Awareness and attitude of university students regarding premarital counseling and examination

[1*]Hanaa Tharwat Osman; [2*]Zeinab Ali Ali Baraia; [3*]Inaam Hassan Abdelati

[1*]Nursing Specialist at Al-Qurain Hospital
[2*]Lecturer of Maternity, Obstetrics and Gynecological Nursing, Faculty of Nursing- Suez Canal University
[3*]Assist. Professor of Maternity, Obstetrical and Gynecological Nursing, Faculty of Nursing -Port Said University

Abstract

Background: Premarital counseling generally refers to a process designed to enhance premarital relationships leading to stable marriages and to more satisfaction. **Aim**: study aimed to assess University student's awareness regarding premarital counseling and examinations. **Study design:** Descriptive design was conducted in this study. **Study sample**: A total of 400 students from Suez Canal University at level four from diversity of faculties. **Tools**: two tool was used (Self-administered Structured Questionnaire, Likert scale) to assess studied student's awareness and attitude regarding premarital Counseling and examination. **Results:** more than half of studied students (60.5%) aware about premarital Counseling. Meanwhile about three quarter of the studied students (74.5) had positive attitude. No significant relation between scores of student's knowledge about premarital examination and socio demographic characteristics of studied students, however female significantly had adequate knowledge regarding premarital examination. Clinical colleges had significantly higher percentage of satisfactory knowledge (90.4%) than theoretical colleges (81.25%). **Conclusion**: The majority of studied students had satisfactory knowledge regarding premarital examination, and had satisfactory knowledge about its importance and examination. Positive attitude was found among majority of studied students .Female students were more oriented about PMC rather than males. **Recommendation**: developing educational programs to raise awareness of males and families about PMC in universities.

Key words: premarital counseling, awareness. Knowledge and attitude

1. Introduction

Premarital counseling is a therapeutic intervention to future couples who plan to marry. It is a skill aims to provide the couples with information on ways to improve their relationship. Premarital counseling programs have emerged as a way to lower the chances of divorce and also to increase couple satisfaction after marriage Typically couples who participate in premarital counseling demonstrate overall positive psychological health and to have serious relationship problems. It occurs in a wide range of settings and is provided by practitioners from a different profession (e.g, clergy, professional, and lay counselors, community agency workers) *(Sampson 2016; Kit and Tang, 2018)*.

Premarital counseling 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 them

about male and female a reproductive facts , menstruation, ovulation , fertilization , family planning methods and the common preventable problems for couples also their offspring through a comprehensive group of tests especially for couples in a consanguineous marriage in order to help them take the necessary precautions or treatment (e.g. Rh incompatibility and Down's syndrome)*(Hamamy, 2012 ;Hu et al, 2018;Desai andGoel, 2018)*.

Pre-marital examination considered the most effective means of prevention that could limit the birth of affected children by genetic diseases, through minimizing the marriage of the carriers of the blood genetic disorder. It is also the most appropriate procedure, as it is generally acceptable from the religious and ethical point of view as well as economical requirements *(Goonasekera et al ,2018)*.

In Egypt, the first checkup center has been operating since mid-2001 at Nasser Institute. Nowadays, PMC became compulsory by law in many Arab countries including Egypt. 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 according to *WHO (2017)*, a medical certificate has often

been provided without the medical checkup being carried out. Nowadays, PMC became compulsory by law in many Arab countries including Egypt *(WHO, 2017)***.**

Nowadays premarital counseling and examination are of great importance in Egypt because of high prevalence of divorces. The Central Agency for Public Mobilization and Statistics (CAPMAS) stated in its annual report on marriages and divorces. Health education and the media can work together to increase awareness in the premarital adolescent students. Also, promotion and protection of teenager females from reproductive health hazards. So, it's important to assess university students' awareness about premarital counseling and examination *(CAPMAS, 2016).*

Nurses have a crucial role to play in premarital care and examination. They communicate with clients verbally and non-verbally so it requires much skill to do this and with the considerations of various domains: biological, psychological, socio culture, spiritual and environment. The role of 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, role model and as a

counselor*(Leifer, 2014 ;Muziwandile Robert,. 2017)*.

1.2. Significant of the study

Premarital counseling is a skill aims to provide the couples with information on ways to improve their relationship, and reduce transmission of diseases to children. At present blood genetic disorders 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%. Blood genetic disorders are a major load on organizations and healthcare systems. Its prolonged (chronic) nature needs life-long medical care and high cost therapies also specific treatment *(Kaufman et al., 2016)*.

All of these mentioned justifications 2.2 Egyptian Premarital Screening and Genetic Counseling (PMSGC) program was introduced in 1946 as a chief component of pre-marital and child health care services. Service of wellbeing began to give such administrations gratis for imminent companions in either maternal and child wellbeing focuses or concentrated wellbeing focus, yet this administration still extremely constrained and a large portion of the couples get hitched with no arrangement which may

build the maternal and fetal risk *(Ali et al., 2018)*.

So we Assessed Suez Canal University student's awareness regarding premarital counseling and examinations because this stigma subject among University student's also Students who will graduate within few years are in a good position to play a major role in propagating the importance of PMC and educating their families regarding its practical application in the case of knowing their awareness and attitude towards PMC

2. Subject and Methods

2.1. Aim of the Study: The current study aimed to assess Suez Canal University student's awareness regarding premarital counseling and examinations.

2.2.Study design: A descriptive design was conducted in this study at Suez Canal University (SCU) from May to October 2018.

2.3. The sample of the study: A total sample of 400 students at level four were recruited as sample size determined by using the following equation: **(Kanda, 2013)**

$$N = \frac{Z^2 * (p) * (1-p)}{c^2}$$

$$\frac{1.96^2 * (6535) * (1-6535)}{4.75^2}$$

$$N = 400$$

Z= Z value (e.g. 1.96 for 95% confidence level)

p= percentage picking a choice, expressed as decimal
(.5 used for sample size needed)

c = confidence interval, expressed as decimal
(e.g., .04 = ±4)

2.4. Study setting: The population for this study Suez Canal University students at level four from13 faculties.

Colleges enrolled in the data collection

Collage	N	%
Literature	87	21.8
Commerce	109	27.3

Education	60	15.0
Nursing	15	3.8
Computers and Information	9	2.3
Agriculture	16	4.0
Tourism and Hotels	7	1.8
Pharmacy	18	4.5
Dental	15	3.8
Medicine	19	4.8

2.5. Study subjects:

- The study included 400 students; the sample was taken from all facilities of Suez Canal University, calculated from list of students at level four according to Central Student Affairs **(2017/2018)**, 6535 students. Number of students was chosen by a convenient purposive sample from each faculty was used, unbiased estimator of the total of the fourth year. Age 19-25 year married students were excluded. Pilot study was carried out on 40 students (10%) from the Suez Canal University, and these were not included in the total sample of the research work to ensure stability of the answers.

- **2.6. Tools of data collection:**

- **2.6.1.Tool (1): Self-administered Structured Questionnaire:**

  The instruments used for this study is Self-administered Structured Questionnaire (first tool) It was designed by the investigator after reviewing the related current and previous literature to collect data that cover the aim of the study. It was divided into three parts and consisted of (29) questions of multiple choice types and (19) questions put true, false or don't know. The first part was covered the study samples' general characteristics such as gender, marital status, religion, parents' education level and A s profession (Q 1 to 19).

  The second part was designed to assess student's awareness regarding premarital counseling and examination, which included premarital counseling and examination definition, importance and components / services offered through it (Q 20 to 29). The third part was designed to assess student's knowledge regarding premarital examination. It included (19 questions) true, false or don't know. Each question were scored three marks for correct answer and two for incomplete answer while wrong answer were scored one. The items of score were submitted and divided into satisfactory and un satisfactory, 50% or more considered

satisfactory and less than 50% un satisfactory.

- **2.6.2. Tool (2): Likert scale:**

This tool was used to assess student's attitude regarding premarital counseling and examination each item was evaluated. It contained 12 items and was rated by three point Likert scale; disagree=1, uncertain=2, and agree=3.this tool developed by (*Al-Haddad, Hu et al,2014*) and modified by the researcher.

2.6.3. Scoring system:

A scoring was given to each question and a total of attitude scores were 36 points A total score of >27 points (>75%) conveys a positive attitude toward premarital counseling, while a total score of 18-27point (50-75%) conveys equivalent attitude toward pre-marital counseling and a total score of <18points (<50%) conveys negative attitude toward pre-marital counseling.

2.6.4. Reliability of the Tool:

Coefficient of reliability of the evaluating tools were measured by Cronbach's α alpha. **Reliability Statistics:**

Tool	Cronbach's Alpha	No of Items
student's awareness regarding premarital counseling and examination	0.588	10
student's knowledge regarding premarital examination	0.543	19
Likert scale	0.297	12
Total	0.684	41
Total + socio demographic	0.611	60

2.7. Field work:

Data were collected within a six month period started in May 2018 and ended in October 2018. The investigator was attain each faculty of Suez Canal University for three days per week to collect data .Data were collected from Suez Canal university students. The investigator selected the subject according to previous criteria (age 19-25 years - married students were excluded). The investigator was interviewed group of students for 15 to 20 min utilizing interviewing questionnaire. Forth groups on day and each group contained 5 students starting by introducing herself to each student and then explaining the aim of the study to obtain student consent to participate in the study. The self-administered questionnaire was distributed to students to fill it in then the research assessed student's attitude regarding premarital counseling and examination by using schedule attitude (likert scale) and the investigator was available to clarify any question. Some students was not gave me questionnaire approximately 5%. The investigator was met students in the break time between lectures in the stadium from 9 AM to 3 PM.

2.8. Ethical Consideration:

The investigator approval was obtained from Scientific Research Ethical Committee, Faculty of Nursing, and Suez Canal University before starting the study. The aim of the study was explained to each student before applying the tools to gain confidence and trust. An oral consent was obtained from each student prior to participate in the study. Data was confidential and coding system was used for it. Each student has right to withdraw from the study at any phase. There was no harm to the students. Total of data collection did not touch students dignity or traditional and culture issues. All tools of data collection

were burned after statistical analysis to maintain confidentiality of the study.

2.9. Administrative design:

An official written approval letter clarifying the purpose of study was obtained from Dean of Nursing faculty to Dean of each faculty of Suez Canal University.

2.10. Statistical design:

Data were categorized, coded and analyzed   according to appropriate statistical methods and tests then results were presented in suitable tables, figures, and graphics. Data were then imported into Statistical Package for the Social Sciences (SPSS version 20.0) software for analysis.

3. Results

Four hundred individuals were enrolled in this study to fulfill its aim. Age ranged between19 to 25 age was distributed as **20.77±1.52**, regarding sex distribution male were 34.8% and female 65.3%. Majority of them were Muslim (93.3%).Students who were from urban (51%).Regarding parents education majority of students parent were educated. Regarding parent's occupation (57.8%) 0f students parent were employee fathers and (65%) house wives' mothers.

Figure (1): Awareness of students toward premarital counselling. It   reveals that 60.5% of studied students had

awareness regarding premarital counseling and examination.

Table (1): Distribution of Knowledge regarding Premarital Examinations and Investigation among studied students. It reveals that the majority of studied students (92.5%) knowing the health history help to provide early treatment and prevents many complication between children. As shown more than half of studied students thought that premarital medical examination and tests avoid family tragedy, the most important means of controlling the spread of genetic diseases, held in the clinic of counseling and necessary for those who are intending marriage (72.0%, 76.5%, 54.75%, 76.5% respectively),support premarital medical examinations and tests, refuse to marry someone who carries the disease, Health awareness helps to take the appropriate decision based on the results of premarital examination and medical tests (78.5%, 54.6%, 84.5%, respectively).Also shows that more than three quarter of studied sample (78.25%) media has an important role in increasing health awareness.

Figure (2): Total Knowledge of studied students toward premarital

examination and investigation. It reveals that the majority of studied students (86.75 %) had satisfactory knowledge regarding premarital examination and investigation.

Figure (3): Total attitude of studied students toward premarital counseling**.** It reveals that, (74.5%) of studied students had positive attitude toward premarital counseling and (25.5%) of studied students had negative attitude toward premarital counseling.

Table (2): Comparison between male and female regard adequate knowledge. It reveals that femal significantly associated with adequate knowledge regard examination.

Table (3): Relation between total score of studied student's awareness regarding premarital examination and socio demographic data. It shows that adequate awareness significant associated with rural, Read & write and Primary father education and also with own business father and retired father. On the other hand there no statistical significantly relation between total score of students awareness and mother education, mother occupation and consanguinity (p value more than, 5).

Table (4): Relation between total score of studied student's knowledge about premarital examination and socio

demographic data. It reveals that adequate knowledge significant association with sex.

Table (5): Relation between total score of studied student's attitude regarding premarital awareness and socio demographic data. It reveals that no significant association or relation.

Table (6): Correlation between awareness with Parent consanguinity, Intend marriage consanguinity and Family history of blood disease as Fauvism. It reveals that awareness had significant indirect weak correlation with Parent consanguinity /*89(p=0.035, Rho=-0.106), significant indirect weak correlation with Intend marriage consanguinity (p=0.018, Rho=-0.119), and had insignificant correlation with family history of blood disease as fauvism.

Table (7): Comparison between total score of studied student's knowledge about premarital examination among colleges**.** It showed that clinical colleges had significantly higher percentage of satisfactory knowledge (90.4%) than theoretical colleges (81.25%)

4. Discussion

Interpretation and discussion of results obtained from the current study were presented in two main parts: the first part describes the Suez Canal University

student's awareness and attitude regarding premarital counseling and examination. The second part describes the difference between male and female student's awareness and attitude about premarital counseling and examination.

Regarding the awareness of premarital counseling the majority of studied students heard about premarital exam and about two third thought consanguinity marriage are the main cause of genetic diseases. This result was in agree with **Elyazid et al., (2014)**, who found that about two- thirds of the participants heard before about PMC, in their Comparative assessment of knowledge and attitude towards premarital care service among medical and non-medical students of Al Azhar University.

Also, in a cross-sectional study about Knowledge and attitude of students in Menoufia University, Shebin Elkom city toward premarital care revealed that most of their participants from theoretical faculties heard before about PMC services **Farahat et al., (2014)**.these finding may be due to high educational level of studied students.

Regarding source of knowledge, in current study revealed that relatives and friends and mass media were the most frequent ones among studied students. More

than of three quarter showed that media had an important role in increasing health awareness. This clarifies the importance of mass media and health education for families and students for proper dissemination of information about PMC program. These findings were supported by the findings of a study done by **Mahaini (2009),** were showed that media and friends are the primary sources of health information related to reproductive health for young women and men even if they are educated.

Also supported by Egyptian study performed by **Al Azeem et al., (2011)** revealed that the television was the main source of knowledge and were about two-thirds of participants, followed by relatives. This study was about Promotion of knowledge and attitude towards premarital care: An interventional study among medical student in Fayoum University.

Furthermore, **Farahat et al., (2014)**,and **Kabbash et al., (2019)** reported that primary source of knowledge of less than half of participants was media followed by relatives and friends of less than one third of participants. In their work about Perception of Importance of Premarital Counseling among Medical Students of Tanta University, Egypt. Many studies supported these findings because nowadays

every person use the social media to gain their information.

Another work about, Thalassemia and premarital screening: potential for implementation of screening program among young people in Pakistan found that electronic media the primary source of information for about one quarter of their participants **Mirza et al., (2013)**.

This was in contrast with **Elyazid et al., (2014**) where their results revealed that university curriculum and health care workers were the most frequent sources among medical students and this may be nature of their study. Also **Oluwole et al., (2010)** found that the majority of their respondents were informed by health care workers were study the awareness of Premarital Genetic Counseling among Youth Corpers in South-West Nigeria**.**

In addition, the role of media is still not fully utilized to circulate the significance of PMC as a preventive program. In the same line, **Ibrahim et al.,(2011)** in their work, An educational program about premarital screening for unmarried female students in King Abdul-Aziz University, Jeddah were showed that the majority source of information were relatives and friends followed by mass media.

Also another study about Premarital Screening and Genetic Counseling program: Knowledge, attitude, and satisfaction of attendees of governmental outpatient clinics in Jeddah found that relatives and friends were the source of information **Ibrahim et al., (2013)**. From the researcher point of view, these differences in source of information may be importance of combination of all categories in disseminating information about PMC.

The current study showed that, less than two third had adequate awareness about premarital counseling and examination compared to **Kabbash et al., (2019)** who found that the majority admit that PMC can detect hereditary diseases and sexually transmitted infections ,among medical students.

Maine while, more than half were willing to use free PMC and majority expressed awareness of premarital investigations. This result was in agreement with **Ali et al., (2018)** who found that most of the study participants were perceptive about the premarital screening availability, in their study about Perception about premarital screening and genetic counseling among males and females nursing students.

In addition, **Al-Qahtani et al., (2019)**, in their work about Perception of

premarital counseling among King Khalid University students mentioned that ages ranged from 18 years to 27 years old and 56.6% at medical colleges. Exact less than three quarter of the participants were aware of PMC and majority reported its importance.

Concerning the definition of premarital counselling, the current study revealed that more than three quarter of studied students had correct incomplete information about it. These findings supported by the findings of a study done by **El-Ghany et al. (2010)** they found that more than one third of their participants were unable to define premarital care. Which study the Knowledge and Attitude about Pre-Marital Counseling among Hadhramout University Students.

Also study showed that the majority of studied students had correct in completed information about importance of PMC which include check health status of both couples, detection of hereditary and genetic diseases, production of healthy offspring, decrease transmission of STDs & infectious diseases and saving marriage. This was in accordance with **Elyazid et al., (2014)**, who found that high frequency of participants were more knowledgeable about importance of PMC.

Furthermore the study clarify the Awareness and Attitude Towards the Premarital Screening Programme Among High School Students in Muscat, Oman by **Al Kindi et al., (2019)** showed that the majority of participants had good information about the importance of premarital screening test. This was based on their desire to prevent transmission of disease to their offspring. On the other hand, a few participants were not willing to undergo PMS screening as they did not want to interfere with God's will. Also **Ali et al., (2018)**, they reported that less than two-thirds of participants had completed information about importance of PMC.

Concerning objectives of PMC, majority of studied students were more knowledgeable about all objectives of PMC. More than three quarter PMC and examination the most important mean of controlling the spread of genetic disease, more than two third PMC and examination avoid family tragedy, majority help to early treatment and prevents many complication between children.

This was in accordance with **Mirza et al., (2013)** reported that the objectives of PMC were detection of hereditary and genetic diseases in more than two third, healthy outcome of pregnancy in more than half and to check health status which

constituted more than one third of the participants. Farther more studies by **Mohaseb, (2013)** found that the majority of participants considered PMC is important in preventing genetic blood disorders. As clear in previous results we find that clear the age stage indicates their acquaint.

According to **Elyazid et al., (2014)**, the components of the premarital Package are; premarital history taking, premarital investigations, premarital examination, premarital counseling, and premarital immunization. Also **oluwole et al., (2010**) regarding knowledge about counseling component, reported that the majority of their respondents were aware of premarital counseling. These findings agreed with the current work, more than two third of studied students knew that PMC includes investigations, examination, immunization, and counseling.

The present study not supported previous studies by **Ibrahim et al., (2011)** and **Ibrahim et al., (2013)** who found that most of their participants respectively had low knowledge about PMC investigations. Also **Kabbash et al., (2019)** showed that less than one quarter expressed awareness of premarital investigations.

Farther more, **Abd-elghany et al.,(2010)**found that less than two third of

their medical students 'participants comparing to only less than one third of the non- medical students were knowledgeable about premarital immunization.. The variety in results was due to the variable educational background of the studied groups.

Regarding individuals knowledge about premarital investigation, the current study clearly showed that the majority of studied students had complete information about what investigation to be done before marriage. From the researcher view of point, this may be due to high education level of studied students, majority of the current studied students and their awareness about importance of premarital investigation in protecting them from risk marriage.

These results disagree with the finding of the study by**Ibrahim et al., (2011)**, reported that about two-thirds of their participants had insufficient information about PMC investigation. Also, **Al Kindi et al., (2012)**, showed that their participants had inadequate knowledge about premarital screening test. Moreover, **Ibrahim et al., (2013)**, who found that more than three quarters of their participants had low knowledge about PMC investigations.

Regarding the illustration second part about the difference between male and female students regarding their awareness

and attitude about premarital counseling and examination through this study showed that, no significant difference between male and female regarding scores, however female significantly had higher adequate knowledge regard examination. Also Awareness was significantly associated with rural, Read & write and Primary father education and also with own business father and retired father.

In line with these above mention finding, **Kabbash et al., (2019),** reported that, the study participant had a good score of more than 5/8. Gender, residence, parents' educational levels or their jobs had no significant difference on the mean score of knowledge among studied participants, while males significantly had higher awareness regarding examination. The same observation was found for family size and familial history of hereditary disease. The only statistically significant difference was observed due to consanguinity of parents, which is in concordant with our results.

The result of this study came in dis-agreement with **Farahat et al., (2014)**, who reported that, there was non-significant difference between male and female students regarding their overall knowledge and their overall attitude regarding PMC. There was non-significant difference between urban and rural students regarding

their overall knowledge toward PMC, but there was significant difference in their overall attitude regarding PMC.

In addition, **Al-Qahtani et al., (2019)**, reported for gender, the majority of female students had good awareness level compared to two third of males. Considering college nature, the majority of medical students' had good awareness level compared to half of non-medical students with significant difference. Which is consistent with our results.

5. Conclusion:

Based on the findings of this study we can conclude that: Most respondent's had satisfactory level of knowledge about PMC importance and examination the majority of them heard about premarital exam and thought consanguinity marriage are the main cause of genetic disease. Moreover, a positive attitude was found among majority of the studied students. Female students were more oriented about PMC rather than male's students, also awareness was significantly associated with rural resident, educational level and working status of student's fathers.

6. Recommendations:

Based upon these study findings, the following could be recommended that:

- Conducting health education services about premarital counseling in every college

- Developing an educational program to raise awareness of male and families about premarital counselling in secondary schools and universities.

- University services should distribute booklet about premarital examination and places provided these services.

- Booklet about premarital counselling should be available in the obstetric and gynecological department.

- Various means of communication can be utilized to circulate important information among the target population. Such efforts might focus on disseminating information through mass media, for example through popular and readily available social media platforms.

Awareness about premarital counselling

39.50%

60.50%

■ Unsatisfactory<50%

■ Satisfactory >50%
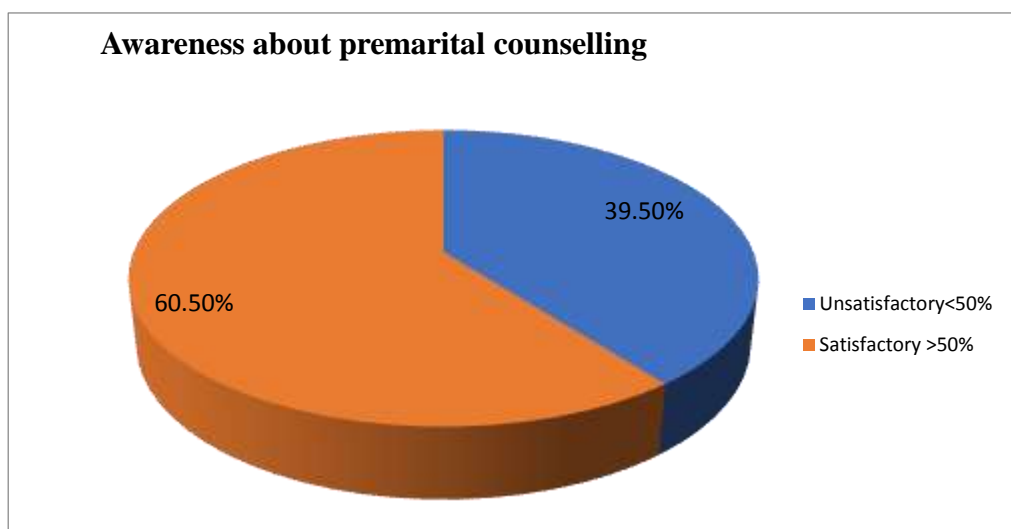
Figure (1): Awareness of students toward premarital counselling (n=400)

Table 1: Distribution of Knowledge regarding Premarital Examinations and Investigation among studied students (n=400)

| Knowledge item	False		Don't know		Know	
	N	%	N	%	N	%
1- Knowing the health history of those who are intending marriage helps to provide early treatment and prevents many complications between children.	10	2.5	20	5.0	370	92.5
2-Having genetic disease is considered family secret.	144	36.0	61	15.25	195	48.75
3-Do you think that premarital medical examinations and tests avoid family tragedy?	67	16.75	45	11.25	288	72.0
4-Premarital medical examinations and tests are the most important means of controlling the spread of genetic diseases.	69	17.25	25	6.25	306	76.5
5- Premarital medical examinations and analyzes are delay a young man or woman from marriage.	202	50.5	96	24.0	102	25.5
6- Premarital medical examinations and tests are held in the clinic of medical counselling.	78	19.5	103	25.75	219	54.75
7- Premarital medical examinations and tests are necessary for those who are intending marriage.	44	11.0	50	12.5	306	76.5
8-Do you support premarital medical examinations and tests?	40	10.0	46	11.5	314	78.5
9-If you married, have you performed premarital medical examinations and tests?	125	31.25	152	38.0	123	30.75
10-Premarital examination includes on thalassemia.	66	16.5	247	61.75	87	21.75
11- Premarital examination includes an AIDS test.	61	15.25	200	50.0	139	34.75
12- Premarital examination includes a sickle cell anemia.	56	14.0	237	59.25	107	26.75
13- Premarital examination includes hepatitis c	65	16.25	215	53.75	120	30.0
14- Premarital examination is safe and has no complication.	39	9.75	164	41.0	197	49.25
15-The emergence of pathogenic genes in-Premarital examination and medical tests dose not impede marriage.	138	34.5	160	40.0	102	25.6
16-Do you refuse to marry someone who carries the disease.	109	27.25	73	18.25	218	54.6
17-You had a role in educating someone about how to make test before marriage.	182	45.5	71	17.75	147	36.75
18-Health awareness helps to take the appropriate decision based on the results of premarital examination and medical tests.	32	8.0	30	7.5	338	84.5
19-Media has an important role in increasing health awareness.	44	11.0	43	10.75	313	78.25
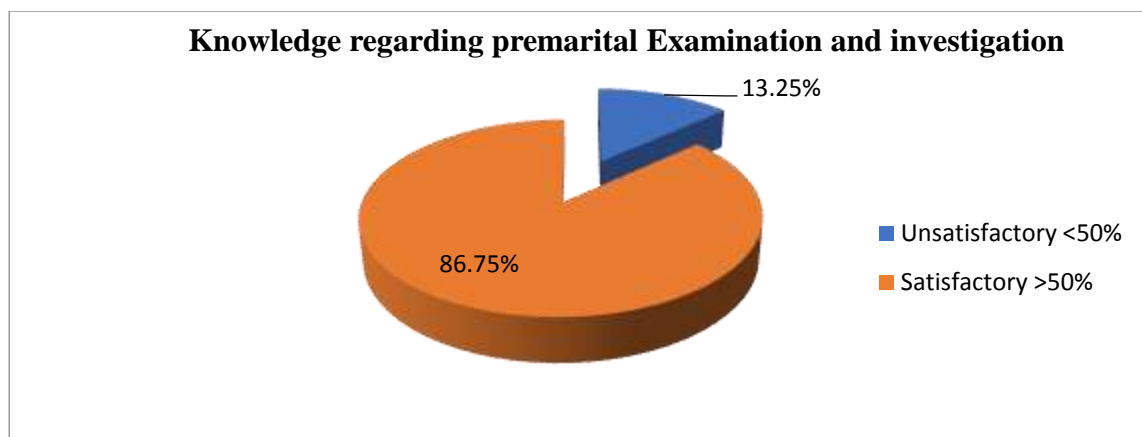
Figure (2): Total Knowledge of studied students toward premarital examination and investigation. (n=400)
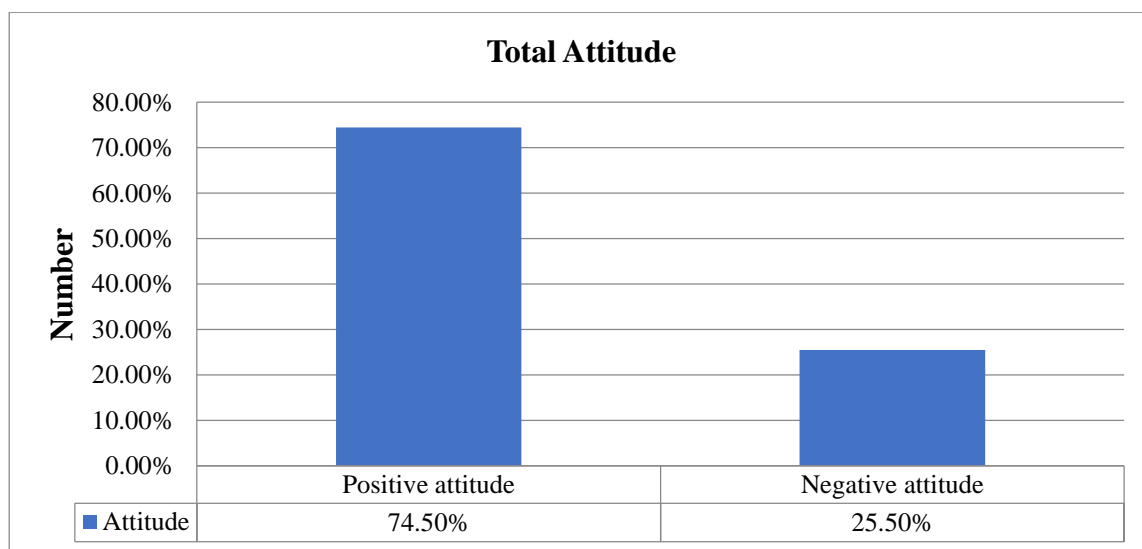
Figure (3): Total attitude of studied students toward premarital counseling (n=400)

Table 2: Comparison between male and female regard adequate knowledge

Variables				Sex		Total	X^2	P
				Male	Female			
Total awareness	Un satisfactory	N		58	100	158	0.44	0.506
		%		41.7%	38.3%	39.5%		
	Satisfactory	N		81	161	242		
		%		58.3%	61.7%	60.5%		
Total knowledge about examination	Un satisfactory	N		25	28	53	4.15	0.041*
		%		18.0%	10.7%	13.2%		
	Satisfactory	N		114	233	347		
		%		82.0%	89.3%	86.8%		
Total attitude	Inadequate	N		23	32	55	1.4	0.23
		%		16.5%	12.3%	13.8%		
	Adequate	N		116	229	345		
		%		83.5%	87.7%	86.2%		
Total		N		139	261	400		
		%		100.0%	100.0%	100.0%		

X^2 **is chi-square test ; P value is significant <.05**

Table 3: Relation between total score of studied student's awareness regarding premarital examination and socio demographic data

Variables			Awareness		Total	X²	P
			Inadequate	Adequate			
Sex	**Male**	N	58	81	139	0.871	0.107
		%	41.7%	58.3%	100%		
	Female	N	100	161	261		
		%	38.3%	61.7%	100%		
Religion	**Muslim**	N	143	230	373		
		%	38.3%	61.7%	100.0%		
	Christian	N	15	12	27	3.12	0.077
		%	55.6%	44.4%	100.0%		
Residence	**Rural**	N	66	130	196		
		%	33.7%	66.3%	100.0%		
	Urban	N	92	112	204	5.46	0.019*
		%	45.1%	54.9%	100.0%		
Marital	**Single**	N	131	214	345		
		%	38.0%	62.0%	100.0%		
	Married	N	27	28	55	2.45	0.11
		%	49.1%	50.9%	100.0%		
Father education	**Illiterate**	N	8	11	19		
		%	42.1%	57.9%	100.0%		
	Read & write	N	10	28	38		
		%	26.3%	73.7%	100.0%		
	Basic Education	N	11	32	43	13.5	0.009*
		%	25.6%	74.4%	100.0%		
	Secondary	N	51	91	142		
		%	35.9%	64.1%	100.0%		
	University or more	N	78	80	158		
		%	49.4%	50.6%	100.0%		
Father occupation	**Employee**	N	106	125	231		
		%	45.9%	54.1%	100.0%		
	Own business	N	18	54	72	14.0	0.003*
		%	25.0%	75.0%	100.0%		
	Retired	N	32	51	83		
		%	38.6%	61.4%	100.0%		
	Died	N	2	12	14		
		%	14.3%	85.7%	100.0%		

X² is chi-square test ; P value is significant <.05

Cont.,, table 3: Relation between total score of studied student's awareness regarding premarital examination and socio demographic data

Variables			Awareness		Total	X²	P
			Inadequate	Adequate			
Mother education	Illiterate	N	11	18	29		
		%	37.9%	62.1%	100.0%		
	Read & write	N	20	30	50		
		%	40.0%	60.0%	100.0%		
	Basic Education	N	9	26	35	5.89	0.207
		%	25.7%	74.3%	100.0%		
	Secondary	N	66	110	176		
		%	37.5%	62.5%	100.0%		
	University or more	N	52	58	110		
		%	47.3%	52.7%	100.0%		
Mother occupation	Employee	N	97	163	260		
		%	37.3%	62.7%	100.0%		
	Own business	N	58	75	133		
		%	43.6%	56.4%	100.0%		
	Retired	N	3	3	6	2.39	0.49
		%	50.0%	50.0%	100.0%		
	Died	N	0	1	1		
		%	0.0%	100.0%	100.0%		
Consanguinity	Yes	N	31	61	92		
		%	33.7%	66.3%	100.0%		
	No	N	127	181	308	1.68	0.19
		%	41.2%	58.8%	100.0%		

X² **is chi-square test ; P value is significant <.05**

Table 4: Relation between total score of studied student's examination regarding premarital awareness and socio demographic data

Variables			Examination		Total	X²	P
			Inadequate	Adequate			
Sex	**Male**	N	25	114	139	4.28	0.039
		%	18%	82%	34.75%		
	Female	N	28	233	261		
		%	10.7%	89.3%	65.25%		
Religion	**Muslim**	N	47	326	373		
		%	12.6%	87.4%	100.0%		
	Christian	N	6	21	27	2.02	0.15
		%	22.2%	77.8%	100.0%		
Residence	**Rural**	N	26	170	196		
		%	13.3%	86.7%	100.0%		
	Urban	N	27	177	204	0.00	0.99
		%	13.2%	86.8%	100.0%		
Marital	**Single**	N	42	303	345		
		%	12.2%	87.8%	100.0%		
	Married	N	11	44	55	2.52	0.11
		%	20.0%	80.0%	100.0%		
Father education	**Illiterate**	N	5	14	19		
		%	26.3%	73.7%	100.0%		
	Read & write	N	9	29	38		
		%	23.7%	76.3%	100.0%		
	Basic Education	N	4	39	43	8.42	0.077
		%	9.3%	90.7%	100.0%		
	Secondary	N	14	128	142		
		%	9.9%	90.1%	100.0%		
	University or more	N	21	137	158		
		%	13.3%	86.7%	100.0%		
Father occupation	**Employee**	N	30	201	231		
		%	13.0%	87.0%	100.0%		
	Own business	N	8	64	72		
		%	11.1%	88.9%	100.0%		
	Retired	N	14	69	83	1.70	0.63
		%	16.9%	83.1%	100.0%		
	Died	N	1	13	14		
		%	7.1%	92.9%	100.0%		

X² is chi-square test ; P value is significant <.05

Cont.,, table 4: Relation between total score of studied student's examination regarding premarital awareness and socio demographic data

Variables			Examination		Total	X²	P
			Inadequate	Adequate			
Mother education	Illiterate	N	6	23	29		
		%	20.7%	79.3%	100.0%		
	Read & write	N	7	43	50		
		%	14.0%	86.0%	100.0%		
	Basic Education	N	5	30	35	4.35	0.36
		%	14.3%	85.7%	100.0%		
	Secondary	N	17	159	176		
		%	9.7%	90.3%	100.0%		
	University or more	N	18	92	110		
		%	16.4%	83.6%	100.0%		
Mother occupation	Employee	N	33	227	260		
		%	12.7%	87.3%	100.0%		
	Own business	N	20	113	133		
		%	15.0%	85.0%	100.0%		
	Retired	N	0	6	6	1.51	0.68
		%	0.0%	100.0%	100.0%		
	Died	N	0	1	1		
		%	0.0%	100.0%	100.0%		
Consanguinity	Yes	N	12	80	92		
		%	13.0%	87.0%	100.0%		
	No	N	41	267	308	0.004	0.94
		%	13.3%	86.7%	100.0%		
Total		N	53	347	400		
		%	13.2%	86.8%	100.0%		

X² **is chi-square test ; P value is significant <.05**

Table 5: Relation between total score of studied student's attitude regarding premarital awareness and socio demographic data

Variables			Attitude		Total	X²	P
			Inadequate	Adequate			
Sex	**Male**	N	23	116	139	1.82	0.11
		%	16.5%	83.5%	34.75%		
	Female	N	32	229	261		
		%	12.3%	87.7%	65.25%		
Religion	Muslim	N	50	323	373		
		%	13.4%	86.6%	100.0%	0.55	0.45
	Christian	N	5	22	27		
		%	18.5%	81.5%	100.0%		
Residence	Rural	N	24	172	196		
		%	12.2%	87.8%	100.0%		
	Urban	N	31	173	204	0.73	0.39
		%	15.2%	84.8%	100.0%		
Marital	Single	N	43	302	345		
		%	12.5%	87.5%	100.0%		
	Married	N	12	43	55	3.5	0.061
		%	21.8%	78.2%	100.0%		
Father education	**Illiterate**	N	3	16	19		
		%	15.8%	84.2%	100.0%		
	Read & write	N	7	31	38		
		%	18.4%	81.6%	100.0%		
	Basic Education	N	4	39	43	3.67	0.45
		%	9.3%	90.7%	100.0%		
	Secondary	N	15	127	142		
		%	10.6%	89.4%	100.0%		
	University or more	N	26	132	158		
		%	16.5%	83.5%	100.0%		
Father occupation	**Employee**	N	36	195	231		
		%	15.6%	84.4%	100.0%		
	Own business	N	7	65	72	3.91	0.27
		%	9.7%	90.3%	100.0%		
	Retired	N	12	71	83		
		%	14.5%	85.5%	100.0%		
	Died	N	0	14	14		
		%	0.0%	100.0%	100.0%		

X² is chi-square test ; P value is significant <.05

Cont,, table 5: Relation between total score of studied student's attitude regarding premarital awareness and socio demographic data

Variables			Attitude		Total	X²	P
			Inadequate	Adequate			
Mother education	Illiterate	N	4	25	29		
		%	13.8%	86.2%	100.0%		
	Read & write	N	8	42	50		
		%	16.0%	84.0%	100.0%		
	Basic Education	N	4	31	35	3.49	0.47
		%	11.4%	88.6%	100.0%		
	Secondary	N	19	157	176		
		%	10.8%	89.2%	100.0%		
	University or more	N	20	90	110		
		%	18.2%	81.8%	100.0%		
Mother occupation	Employee	N	34	226	260		
		%	13.1%	86.9%	100.0%		
	Own business	N	21	112	133		
		%	15.8%	84.2%	100.0%		
	Retired	N	0	6	6	1.68	0.64
		%	0.0%	100.0%	100.0%		
	Died	N	0	1	1		
		%	0.0%	100.0%	100.0%		
Consanguinity	Yes	N	8	84	92		
		%	8.7%	91.3%	100.0%		
	No	N	47	261	308	2.57	0.109
		%	15.3%	84.7%	100.0%		
Total		N	55	345	400		
		%	13.8%	86.2%	100.0%		

X² is chi-square test ; P value is significant <.05

Table 6: Correlation between awareness with Parent consanguinity, Intend marriage consanguinity and Family history of blood disease as Fauvism

Variables		Awareness
Parent consanguinity	Correlation Coefficient	-.106*
	Sig. (2-tailed)	.035
	N	400
Intend marriage consanguinity	Correlation Coefficient	-.119*
	Sig. (2-tailed)	.018
	N	400
Family history of blood disease as Fauvism	Correlation Coefficient	-.009
	Sig. (2-tailed)	.854
	N	400

Table 7: Comparison between total score of studied student's knowledge about premarital examination among colleges.

Knowledge score		Colleges		Total	X²	P
		Theoretical (n=160)	Clinical (n=240)			
Satisfactory	N	130	217	347	4.312	**0.048**
	%	81.25%	90.4%	86.75%		
Un Satisfactory	N	30	23	53		
	%	18.75%	9.6%	13.25%		

X² is chi-square test ; P value is significant <.05

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