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Premarital Counseling in Relation to Common STDs, Andrological and Dermatological Disorders in Menoufia Governorate

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ABSTRACT

Background: Premarital screening (PMS) is one of the most important strategies for management of medical disorders that can be transmitted between spouses, additionally preventing genetic disorders and congenital anomalies of the upcoming generations. It supports marriage stability.

Objectives: This study aimed to evaluate the PMS program in Egypt in relation to common sexually transmitted diseases and dermatological disfiguring disorders in newly married couples.

Subjects and method: A cross-sectional study included 73 newly married individuals who attended Dermatology, Andrology, and Sexually Transmitted Diseases (STDs) Clinics at Menoufia University Hospital and Shebin Elkom Teaching Hospital. The presenting complaints were analyzed, and their registered data from the premarital examination computerized system were also obtained.

Results: Among the studied participants, 52.1% were males. The mean age was 26.27 ± 2.67 years. Medical data that were retrieved through the computerized system of the PME program showed that 12.3% were hypertensive, and 5.5% were reported as diabetic. Thalassemia and sickle cell anemia testing was positive in one case (1.4%), 16.4% of participants were hepatitis C virus reactive, and 30.1% were with STDs (genital warts (23.3%) and genital herpes (6.8%) were the most common). Chronic skin conditions affected 42.5% of participants, including psoriasis, vitiligo, eczema, alopecia, and keloid scars. Among the 38 male participants, 12 experienced infertility, while 7 reported erectile dysfunction.

Conclusion: Despite the significant disorders covered by the Egyptian PMS program, it would be beneficial to expand its scope to include disfiguring dermatological conditions, sexually transmitted diseases (STDs), infertility, and andrological disorders, as these are important factors influencing marriage stability.

Keywords: Premarital counseling, STDs, Dermatological disorders, Infertility, PMS, Andrological disorders.

INTRODUCTION

Premarital counseling (PMC) is a globally recognized approach aiming to identify and treat unrecognized disorders in prospective couples, with the broader aim of reducing disease transmission. This counseling ensures the health and well-being of both partners before pregnancy, effectively serving as a primary preventive strategy for couples planning conception [(1)].

Premarital counseling program has a significant positive impact on couples' health by promoting transparency, preventing disease transmission, and ensuring overall well-being, including for future children. These examinations help identify potential health issues, enabling couples to make informed decisions about reproductive health, take necessary precautions, and seek appropriate medical advice. This proactive approach can also foster open communication and shared responsibility within the relationship [(2)].

In Egypt, the premarital counseling program was introduced as a part of the presidential health initiative (100 million health). Its objective was to guarantee a secure marriage and a generation devoid of genetic, infectious, and non-communicable diseases. It examined for infectious diseases [(Hepatitis B virus (HBV), Hepatitis c virus (HCV), and Human Immunodeficiency Virus (HIV)], detected non-communicable diseases (Diabetes mellitus, hypertension and sickle cell anemia) as well as other analyses (Blood grouping, hemoglobin and Rhesus factor). The certificate ensures the transparency of health information as both couples must sign the certificate [(3)].

Chronic dermatological conditions, particularly those affecting hidden areas such as psoriasis, eczema, vitiligo, hirsutism, and alopecia, can significantly impact marital relationships. Their burden may be expressed in terms of low self-esteem and poor quality of life [(4)]. Beyond the psychological toll, chronic skin disorders can lead to physical discomfort, such as pain and itching, which may contribute to sexual dysfunction and strained intimacy between partners [(5)]. Additionally, comorbidities of common skin diseases like, psoriasis, which are risky include cardio vascular diseases, metabolic syndrome, psoriatic arthritis and kidney diseases [(6)].

Sexually transmitted diseases are a major public health problem that are presented in both males and females, Chlamydia trachomatis (CT) and Neisseria gonorrhoeae (NG) are widespread, treatable sexually transmitted infections (STIs) of global significance, affecting millions annually. Left untreated, they pose significant risks, including pelvic inflammatory disease (PID) and infertility [(7)].

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In a meta-analysis study, analysis of 341 prevalence measures of Neisseria gonorrhoeae (NG) infections across 21 countries in the Middle East and North Africa (MENA) region was done. It found an overall pooled prevalence of 1.9% in the general population. This prevalence varies in different specific groups. Female sex workers**:** 6.5%**,** infertility clinic attendees**:** 7.5%**,** women with miscarriage/ectopic pregnancy**:** 3.0%**,** symptomatic women**:** 3.9%**,** symptomatic men**:** 41.4% [(8)]. Human papilloma virus infection is also prevalent infection. In an Egyptian study, the prevalence of HPV among participants was 23.1%. Only 20% of HPV positive cases were infected by single HPV genotype and 80% were co-infected by more than one genotype [(9)].

Dermatological disorders and sexually transmitted infections are highly prevalent among young individuals, posing both a risk of transmission and psychosocial burden. These conditions not only impact physical appearance but also influence self-esteem, interpersonal dynamics, and marital relationships [(10)].

Given their potential to compromise intimacy and trust, addressing these health concerns should be considered an essential component of premarital screening. Incorporating dermatological and STI assessments into premarital examinations would enhance marriage success by mitigating undisclosed health risks and fostering informed decision-making between partners [(11)].

This study aimed to evaluate premarital counseling program in Egypt, Menoufia Governorate Area in relation to common sexual transmitted diseases, dermatological disfiguring disorders in males and females.

SUBJECTS AND METHODS

A cross-sectional study was conducted on newly married couples attending the Dermatology, STDs, and Andrology Clinic at Menoufia University Hospital, as well as Shebin El-Kom Teaching Hospital.

Participants eligible for this study were individuals attending Dermatology, Venereology, and Male Infertility Clinics within the study setting over a six-month period.

Inclusion criteria: Individuals who had been newly married within the past two years, who had undergone a premarital examination, and who were willingly consented to participate.

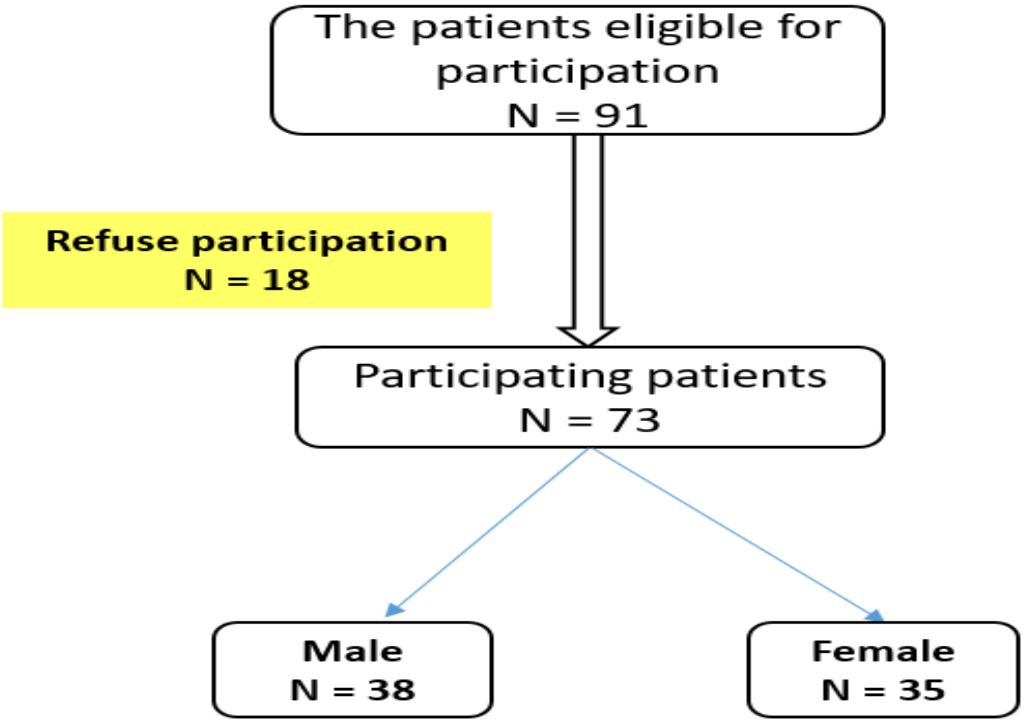

Figure (1): Flow chart for recruitment of the studied cases.

The data were collected in two stages:

Stage 1: Patients were interviewed to obtain personal data and details of their primary complaint, followed by clinical examination and further investigations as necessary to assess the reported condition.

Stage 2: The premarital certificate data for each participant was retrieved from the primary health care center where they underwent their examination, using their name and identification number as reference identifiers. They were examined for infectious diseases (Hepatitis B virus, HBV, Hepatitis c virus, HCV, and HIV), detected non-communicable diseases (Diabetes mellitus, hypertension and sickle cell anemia) as well as other analyses (Blood grouping, hemoglobin, and Rhesus factor). The certificate ensures the transparency of health information as both couples must sign the certificate (The Arab Republic of Egypt presidency, 2023).

Ethical approval: The study received approval from hospital authorities for case collection and was further endorsed by the institutional review board (research ethics committee) under approval number (5/2022 DERM37). Prior to recruitment, each participant provides informed written consent, ensuring ethical compliance and voluntary participation.

Statistical analysis

Statistical package for social science (SPSS) version 27 software (SPSS Inc., Chicago, IL, USA) was used to compare the collected data. The data either qualitative or quantitative were described as frequency and percentage (Qualitative data) or mean, standard deviation and range (Quantitative data).

RESULTS

Among the 73 studied participants, 52.1% were males and 47.9% were females. The mean age was 26.27 ± 2.67 years, ranging from 20 to 31 years. More than 70% of participants had been married for a duration of 6 to 18 months. Their BMI had an average of 27.74 ± 1.66, ranging from 25 to 32 (Table 1).

Table (1): Demographic and anthropometric characteristics of the studied subjects (N=73)

Personal Data	**The Studied subjects (N=73)**	
Age (year)		
Mean ± SD	26.27 ± 2.67	
Range	20 – 31	
	NO	**%**
20-25	45	61.6 %
25-30	26	35.6 %
>30	2	2.7%
Gender		
Male	38	52.1 %
Female	35	47.9%
Marriage duration		
Less than 6 months	14	19.2
6-12 months	34	46.6
13-18 months	18	24.7
19-24 months	3	4.1
More than 24 months	4	5.5
Anthropometric Measures		
Height (cm)		
Mean ± SD	169.23 ± 6.15	
Range	156 – 178	
Weight (kg)		
Mean ± SD	78.69 ± 6.31	
Range	60 – 90	
BMI		
Mean ± SD	27.74 ± 1.66	
Range	25 – 32	

No = number, **SD** = standard deviation **BMI**= body mass index

Table (2) illustrated medical data of the studied group retrieved through the computerized system of the PMC program. 12.3% of participants were hypertensive, and 4 individuals (5.5%) were reported as diabetic. The Rh factor was negative in 15.15% of the group. Thalassemia and sickle cell anemia testing yielded a positive result in one case (1.4%). The hepatitis C virus test revealed that 16.4% of participants were reactive and receiving treatment. Tests for hepatitis B virus and AIDS showed that 100% of participants were non-reactive.

Table (2): Medical data and viral infection monitoring as documented in by premarital test

Category		The studied cases (N= 73)	
		Frequency (N)	**Percent (%)**
Blood Pressure Category	Non hypertensive	64	87.7
	Hypertensive	9	12.3
Diabetes mellitus		4	5.5
Blood Group	A	39	53.4
	B	23	31.5
	AB	8	11.0
	O	3	4.1
RH	+ve	62	84.9
	-ve	11	15.1
Thalassemia	+ve	1	1.4
	-ve	72	98.6
Virus C Testing	Non-reactive	61	83.6
	Reactive	12	16.4
Virus B	Non-reactive	73	100
HIV Testing	Non-reactive	73	100

R.B.S: Random Blood Sugar, **RH**: Rhesus factor

Among the studied participants, 22 individuals (30.1%) were diagnosed with sexually transmitted diseases (STDs), including genital warts (23.3%) and genital herpes (6.8%). Chronic skin conditions affected 42.5% of participants and included the following disorders: psoriasis (8.2%), scars and keloids (5.5%), androgenic alopecia (6.8%), alopecia areata (5.5%), vitiligo (6.8%), and eczema (4.1%). Male infertility was observed in 12 out of 38 male participants, while erectile dysfunction was reported by 7 out of 38 males (Table 3).

Table (3): Frequency and percentage of participant diagnoses

		The studied participants N = 73	
		Frequency	Percentage (%)
STDs	Genital warts with remission & relapse	17	23.3%
	Genital herpes (vesicles, maceration)	5	6.8%
	Total	**22**	**30.1%**
Dermatology	Scars and keloid	4	5.5%
	Psoriasis	6	8.2%
	Vitiligo	5	6.8%
	Androgenic alopecia	5	6.8%
	Alopecia areata	4	5.5%
	Stria rubra	2	2.7%
	Seborric keratosis	2	2.7%
	Eczema	3	4.1%
	Total	**31**	**42.5%**
Infertility	1ry male infertility Grade II varicocele &wife free investigations	6	8.2%
	1ry male infertility Grade III varicocele &wife free investigations	2	2.7%
	1ry male infertility with Azoospermia &past history of surgical interference with hydrocele	1	1.4%
	1ry male infertility &wife free investigations	2	2.7%
	Klinefelter syndrome	1	1.4%
	Total	**12**	**16.4**
Andrology	Venogenic erectile dysfunction	1	1.4%
	Arteriogenic erectile dysfunction	1	1.4%
	Psychogenic erectile dysfunction	4	5.5%
	Endocrinal erectile dysfunction	1	1.4%
	Total	**7**	**9.6%**

DISCUSSION

A healthy marriage is more comprehensively defined as a state of profound agreement and enduring harmony between marriage partners across several crucial dimensions. These encompass healthy psychological, sexual, social, and legislative aspects of their shared life. The overarching aim of such a robust and harmonious union is the successful establishment of a family unit with children who are ideally free from inherited or transmissible diseases, thereby prioritizing the well-being of future generations [(12)].

The premarital screening program, part of the 100 million Health Presidential Initiative, has been implemented in Egypt since 2023. The current results present data collected and certified through the premarital certificate before marriage authorization in Egypt. Findings indicate that 12.3% of participants were hypertensive, while 5.5% were diabetic. Additionally, 15.1% had an Rh-negative blood type. ABO blood grouping was conducted, along with screening for thalassemia and sickle cell anemia. Infectious disease screenings included tests for HCV, HBV, and HIV.

Premarital screening is defined as testing couples who are about to marry soon for common genetic blood disorders (e.g., sickle cell anemia and thalassemia) and infectious diseases (e.g., hepatitis B, hepatitis C, and HIV/AIDS). The premarital screening aims to give medical consultation, evaluation of the abovementioned diseases and prevent transmission to other partner or children and to provide partners with options that help them plan for healthy family [(13)].

Also, in a study analyzing premarital screening in The Middle East, it documented that in the middle east countries, premarital screening is for haemoglobinopathies and hepatitis viral infections (HCV & HBV) and HIV [(14)].

Globally, the idea of premarital examination starts with screening for haemoglobinopathies (thalassemia and sickle cell anemia) [(15, 16)].

In Arabic countries, the program begins as proposed low-cost premarital screening program for haemoglobinopathies (thalassemia and sickle cell anemia) in 2003 [(17)]. The PMS program began in 2004 as a screening program for hemoglobinopathies, particularly sickle cell anemia and thalassemia [(18)]. Hemoglobinopathies are the most frequently inherited disorders worldwide. According to the WHO, approximately 240 million people are heterozygous for inherited hemoglobinopathies, including thalassemia and sickle cell diseases [(19)].

Regarding viral screening, **Alswaidi *et al.*** [(20)] reported that premarital screening for HIV and the hepatitis viruses is still highly controversial, it depends on risk for such pathogens, affordability for such examination and ethical and religious issues also needed to be addressed. Viral pathogen screening was included in the Saudi PMS on January 2008 to test for human immunodeficiency virus (HIV), hepatitis B virus (HBV) and hepatitis C virus (HCV) as a prerequisite for issuing a marriage certificate [(18)].

The current study revealed that newly married couples attended Dermatology and Venereology Clinic for Chronic Dermatological Disorders were 42.5%, sexually transmitted diseases were 30.1%, male infertility were 16.4% and andrological disorders were 9.6%.

According to genetic diagnostic center [(21)], premarital test should include in addition to common haemoglobinopathies and viral infection, tests for STDs and infertility as in many Arab communities, women often face criticism and societal pressure if they remain childless after years of marriage. It's essential for both men and women to undergo fertility testing. Infertility is a major problem may lead to divorce.

Identifying male fertility issues early can lead to timely treatment and improve the chances of a successful pregnancy. Additionally, testing for male infertility can help prevent women from undergoing unnecessary procedures and costs.

Regarding STDs, the most frequent disease was genital warts (23.3%). In Egypt, there is no national, mandatory premarital screening program specifically for genital warts. Despite high prevalence of human papilloma virus infection was 14.3% [(22)] it is a common cause of cervical cancer.

Also, erectile dysfunction is prevalent, it was recorded to be 13.2% that increases with increasing age [(23)]. Erectile dysfunction (ED) is a common medical problem that can have a negative effect on marital satisfaction and quality of life of partners [(24)].

CONCLUSION

Egypt has authorized the premarital screening program since 2023 as a prerequisite for legal marriage. It covers hemoglobinopathies, viral hepatitis, HIV infection, diabetes mellitus, and hypertension, as well as blood grouping and Rhesus factor. But, it is important to expand this program to include disfiguring chronic dermatological disorders, STDs, infertility, and erectile dysfunction, as these factors affect marital stability and continuity of marriage.

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