rural populations, primarily attributed to consanguinity.⁶ PMC can prevent genetic disorders such as hearing impairment, intellectual disability, osteoporosis, and hemoglobinopathies, including thalassemia, which are more prevalent in consanguineous marriages.7

PMC as a service has been adopted by numerous countries globally. Cyprus pioneered making it mandatory in 1973, making it a prerequisite for marriage. Initially, the primary focus of screening was β -thalassemia.⁸ Premarital screening can mitigate maternal and infant mortality, reduce congenital anomalies, and prevent fetal growth restriction through early identification of maternal health risks. Additionally, by reducing the transmission of infectious diseases, it can significantly reduce associated healthcare expenditures for individuals and the healthcare system.⁹

In February 2023, the Egyptian Presidency launched a comprehensive premarital examination initiative. This program mandates medical screenings and counseling for prospective couples to enhance their overall health and prevent the transmission of diseases within families. The initiative aligns with the newly enacted personal status law and requires a premarital medical screening certificate with a QR code for all couples before marriage. The medical examinations provided by the initiative include the detection of noncommunicable diseases (diabetes, high blood pressure, obesity), as well as the detection of infectious diseases (virus B, virus C, and immunodeficiency virus). Human), in addition to performing tests (blood type, Rh, hemoglobin), as well as analysis for thalassemia and filling out the mental health questionnaire.¹⁰

Awareness towards PMC among students influences its practice and success rate because they can play a key role in propagating and educating their communities about the importance of PMC. Therefore, our objectives in this study are to assess the awareness level as well as factors affecting level of awareness of university students about importance of PMC within the campus of Kafr El-Sheikh University.

METHODS

It is a descriptive cross-sectional study with analytic component conducted on university students from two medical (Medicine and Dentistry) and two nonmedical faculties (Arts and Commerce) at Kafr el-Sheikh University University during the year 2023-2024. The study protocol was approved by the Institution Research Record (IRB) of Mansoura Faculty of Medicine. Additional approvals were obtained from the dean of each college to collect the samples to whom the questionnaire will be distributed.

The study was conducted among Egyptian students studying their last year at Kafr El-Sheikh University. Students were chosen from two medical and two nonmedical faculties of both male and female to assess their awareness towards premarital counselling services. Table (1) shows their distribution of included students according to gender and college. Inclusion criteria included last year Egyptian students, both male and females studying at Kafr El-Sheikh University, aged over 18 years. Non-Egyptian students not included in the study.

Sample size: Sample size calculation was based on awareness level of university student about PMC retrieved from previous research.11 Using Epi info version 7.2.4.0 software package created by World Health Organization and Center for Disease Prevention and Control (CDC), Atlanta, Georgia, USA in 2002 to calculate sample size based on 18 % awareness, 95% CI with an acceptable margin of error +/- 5 then the total sample size will be 227 students and 20% was added to compensate for possible attrition then total sample size will be 277 at least.

Table 1: Sample size and sampling distribution by type of students

	Total numbers of students studying	Percentage out of total students	Sample size needed	Male students included	Female students included	Total student included
Faculty of Medicine	420	8.0	22	7	15	22
Faculty of Dentistry	576	8.6	24	4	20	24
Faculty of Arts	3125	40.6	114	19	95	114
Faculty of Commerce	3400	42.8	120	20	100	120
Total	7521	100	280	50	230	280

Table 2: Awareness of premarital counseling by sociodemographic characters, medical history among studied students

	N (%)	Total awareness score Median (range)	Test*	P value
Sex				
Males	50 (17.9)	8 (3-17)	0.152	0.879
Females	230 (82.1)	9 (1-19)		
Residence				
Urban	164 (58.6)	8 (2-19)	1 = 0	0.444
Rural	116 (41.4)	10 (1-18)	1.59	0.111
Marital status				
Single	201 (71.8)	8 (1-19)		
married	46 (16.4)	10 (2-16)	13.53	0.001*
Engaged	33 (11.8)	12 (4-19)		
College				
Medical	46 (16.4)	15 (14-19)	4 50	0.001*
Non-medical	234 (83.6)	8 (1-14)	4.70	0.001
Socioeconomic status				
Low	86 (30.7)	7 (6-11)		
Middle	125 (44.65)	11 (1-14)	40.05	0.001*
High	69 (24.65)	15 (2-19)	40.37	
Consanguinity between parents				
Yes	215 (76.8)	9 (1-18)	0.208	0.690
No	65 (23.2)	9 (2-19)	0.398	
Diabetes				
Yes	7 (2.5)	7 (2-16)	0.804	0.371
No	273 (97.5)	9 (1-19)	0.894	
Hypertension				
Yes	12 (4.3)	9 (6-16)	1.07	0.283
No	268 (95.7)	8 (1-19)	1.07	
Hereditary blood disease				
Present	7 (2.5)	8 (6-12)	0.200	0.825
Absent	273 (97.5)	9 (1-19)	0.209	0.035
Presence of Hereditary blood diseases in family				
Present	81 (28.9)	9 (2-19)	0.241	0 722
Absent	199 (71.1)	8 (1-19)	0.341	0./33

Test: Mann Whitney U test or Kruskal-Wallis

Sampling technique: Proportionate random sample was retrieved according to number of students in medical and non-medical faculties, then simple random sampling from each college was retrieved

through computer generated random tables using SPSS version 25 depending on student list from student affairs from each college as sampling frame as shown in Table (1).

Table 3: Awareness of premarital counseling by sex among the studied students

	Total	Males N=50 (%)	Females N=230 (%)	P-value*
Heard about pre-marital counselling	83	12 (24.0)	71 (30.9)	0.335
Know if PMC counselling is mandatory	67	10 (20.0)	57 (24.8)	0.714
In your opinion, what's the best purpose for PMC?				
Prevention of genetic diseases	88	16 (32.0)	72 (31.3)	
Prevention of infectious diseases	18	4 (8.0)	14 (6.1)	0.599
Couple health	116	23 (46.0)	93 (40.4)	
Don't know	58	7 (14.0)	51 (22.2)	
Did you hear about Sickle cell anemia?	130	26 (52.0)	104 (45.2)	0.383
Did you hear about thalassemia (Mediterranean				
anemia)?	257	45 (90.0)	212 (92.2)	0.612
Did you hear about viral hepatitis B routes of				
transmission?	235	41 (82.0)	194 (84.3)	0.682
Did you hear about viral hepatitis C routes of				
transmission?	202	42 (84)	160 (69.6)	0.039**
Did you hear about HIV routes of transmission?	182	38 (76)	144 (62.6)	0.075
The results of the examination affect the continuation				
of the marriage	46	11 (22.0)	35 (15.2)	0.262
Screening should be mandatory	96	18 (36.0)	78 (33.9)	0.779
Do you think that consanguineous marriage increases				
the risk of hereditary diseases?	55	10 (20)	45 (19.6)	0.944
Medical advice after pre-marital counselling is				
necessary	229	39 (78)	190 (82.6)	0.444
Know if laboratory investigations are available in				
Egypt ?	133	26 (52)	107 (46.5)	0.482
Did you know the location of the laboratory				
investigation?	159	29 (58.0)	130 (56.5)	0.876

PMC, premarital counseling; *Chi-Square test; **statistically significant



Figure 1: Source of information about premarital counseling among studied students

Systematic random sample was needed to retrieve the required sample from each college. Sampling frame was retrieved from students' affairs, sampling interval was chosen according to the number of students and needed sample size per college, and then the first student was chosen randomly. All students were chosen by a systematic random sample. Two fixed days were chosen randomly per week. Study tool: Data was collected using a constructed self-administered questionnaire in Arabic language which included 3 parts. Informed verbal consent was obtained from each participant sharing in the study. Part I: assessed socioeconomic characters, e.g., age, sex, residence and marital status, college, mother's education, father's education, working status of the mother, working status of the father, use of a computer, per-capita income, family size, crowding index, proper sewage disposal, proper refuse disposal, and these variables according to the modified Fahmy and El-Sherbini scale for the scoring system for socioeconomic status, with those with less than a 40% score being classified as 'low SES', those with more than a 70% score being classified as high SES and the rest being classified as medium SES.¹² Part II: assessed the student medical history. It involved personal history such as consanguinity between parents, past history such as chronic illnesses such as

	Total	Non-medical N=234 (%)	Medical N=46 (%)	p-value*
Heard about pre-marital counselling	83	37 (15.8)	46 (100)	0.001**
Know if PMC counselling is mandatory	67	35 (15.0)	32 (69.6)	0.001**
In your opinion, what's the best purpose for PMC?				
Prevention of genetic diseases	88	70 (29.9)	18 (39.1)	0.001**
Prevention of infectious diseases	18	10 (4.3)	8 (17.4)	
Couple health	116	96 (41.0)	20 (43.5)	
Don't know	58	58 (24.8)	0	
Did you hear about Sickle cell anemia?	130	85 (36.3)	45 (97.8)	0.001**
Did you hear about thalassemia (Mediterranean				
anemia)?	257	216 (92.3)	41 (89.1)	0.542
Did you hear about viral hepatitis B routes of				
transmission?	235	40 (17.1)	5 (10.9)	0.293
Did you hear about viral hepatitis C routes of				
transmission?	202	157 (67.1)	45 (97.8)	0.001**
Did you hear about HIV routes of transmission?	182	141 (60.3)	41 (89.1)	0.001**
The results of the examination affect the continuation				
of the marriage	46	40 (17.1)	6 (13.0)	0.001**
Screening should be mandatory	96	54 (23.1)	42 (91.3)	0.001**
Do you think that consanguineous marriage increases				
the risk of hereditary diseases?	55	32 (13.7)	23 (50)	0.001**
Medical advice after pre-marital counselling is				
necessary	229	189 (80.8)	40 (87.0)	0.320
Know if laboratory investigations are available in				
Egypt?	133	111 (47.4)	22 (47.8)	0.961
Did you know the location of the laboratory				
investigation?	159	134 (57.3)	25 (54.3)	0.715

Table 4: Awareness of premarital counseling by college among studied students

PMC, premarital counseling; *Chi-Square test; **statistically significant

Table 5: Regression analysis for predictors of total awarene	ss of premarital counseling among studied
students	

Predictors	Standardized Coefficients (β)	t	p value
Marital Status (engaged/other groups)	0.170	2.96	0.003*
College (medical/non-medial)	0.669	13.37	0.001*
Socioeconomic status (high/other groups)	0.047	0.94	0.347

hypertension, diabetes mellitus, and hereditary diseases, and family history of hereditary diseases. In this part, all questions were answered by yes or no. **Part III:** assessed the awareness of the students towards PMC and testing. Initially, respondents were asked if they had heard of PMC, with options of "yes" or "no". Subsequently, they were queried about their awareness of PMC becoming mandatory in the country, with response options of "yes", "no", or "don't know". Finally, participants were asked to identify the primary goal of PMC, selecting options

such as preventing genetic diseases, preventing infectious diseases, promoting couple health, or indicating they were unsure. Part III also assessed the awareness of the students about routes of transmission of specific diseases targeted by PMC, including sickle cell anemia, thalassemia, hepatitis B (HBV), hepatitis С (HCV), and human immunodeficiency virus (HIV), and they could respond with "yes" or "no". Participants were asked if they believed the results of the premarital examination would impact the continuation of the marriage. They

could respond with "yes", "no" or "don't know". Students were also asked to share their opinions on whether PMC should be mandatory. Then we asked participants about the potential risks of marrying a relative, the importance of doctor's advice after premarital tests, the availability of laboratory investigations, and if they knew about their settings. They answered "yes" or "no" to each question., then we ask about students' main sources of information about PMC, offering options such as television, radio, newspapers, books, the internet, friends, relatives, or multiple choices and last question was about exploring the reasons why individuals might refuse premarital examinations, providing response options like lack of perceived importance, time constraints, fear, financial problems, potential interference with wedding plans, not to interfere with God's will or others.

Questionnaires were administered to the entire students immediately following college-wide lectures in collaboration with students' affairs. Prior to questionnaire distribution, informed consent was obtained from all students. Participants were afforded the opportunity to complete the questionnaire at their convenience, and non-participation was fully respected.

The Arabic version of the questionnaire was distributed to all students by researchers. The questionnaire was self-administered, and data collectors were available during filling out the questionnaire to respond to any questions from study participants. Questionnaire filling and response duration took about 5-10 minutes. Only questionnaire sheets with full data were included in the study analysis. Content validity of questionnaires was assessed by a gory of 9 experts in the field of community medicine. Questions of the studied questionnaire were assessed for relevance, trueness and clarity with item validity index was excellent for all questions ranging from 0.89 to 1. Cronbach alpha was assessed for internal consistency of total scale and demonstrates value 0.82. As regard scoring of questionnaire for correct answers it was scored as one and incorrect as zero then summation of all questions was done, we don't have cut off point but we depend on median total score value.

Statistical analysis: Data analysis was performed by SPSS software, version 26 (SPSS Inc., PASW statistics for windows version 26. Chicago: SPSS Inc.). Qualitative data were described using number and percent. Quantitative data were described using median (minimum and maximum) for non-normally distributed data and mean± Standard deviation for normally distributed data after testing normality using Kolmogrov-Smirnov test / Shapiro Wilk test. The significance of the obtained results was judged at the (0.05) level. Chí-Square test was used to compare qualitative data between groups as appropriate. Mann Whitney U test was used to compare between 2 studied groups for non-normally distributed data. Multiple linear regression was used after log transformation of total awareness score.

RESULTS

The present study investigated a sample of 280 students with a mean age of 22.5 years old; 17.9% were males and 92.0% were non-medical students. Marital status distribution revealed that 71.8%, 16.4%, and 11.8% of the participants were single, engaged, and married, respectively. In terms of residence, 58.5% are urban areas. Socioeconomic status indicated that 30.7%, 44.6%, and 24.7% of the students belonged to low, middle, and high socioeconomic groups, respectively; 76.8% of participants have a positive history of consanguinity; 2.5% of participants reported being diagnosed with diabetes; an additional 4.3% of participants indicated having hypertension; a small percentage (2.5%) of participants reported having hereditary blood disease; and 28.9% of participants indicated a family history of hereditary blood diseases, as shown in Table (2) Among studied students, 29.6% of students heard about PMC, 23.9% knew PMC is mandatory, while 51.4% didn't know if it was mandatory or not, and 31.4% of students considered that the aim of the PMC was prevention of genetic diseases. "Couple health was reported by 41.4% of students, while "Prevention of infectious diseases" appeared to be the least reported by 6.4% of students. A percentage of 46.4% of students heard about sickle cell anemia, and 91.8% knew about thalassemia. Students were familiar with HBV, HCV, and HIV with percentages of 83.9%, 72.1%, and 65%, respectively. The continuation of the marriage was affected by the results of the examination in 16.4%, while 63.9% of students reported that the marriage wouldn't be affected. A percentage of 34.3% of students confirmed that PMC should be mandatory. Relative marriage was considered risky for 19.6% of students; 81.8% of

students reported that medical advice after PMC is important. Students who knew about laboratory investigation availability and setting were 47.5% and 56.8%, respectively.



Figure 2: Causes of refusing premarital examination among studied students

A statistically significant association between the

median score of the questionnaire asking about students' awareness of PMC and the following factors: marital status, college enrollment, and socioeconomic status (p=0.001 each). Female students exhibited a significantly higher median score on the assessment compared to males. Engaged students achieved the highest median score, followed by single and then married students. A clear distinction was observed based on academic field, as medical students attained a substantially higher median score than non-medical students. Students from high SES backgrounds achieved the highest median score, followed by those from middle and then low SES backgrounds. No statistically significant relationships were observed between students' awareness and the following: sex, residency, parental consanguinity, presence of diabetes, hypertension, hereditary blood diseases, or family history of hereditary blood diseases (Table 2). As regard source of information about PMC among studied students, 33.7% of students report the internet, followed by television and radio (24.1%), followed by newspapers and books (15.7%), friends (16.9%), and relatives (4.8%), and 4.8% of participants indicated utilizing more than one source for information gathering (Figure 1). As regard causes of refusing premarital examination, "Not to interfere with God's Will," reported by 27.4% of students, 22.8% report having multiple reasons for refusing PMC. "Fear of tests' results" was reported by 13.7%, followed by perceiving the screening as unimportant (13.2%), time constraints (10.2%), and potential disruption of marriage plans (5.1%) were also reported as reasons for refusing PMC. Financial limitations appeared to be the least reported (4.6%), while other unspecified reasons accounted for only 3% of refusals (Figure 2).

A statistically significant difference between males and females as regards the question asking about knowing viral hepatitis C routes of transmission with higher knowledge among males than females as shown in Table (3).

A statistically significant better awareness among medical than non-medical students as regard the following questions "Know what pre-marital screening", "Pre-marital screening mandatory", "The aims of pre-marital screening", "Know what sickle cell anemia", "Know what viral hepatitis C (routes of transmission"), "Know the ways of transmitting HIV", The results of the examination affect the continuation of the marriage", "Screening should be mandatory", "It is dangerous to marry relatives" as shown in Table (4).

Multiple linear regression for predictors of perception total score after log transformation demonstrates that marital status and college are statistically significant predictors of change in total awareness of PMC among studied students with the following prediction equation: total awareness of PMC marital status (beta coefficient + 0.170) and college (beta coefficient -0.669) as shown in Table (5).

DISCUSSION

The present study suggests that there was a statistically significant association (p-value=0.001) between student awareness and socioeconomic status, including parents' education and occupation, use of computers, per-capita income, family size, crowding index, proper sewage, and refuse disposal, as shown in Table (2) These results were agreed with the Aljulifi et al. 13 study that was carried out in Saudi Arabia on citizens from 8 cities, in which there was a statistically significant association between the level of awareness and socioeconomic characteristics, including age, marital status, and education level. Similarly, in Saudi Arabia, the Al-Shroby et al. ¹⁴ study that was conducted on participants randomly selected from all 20 health regions illustrated that a statistically

significant association was observed between awareness and most of the sociodemographic variables. This comes in disagreement with the study carried out in Egypt by Alkalash et al.¹⁵ on citizens attending a family health center and reporting that there was no statistically significant association between participants' socioeconomic level and awareness. The present study found a statistically significant association (p-value=0.001) between students' awareness of PMC and their marital status, and the engaged students had the highest score. These findings were in agreement with the study carried out by Sabbah et al.¹⁶ on clients attending maternal and child health in Egypt and demonstrated that there was a statistically significant association between marital status and total awareness regarding PMC (pvalue=0.021), and the single (not married) had the highest score. Additionally, in Saudi Arabia, the Al-Shroby et al.¹⁴ The study was conducted on citizens randomly selected from all 20 health regions in Saudi Arabia and showed an association between the level of knowledge about PMC and marital status, with previously married participants having a higher knowledge score than those not married before. Also in Saudi Arabia, Aljulif et al.13 conducted a study on citizens from 8 cities and illustrated that a significant association was observed between the level of awareness and marital status (p-value=0.014), showing that the married group had the highest score. In contrast, the AL-Shafai et al.⁸ study was conducted among Qatar University students and showed that there was no association (p-value=0.47) between awareness level and marital status. Also in Egypt, the Osman et al.¹⁷ study carried out on Suez Canal University students reported that the marital status of the participants was unrelated to the degree of awareness about PMC (p-value=0.11). The present work showed a statistically significant association between student awareness and college (pvalue=0.001). This means students from medical colleges as faculty of medicine and dentistry were more aware of PMC than students from nonmedical colleges as faculty of arts and commerce (pvalue=0.001). So, integrating basic information about premarital care into the curriculum could address the knowledge gap among non-medical students regarding this service. Similarly in Qatar, the AL-Shafai et al.⁸ study that was carried out on Qatar University students reported students enrolled in

health-related colleges demonstrated a significantly higher level of awareness regarding premarital care compared to their peers in non-health-related fields (p-value < 0.001). Also in Saudi Arabia, a study conducted in 2019 by Alhowti et al.18 among Saudi Tabuk University students illustrated that medical students had a higher awareness level than their counterparts (p-value=0.024). This was also agreed with the Osman et al.¹⁷ study that was conducted on university students in Egypt and reported that clinical colleges had a higher percentage of satisfactory awareness (90.4%) than theoretical colleges. This finding disagreed with a study that was conducted by Khalil et al.¹⁹ at King Saud University targeting female students, in which there was no statistically significant association (p-value=1.89)between intention behavior and college. The present study illustrated that 29.6% of the students heard about PMC. In Oatar, Al Shafai et al.⁸ study that was conducted on university students and reported that approximately only (21%) heard about PMC. In contrast, Hamed et al.⁶ study that was carried out on future couples attending maternal and child health center in Egypt and reported that approximately three-quarters of the studied future couples (73.3%) had heard about PMC. Also in Saudi Arabia, Aljulifi et al.¹³ (2024) study that was conducted on citizens from 8 cities and revealed that 98.4% of participants heard about premarital counselling. Additionally, Al-Qahtani et al.²⁰ study that was carried out on university students in Saudi Arabia and found that 76% of King Khalid University students heard about PMC. In Nigeria, Adeyemo et al.²¹ study that was carried out on university students of Medical Sciences and illustrated that 85.1% of students heard about premarital genetic counselling. Regarding students' source of knowledge about premarital counselling in our work; the internet served as the highly frequent source of information for students (33.7%) followed by television and radio (24%), while the least frequent (4.8 %) of students received their information from more than one source as (internet, TV or Radio, newspapers or books, relatives, friends and relatives). This go parallel with Osman et al.¹⁷ study that was conducted among Suez Canal University students in Egypt and reported that more than three quarter showed that media had an important role in increasing health awareness. These findings agreed with Alkalbani et al.²² study that was carried out on Omani study participants from different majors at a national

governmental university in Oman and found that media is the most frequent source (46.8%) from which they heard about premarital counselling followed by newspapers (8%). In contrast, Hamed et al.⁶ made a study on future couples attending maternal and child health center in 2022 and reported that friends and family were the main source of knowledge about PMC and genetic counseling for 46.90% of participants followed by the internet (21.40%). Additionally, Alkalash et al.¹⁵ study was carried out on citizens attending family health center and reported the healthcare provider was the most frequent source of information about PMC (44%), while the least frequent (9.4%) received their information from more than one source as health care providers, family and relatives, mass media and school.

Limitations of the study: The questionnaire focused exclusively on assessing students' awareness of premarital care without including questions about attitudes and practice. The findings of the study were only applicable to university students and not youth in other settings. Since it was a single- University experience, results should be generalized with caution.

CONCLUSIONS

Medical students and engaged students had higher levels of awareness of premarital counseling and its services in both univariate and multivariate analysis. The most common reason for refusing PMC was "not to interfere with God's will" (27.4%), followed by "fear of test results" (13.7%). The internet was the primary source of information (33.7%), followed by television and radio (24.1%). Health education campaigns should target university students to highlight the importance of premarital counseling. Educational elective curriculum can be added for students in nonmedical faculties.

Ethical consideration

The study protocol was approved by the Institution Research Record (IRB) of Mansoura Faculty of Medicine code MS.23.04.2367. Informed verbal consent was obtained from each participant sharing in the study.

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that could have appeared to influence the work reported in this paper.

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