

Virginity and Virginity Testing: Then and Now

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ABSTRACT

Background: Despite the increasing progresses in medicine and health in the 21st century especially in the area of reproductive health, myths related to “virginity” and “virginity testing” still figure out life and death in some communities after centuries. Overall, aim of this study was to investigate the myths and objective facts associated with virginity and virginity testing.

Methods: This review conducted by SID, Ovid, Science Direct, Pub Med, Pro Quest, Iran Medex, Google Scholar, Cochrane library, EBSCO, and United Nations Population Fund, WHO from 1980 to 2015. Keywords for search included virginity, virginity testing, hymen, sexual abstinence.

Results: The undeniable value of virginity, female virginity worth versus the shame of virginity for male, the idea to preserve virginity despite oral and anal sex and indicators to assess the intact hymen and wedding night bleeding to prove virginity are misconceptions that besides perceived premarital sex as signs of civilization and conflicts of gender inequality and violence against women lead to fail most of approaches against increasing of premarital sex.

Conclusion: Although programs such as "virginity pledge", "Silver Ring" and "Sexual abstinence education" are running in some countries, in order to expand virginity as a practical approach in controlling sexual transmitted diseases and teen pregnancy, the role of undeniable myths in advance to such approaches, the use of cultural, social and religious potentials of different societies to cope with the misconceptions and teaching of related objective facts seems necessary.

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► *Implication for health policy/practice/research/medical education:* Virginity and Virginity Testing

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1. Introduction:

Although "virginity" which means premarital sexual abstinence is considered as a value and a sign of piety by various religions over the centuries (1,2), social and cultural status of virginity and attitudes related to Premarital sex have been many developments due to the false perception of virginity and changes of the value system of the world in recent decades (3,4).

In this regard, the limitation of the concept of virginity meaning sexual abstinence in women, not only makes the conflict in gender inequality and lead to stimulating human rights (4,5), but also undermine the social and cultural base especially in the young generation by portraying the negative aspect of virginity (6). Protecting women's virginity besides the lack of commitment of sexual abstinence for men not only doesn't help to control sexually transmitted diseases(STD) and teen pregnancy as a practical approach, but also it frustrates most of the proposed approaches in this area (7).

The lack of common sense and correct of virginity in relation to the type of sex and dominant impression of loss of virginity only through vaginal intercourse lead to increase STDs and teen pregnancy followed by anal and oral sex and unprotected genital contact (8,9). The "Virginity pledge" in America as a century strategy in order to control STDs and teen pregnancy, considers as increasing anal sex and no penetrative sex followed by the lack of common sense and correct of virginity; This is despite the fact that this type of sex due to unprotected sexual intercourse, often aggravate the negative consequences arising from premarital sex (7, 9).

The indicator of intact hymen and post first coital bleeding in order to evaluate the virginity are the facts that in addition to gender inequality, sometimes leading to violence against women in some

communities according to the association of virginity with the dignity of families (5,10).

With respect to the indispensable role of the false notion of virginity and hymen and related hidden objective facts to reproductive health due to the taboo of such threads, this review was performed with the aim to examine the false beliefs and objective facts associated with virginity and virginity testing.

2. Materials and Methods:

The present study conducted by using internet comprehensive review of the English and Persian articles. SID, Iran Medex and Magiran, PubMed, Proquest, Science direct, MD consult Ovid, EBSCO, Sciruse, Cochrane Library, Google Scholar and sites of the World Health Organization (WHO) and United Nations Population Fund (UNFPA) and United Nations Children's Fund (UNICEF) were used for searching articles.

Keywords for searching were "Virginity", "Virginity testing", "Sexual Abstinence", and "Hymen". Articles were used from 1980 to 2015.

3. Results:

Virginity and approaches to promote virginity

Despite the general conception of lack of premarital sex for virginity, there are several definitions for the word in relation to the concept of virginity with regard to the type of sex that makes the defloration and the gender that is required to maintain virginity as a value (8)

In this regard, although premarital sexual abstinence in male and female is defined as virginity according to existing evidences, in some communities not only virginity attributed to abstinence of female before marriage, but also male are encouraged and even expected to have premarital sex in such communities; Otherwise often ridiculed and harassed by their fellows as in America virginity is shameful for men (11). In this regard, while the girls try to conceal their sex, but boys over report their sex according to the results of premarital sex among adolescents and youth in Tehran (capital city

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of Iran) (6). According to the results of another study that was conducted by the Gattmacher Institute, the majority of male experience their first sex in their 20s in most countries (12). The survey of knowledge and understanding of virginity in 781 nursing students in Turkey also indicates a lack of belief in male virginity among two-thirds of the students while most of them said that a man should marry a virgin girl; the result that coordinates with the findings made in the other studies in this country (13). Also in South Africa, despite the belief of free sex life for men, to preserve a girl's virginity is considered as a social and standard value (14). Along with the mentioned studies the results of another study of 600 students from Christian and Muslim Lebanese showed that although 61% believed the sex lives of free men nonetheless 39/9% of Muslim students and 18% of Christian students thought that men should not marry a girl who is not virgin. The results also showed that 78/3% of female Muslim students and 57/3% Christian students don't see any problem to marry a man who had experienced premarital sex (2). Studies conducted in other Asian countries such as Thailand, Peru, China, Jordan, Oman and etc. also often reflects the gender double standards in these countries (13).

Despite the wrong assumptions related to this matter, in all running programs that aim to develop virginity with different titles like "virginity pledge", "Silver Ring" and "Sexual abstinence training", boys and girls all together as a target group participate in a special ceremony at the church and school to preserve their virginity until marriage by written or oral commitments besides having related trainings to sexual abstinence (7). Also in Iran, sexual abstinence until marriage for boys and girls is a social value and necessity of sexual reproductive health (15). Moreover premarital sex is banned for either sexes over the centuries by various religions especially religions of the Book or abstain from sex before marriage is recommended as a sign of piety for men and women. Premarital (free) sex is forbidden for men and women in Islam (6).

There are also different views associated with the type of sex which leads to defloration; In this regard according to traditional view just vaginal intercourse with or without consent leads to defloration and oral, anal, genital touching, oral contact with the nipple and the other kinds of sex will not cause defloration (8).

In this regard, based on the results of a cohort study of over two decades (1990-2012) in relation to the attitudes and behavior of young Asians, Europeans, Africans in America of virginity, considering the type of sexual relationship, in contrast of 99.75% of participants who believe vaginal sex as the reason of defloration, 40% of them mentioned anal and oral sex and 1-2% kissing, contact the nipple and the breast and genital vaginal touching against the preservation of virginity. One third of the participants in this study did not consider rape as the cause of defloration (4).

However according to available evidence, despite the belief of maintaining virginity by anal, oral sex and genital contact surface, it leads to increase the risk of such sexual relations in adolescents on one hand and on the other hand due to the lack of awareness of the risk of transmission of STDs and pregnancy during the relationship, this type of sex usually do in unprotected sexual contact (9). In this respect according to reports, despite the increase in premarital sex among adolescents and young Iranians, there is little information regarding the risk of transmission of sexual transmitted diseases and unwanted pregnancy from the other kinds of sex in this group (6,15).

Considering above and importance of virginity in promoting reproductive health, training adolescents in relation to the potential risks of such sexual relations and planning to achieve a common sense and correct of virginity has particular importance (16). In this respect by taking history of different kinds of non-entry sex in medical history of people especially adolescents and young people besides educational programs and incentive programs for sexual abstinence will facilitate to reach a common and correct understanding of virginity (9).

Myths and objective facts related to the hymen and virginity testing

Hymen is a thin mucous membrane which is located in the distal part of the vaginal opening and in its environment sticks to the wall of the vagina. The membrane is usually torn by entering penis or external material (17). Hymen after years of classifying as a serous membrane anatomic like pericardium and peritoneum introduced as a part of anatomically structure of the female reproductive system for the first time by Andreas Vesalius (18).

Although urogenital sinus is often known as the embryonic origin of this membrane, the scientific evidences exist on the probability of participation of mullerian ducts and wolffian ducts as embryonic origin of hymen (19). Hymen orifice diameter varies from the pit point to dimensions of possible entering the tip of a finger or two fingers (20) and according to its shape which is normally has a large variety; anatomic variants of hymen characterize (17).

Hymen membrane is mainly composed of elastic and collagenous fibers and there is no glandular and muscular element. This membrane in both internal and external levels is covered by squamous stratified epithelium (17). In connection with the performance of hymen based on some existing theories, this membrane leads to protect vagina against fecal defecations and other pollutions especially early in life (5,21).

Despite any distinction in hymen structure in different races, this membrane naturally undergoes many changes from infancy through menopause. In this regard, hyman in infancy is a vascular tissue with thick epithelium and rich in glycogen (22) while it is thin and brittle with no expansion capability due to low level of estrogen before puberty (23). Hymen elasticity increases during adolescence (24) so that sexual activity may occur but the damage can't be seen in testing. Hymen will be also thin and cornified at the end of childbearing years and menopause (25).

Despite the use of some features of the hymen like hymen orifice and shape, texture

and thickness, anterior space and also the distance between the lower edge of hymen to the vestibule in forensic medicine to prove sexual assault (26) according to the existing evidences due to increasing the elasticity of hymen in teen, existing elastic membrane, congenital absence of hymen, hymenal notches, inability to distinguish the cause of hymen damage by intercourse or external material and also development in techniques of hymenorraphy, finality of virginity testing in penetration is doubtful (5,26). In other words, many experts believe that not only the appearance of hymen is not an acceptable indicator for vaginal sex (27), but also according to the fact that anal and oral sex is not detectable in this testing, we can definitely say that the testing is not a proper criteria for the diagnosis of virginity which means lack of sex (5). However virginity testing is a common thing in communities which knows it the only way to prove chastity in girls because of the association with dignity of family and it sometimes leads to unpleasant and irreversible consequences (27, 28).

Although the World Health Organization has announced official coercion of virginity testing as a kind of sexual violence (10), cases of suicide, divorce and honor killing are happening around the world daily due to formal and informal coercion for girls in virginity testing before marriage to prove their virginity (5, 27, 29); murders that do not limit to a particular country and their report despite all existing variants can be heard from Bangladesh, Brazil, Ecuador, Egypt, India, Israel, Italy, Jordan, Pakistan, Morocco, Sweden and etc (30-32).

In this regard based on the results, only qualitative study conducted in connection with the testing of virginity in Iran, virginity testing in girls not only has no diagnostic value for proving sex or even the prevention and treatment, but also can distribute more unusual sexual behavior and the faster spread of sexual transmitted diseases and AIDS which leads to a threat against reproductive health and promoting gender discrimination (33). So checking the intact hymen of girls before marriage due to reinforce Patriarchy, gender inequality and

violence against women has been criticized by some human rights communities (2, 10, 34).

On the other side, the same negative consequences for failure of bleeding after the first sex as a traditional indicator of virginity can be seen in many communities (35). In this regard, it is marvelous that in the twenty-first century still reports of rejection, humiliation, deprivation of civil rights, divorce and even honor murders can be heard from around the world among brides who don't have bleeding in their wedding night or they are not able to provide bloody stained sheet (30, 36).

In addition to the above, the idea of improving AIDS by sex with a virgin girl is perhaps considered a disaster related to virginity and hymen; Belief that makes countless young girls as rape victims of HIV infections every day in Africa and despite repeated warnings from the international communities, the health system in this country has not been provided a proper solution to control this problem (14).

Virginity on the path of development

Social and cultural status related to virginity has been many ups and downs during the last half century (37). In this regard, based on existing evidences, although over 75% of Americans is condemned and rejected "Premarital sex" in 1967, only a few years later, the prevailing view of these relations in America changed significantly as only 33% of Americans disagreed pre marriage sex in 1980s (38) and today almost all of Americans experience pre marriage sex (39). According to UNICEF, in ten of the twelve developed countries, more than two-thirds of young people experience their first sex in teen age. This proportion is more than 80% in Denmark, Finland, Germany, Norway, England and America (40).

Increased premarital sex spread to the developing countries by passing through geographical, cultural and religious borders with development of communication technology (3). Also public attitudes to premarital sex gradually changed in other countries and expanded and diversified so much that "premarital sex" has become the current issue of these countries (41).

Although religious, social and cultural believes have an important role in delaying sexual activity until marriage in most adolescents and young people in Iran (42), it must be acknowledged that the development of the media leads to change attitudes and behaviors of young Iranian people and adolescents on the transition culture (43) as the results of different studies in this field represent an increase of premarital sex in Iran (6). In this regard, based on the results of one of the studies, 27.7% of Iranian teenagers begin sex from fifteens (44). Although critics know various factors in the development of "premarital sex", undoubtedly "sexual revolution" of the 1960s of western societies must be one of the main reasons for these changes (45). The revolution which in less than a decade became the most serious threat against reproductive health by an unprecedented increase in sexual transmitted diseases such as AIDS and teen pregnancy as the origin of the sexual revolution in the United States and other communities regardless of their level of development (39,45).

In this regard, according to the latest existing reports, more than 1.2 millions of Americans over the age of 12 years are living with HIV in this country (46) and One out of every six American teenagers connected with teen pregnancy; as far as today the United States has the highest rate of teen pregnancy among developed countries (47). While in America with 79 million people with genital warts and human papilloma virus (HPV) is not only the most common STDs (48), it is announced as cause of 66% of cervical cancer, 79% of anal cancers and 62% of oropharyngeal cancers in this country (49).

Unfortunately today by globalization of mentioned changes more than half of young people around the world begin sex from adolescence and every minute 10 teenage girls do unsafe abortion (50) and persons under 25 years constitute half of new HIV infections and a third of new cases of STDs annually (51). In Iran also increase in pre marriage sex and its negative consequences such as the AIDS epidemic, as the second sex transfer HIV (6) and spread of teen

pregnancy (2.5%-11.5%) for the health sector is a serious warning (52).

The disastrous consequences of the sexual revolution in the United States caused to adopt the approach of “virginity pledge” in order to restore the value of virginity among American adolescents. This approach has been approved by parliament in 1993 with a budget of over two hundred million dollars (7) and currently is growing at a large number of schools and churches in America. Based on the approach of virginity pledge, teenage girls and boys are committed to maintain virginity until marriage through written or oral commitments in a ceremony (53).

According to the existing evidences, myths related to virginity and the absence of a correct and common concept of virginity was announced as one of the main reasons of incompetent virginity pledge program, so the federal government doubled efforts to expand virginity as an opportunity to control the negative consequences of increased premarital sex with a budget of fifty million dollars to training programs in 1996 (7, 53). Two years after the start of virginity pledge program, a similar program with the title of silver ring emerged in European countries. During the program which is expanding in Europe and the UK, teen boys and girls who are committed to virginity, wear a silver ring as a sign of virginity pledge until marriage in their left hands (7).

This is despite the fact that although in some developing countries such as Indonesia which leads to shock the world and has been widely criticized internationally due to an unprecedented move that was decided to force the approach of virginity testing among female high school students to expand the virginity (54), the prevailing policy on premarital sex in most developing countries, including Iran ignores it due to taboo concept of the issues related to this subject (6).

4. Discussion:

Today's the increase of premarital sex has become one of the most important challenges in the health field in most countries regardless of their level of

development. In this regard, inaccurate deductions related to virginity on one hand with the rise of STDs and teen pregnancies leads to reproductive health threat and on the other hand due to negative social consequences such as violence against women caused weakening of the social base for virginity especially in the young generation (7).

Virginity pledge, silver ring, sex education and forced virginity testing are the most current strategies to cope with the negative consequences of increased pre marriage sex (7, 9, 54). Although sex education is less accepted by societies among the above-mentioned approaches, it is appropriate to deal with its negative impacts and promote virginity (9).

Despite the negative attitude of some Muslim communities to sex education, according to the existing evidences, such training not only does not increase sexual activity, but also decrease sexual transmitted diseases and teen pregnancy. In other words, correct and complete sex education in every period by parents, coaches and teachers in addition to religious values and training control skills lead to prevention of corruption and provides youth reproductive health (55). Therefore policy-makers in the health field should provide the required fields to make a cultural context for sex education to teenagers and offer incentive programs for sexual abstinence until marriage through comprehensive and targeted planning (6).

5. Conclusion:

In this regard, considering the undeniable role of social, cultural and religious implications on virginity and its consequences, it is necessary to focus training programs on myths and scientific facts related to virginity in addition to use potentials in various communities to educate the young generation.

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