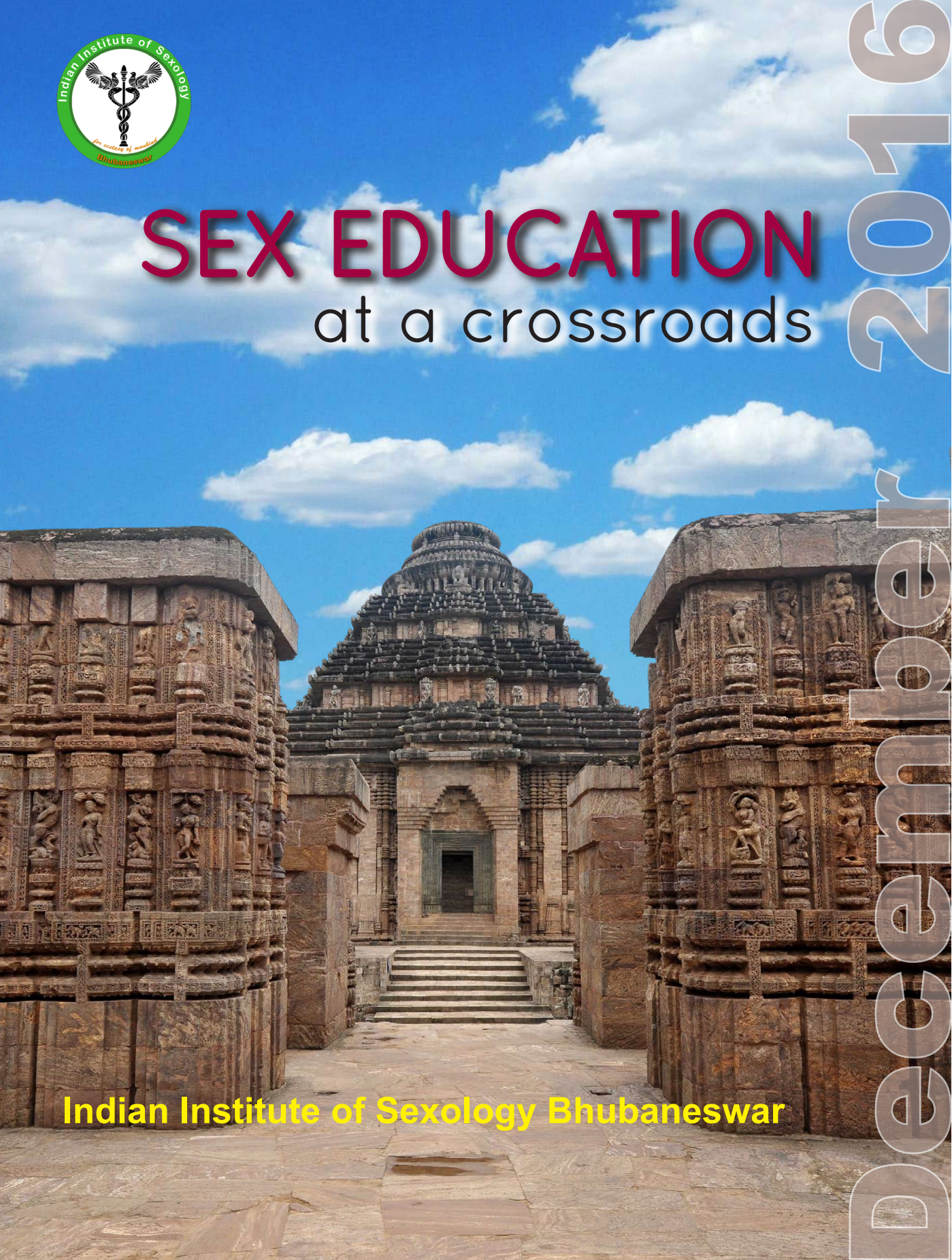

SEX EDUCATION
at a crossroads

December 2016

Indian Institute of Sexology Bhubaneswar

Editorial

Sexual health comprises a very important health domain. A keen understanding of sexuality is instrumental in leading a healthy life. Curiosity about sexuality develops right from the very early stage of life and afterwards childhood experiences go a long way in moulding adulthood sexuality. If we look at sexuality from a developmental perspective, identification and awareness about gender is an important element, which often develops by the age of three years. Going ahead, gender identification and awareness intensifies at around puberty, when secondary sexual characteristics clearly manifest themselves and become all the more evident.

Freudian theory of psycho-sexual development brings about the conceptual evolution of sexuality across ages. It is a natural instinctual tendency of human beings to explore about sexuality from an early age. However, the prevailing socio-cultural and political environment may create opportunity


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to explore more or may act as an impediment for the curiosity. Among diverse geographies, certain cultures are found to be offering more challenges and thereby limit the opportunities to explore and learn. Probably, India too is facing a similar kind of challenge.

Education about sexuality is often held as a taboo in Indian culture. Indian culture seldom encourages discussing sex and sexuality openly. Often, people blame the ancient Indian system for the prevailing mind set. However, it sounds nothing less than illogical.

Had the ancient Indian system not been that resilient and advanced in imparting effective sex education in the society, the erotic sculptures and the popular literatures on sexuality like Kamasutra, Rati Rahasya, Smara Pradipa, Ananga Ranga might not have been created by our ancestors.

Imparting sex education is both a science and an art. It needs the educator to be properly trained first before being tasked to educate others. Currently, the scope of sexuality education is limited to basic anatomy and physiology of the reproductive system in most educational curriculums. Few more issues related to sexually transmitted infections, especially AIDS are also covered to some extent. This pathetically falls short of the actual needs.

There raises an endless debate on the issue of the incorporation of sex education in formal school and college curriculum. Criticisms and protests continue unabated on this controversial issue and might intensify in the coming days. Sex education today is clearly at a crossroads. Considering the indispensability of sex education in building a healthy and progressive society, it's pertinent to ask "What needs to be included in sex education? When to start it? And, of course, Where to start it?" rather than raising the question "Why sex education?".

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Adolescent Sex Education - Indian Scenario

Dr. Amit Khanna | Dr. Prerna Khanna

Abstract

Sex education in India is poorly implemented. Its robust implementation has become the need of the hour, despite lot of resistance in its path of implementation. The major resistances are unawareness and taboos associated with discussing sexuality openly. Understanding sexuality will likely to bring changes in multiple major domains of life.

Introduction

Sex education broadly comprises of instructions on human sexuality which is an embodiment of physical, psychological, emotional, social and relational components of human relationships. Historically, the subject of sex education for children and adolescents was met with severe resistance by the John Birch Society in the 1960's in the West [1]. Recent decades have witnessed an increasing trend in sexual indulgence among teens, teenage pregnancies, and incidences of AIDS. It has given a momentum to the practice of sex education in schools along with the development of structured programmes which provided evidence base for their purported effectiveness.

The projectile of sex education in India perhaps is following a similar trajectory as it is in the West. With the introduction of a new adolescent education programme stressing on adolescent reproductive health by NACO and HRD Ministry, a controversy broke out in 2007 leading to banning of the sex education programme. School administrators were threatened with dire consequences for corrupting tender minds [2].

It is pertinent to note that the UNESCO Project met with serious moral and ideological opposition in India [3]. UNESCO conducted a six country study on the cost and cost-effectiveness of a comprehensive sexuality education programme and India was a part of this study. The programme was launched in May 2002 in four districts of Odisha. Following the controversy, the project was stalled for three years and re-emerged as 'Adolescent Reproductive and Sexual Health (ARSH) education' in 2007. Over the next couple of years, with the indigenously prepared culturally appropriate education material, the project was implemented in all the 30 districts of Odisha covering approximately 5560 schools and 1 million children. The cost of program implementation was found to be US $ 13.5 per student and US $ 630 per school, which was much lower in comparison to other countries. The cost effectiveness was calculated in the program conducted in Estonia wherein the comprehensive sexuality education program purportedly brought down 4000 unintended pregnancies, 7000 STI's and 1900 HIV cases over a period of 9 years, which by all means would be considered a successful venture.

However, staunch Indian conservatives argued around the same time that sex education with the pretext of saving children from the HIV epidemic is erroneous as the cases in the west did not show a declining trend in spite of all the efforts at sex education and recommended multi-stakeholder brainstorming sessions before implementing comprehensive sexuality education programs across the Indian states [4].

Three big social problems in India : Adolescent marriage, Adolescent child bearing and Child sex abuse

According to the International Institute of Population Science data base, 45% of women in India marry before 18 years of age and 22% of them give birth to their first child even before they attain the legal age for marriage (in India, the legal age of marriage is 18 years for girls and 21 years for boys) [5]. Modern contraceptive usage is abysmally low ranging from a mere 12% in Delhi to 2% in Bihar in the age group of 15-19 years with a huge unmet need in 45% of the women in the same age group. This is further complicated by the rising cases of HIV/AIDS with the adolescent and young population comprising 34% of the total AIDS burden [6]. Poor infrastructure and lack of human resources to deal with adolescent specific reproductive health issues make the issue of sex education not only relevant but also important from a human rights perspective [7]. India scores poorly on adolescent reproductive health issues.

The situation is alarming when it comes to statistics of child sex abuse in India. The results of the study on child sex abuse by the Ministry of Social Justice and Empowerment revealed that approximately 53% of male and 47% of adolescent females were victims of sex abuse [8]. This is possibly the vanguard for the need to spread sex education and awareness among school children as it dawned for the first time on the conservatives and liberal Indian populace, the grave danger our children face from sexual predators. Sex education can act as a stop or preventive measure against sex abuse. Even though the subject of sex education has often been debated in India with attempts to remove the taboos associated with it; no longer can the Indian community defer imparting age-appropriate sex education to children in India.

One way of moving forward is to try and understand what leads the Indian socio-political class to resist or ban the sex education program

in the first place. This has its roots in the common myths about sex education for children and adolescent population; in that it leads to increased sexual promiscuity among adolescents, thereby 'corrupting' their tender minds and that the Indian society is essentially conservative and hence what is applicable to the West doesn't necessarily require to be implemented in India.

There is ample evidence from research to support the fact that sex education and HIV risk reduction programs significantly reduce HIV risk in the adolescent and young population [9-11]. According to the WHO report on family life, reproductive health and population education, sex education famously called with a more appealing term as Family Life Education (FLE) results in delayed entering into sexual relationships, reduced number of partners, increased use of contraceptive and positive sexual behaviours [12]. These facts need to be addressed by the scientific community effectively to bring about a change in the primitive mind set in a rapidly evolving world. Further, our imprudence is evident from the fact that we as a community shy away from discussions and debates about sexuality with children over the dining table or in the class rooms and continue to live within the bubble of conservatism while turning a blind eye to the exposure of children to mass media, internet and pornography without realizing the impact it has in shaping the sexuality of young minds. With the electronic medium largely being an unregulated source of information, the onus lies on the parents and schools to educate the young minds on the right practices in a scientific and an age-appropriate manner. Even three decades ago, a survey conducted in Hyderabad and Secunderabad cities of India revealed that the major source of information on sexual matters among adolescents was books and films [13]. In current times, the influence of cyber technology in providing sexually explicit material is huge and not many studies have been done in India to understand the influence it has in shaping adolescent sexuality.

Evidence from Household Surveys and Comprehensive Sexuality Education Programs in India

Two nationally representative large household surveys done in India in the last decade have shed light on the knowledge, attitudes and practices of the adolescents towards Family Life Education and there appears to be a huge unmet need in adolescent sexual and reproductive health. A retrospective study analysed data from District Level Household and Facility Survey (Approximately 1.6 lakh unmarried women were interviewed using a structured interview schedule) and the Youth Study in India (Approximately 51 thousand married and unmarried young women and men were interviewed) carried out between 2007-2008 and 2006-2007, respectively [14]. According to it, 80% of the unmarried women in the age range of 15-24 years perceived the importance of Family Life Education (FLE). More than half of them felt that it should be initiated from 8th class onwards. Majority of the sample surveyed felt that Family Life Education should be imparted by parents followed by teachers in schools and colleges and then siblings, although men preferred teachers to parents for proffering FLE. Amongst those who perceived the need for FLE, only half of them actually received the same, thereby reflecting a huge chasm in service delivery; and 50% of these participants received

the FLE from schools or colleges. Women who received FLE had better awareness of various reproductive health issues in comparison to those who did not receive FLE.

With $^{1}/_{3}$ of the Indian population in the age group of 10-24 years, the findings from these two nationally representative samples highlights the huge unmet need for adolescent reproductive health education amongst the youth and that the authoritative conservative proclivity of the policy makers will only expand this gap, thereby affecting the development of the youth into responsible and well informed adults.

By and large, there is ample amount of evidence from literature from the West that school-based sex education programmes improve the overall quality of lives of the adolescents and their reproductive health [11]. Exploratory studies in India too reveal the knowledge gap [14,15], the perceived need for sex education by adolescents [14,16] and school teachers [17] but there is a genuine dearth of literature on how to implement sex education programmes both in the West as well as in India [11].

Implications for Designing and Implementing Sex Education in India

However, there may be some merit in the argument against large scale curriculum based comprehensive sex education program in schools. The success of most of the programs has been documented in controlled settings (for children and adolescents, school is a relatively restricted setting) and not in the real-world settings. In the real world settings, many factors need to be taken into consideration which can modify the outcome of the program such as the educational and comfort level of the teachers, total number of children per class, time duration of the program, modes of imparting sex education to the children in harmony with the local culture and taking care of the sensitivities involved. In a country like India with many religions, cultures and languages, striking the right chord in the absence of any standardized comprehensive sex education delivering modules is an arduous task. It is possible that for this reason, and for this reason alone, one would want to agree treading the path to sex education in India with some caution without jeopardizing the future of our adolescent population.

In a rapidly changing world with information overload and easy access to electronic medium, the scientific and political class in India need to urgently deliberate and discuss the issue with all stakeholders and formulate a strategy to address both basic levels of sex education involving personal safety and security; and advanced levels of sex education involving adolescent reproductive health issues in a systematic and strategic manner to help in properly shaping the adolescent population into responsible adults.

It is unfortunate that sex education in India has not received as much attention from the research and policy perspective as it should have, given the current Indian scenario. If the unmet need for sex education for the normal adolescent population is as high as 50% [14], then the unmet need of the differently able adolescent population of 27 million is a total blind spot. According to the Census 2011 report, 8.3% of the total differently able population has either intellectual impairment or severe mental illness [18]. A significant proportion of this group, i.e., 4.5% is

below 20 years. Research related to the needs assessment and effective strategies for delivery of sex education to the most vulnerable group of the differently able adolescent population is still in primordial stages and much needs to be done by child care specialists, mental health experts and the society at large in effecting a comprehensive sexuality education program for this at-risk group. It would be an error and grave injustice on our part to continue to believe that the differently abled have no sexual needs and as of now, imparting them sex education would need to be done on a case-to-case basis by concerned clinicians who know the child best in the absence of any structured sexuality program for them.

Conclusion

To conclude, there is a huge unmet need for sex education in India amongst the youth as established by nation-wide surveys. To keep pace with the current day and age of Information Technology, huge efforts need to be exacted from clinicians, social scientists and policy makers in providing comprehensive sex education as intra-curricular and extracurricular programs keeping in mind cultural beliefs and social taboos. It is only when we as individuals are in position to talk about the subject of sexuality without social stigma or inappropriateness, we will be able to make progress as a society in educating the young minds on sex and reproductive health. Even the healthcare facilities and healthcare professionals lack the knowledge and comfort to discuss issues related to sexuality that gets reflected in poor, inadequate and discomforting history taking [19].

Indeed, it is ironic that India, the land of 'Kamasutra', where sexuality was expressed artistically through sculptures of everyday life; and great leaders like MK Gandhi and JL Nehru have written and spoken so elegantly about their experimentation with their own sexuality with meaning and purpose, is finding itself at the receiving end when it comes to sex education, and as a nation, is failing to do and persisting with conservative attitudes when the evidence points more towards the contrary. Thus, it's the crying need of the hour to revive the comfort and eloquence that our forefathers had at all levels in the society to openly discuss the various aspects of sexuality, with continued efforts at research and policy implementation for the safety and appropriate shaping of our future generations.

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Issues Related to Adolescent Sexuality and Role of Socio-cultural Factors in Sexual Behaviors among Adolescents in India

Dr. Bandna Gupta | Dr. Rashmi Shukla

Abstract

Adolescence is considered very important phase of an individual's life as it is a transition from childhood to adulthood. During this phase, an individual gains physical (both in terms of growth and maturation of brain and body), sexual and social maturity by virtue of a number of internal and external factors. The internal factors consist of the hormonal and biological changes that our body undergoes in this transition phase, whereas external factors consist of the socio-dynamic factors that one experience during this sensitive phase.This article mainly focuses on the sexual development, orientation, behavior and knowledge during 'Adolescence' and how the prevailing social norms and culture affect adolescent sexuality and behavior.

Introduction

Adolescents are defined as the individuals in the age group of 10–19 years. The National Youth Policy of Government of India, however, defines adolescents as age group that ranges between 13 and 19 years of age [1]. This phase is characterized by acceleration of physical growth and associated changes in psychology and behavior, which transforms the child into an adult. Sexual maturation accompanies the physical growth and development, often leading to intimate relationships. In addition, the adolescent experiences changes in social expectations and perceptions. The individual's capacity for abstract and critical thinking too develops along with it. There, also evolves an associated sense of awareness

of self when social expectations require emotional maturity. Adolescents form a significant proportion (22%) of the population of India. They are a rich human resource and hold an important place in the process of development. Therefore, maintaining and providing adequate health care to the adolescent age group will go a long way in raising the health status of the community. Adolescents show a high degree of vulnerability to human immunodeficiency virus (HIV)/acquired immunodeficiency syndrome (AIDS) and other sexually transmitted infections (STIs) [1]. Health of adolescent girls, in particular, has an intergenerational effect.

Gender and Adolescence

There are many factors that influence the 'Sexual Identity' of a person. It can be defined as the way the biological sexual characteristics of a person are exhibited. The factors that influence it are chromosomal patterns, external and internal genitalia, composition of hormones, and secondary sexual characteristics [2]. 'Gender Identity' connotes the psychological behavioural aspects in relation to masculinity and femininity. It results from some cues that are derived as a result of different experiences from members of the family, teachers, peers, and co-workers and from cultural phenomena [2]. Physical characteristics derived from a person's biological sex such as physique, body shape, and physical dimensions interrelate with an intricate system of stimuli, including rewards and punishment and parental gender labels, to establish gender identity. Abnormalities in gender identity can result in a lot of psychiatric conditions including gender dysphoria or gender identity disorder. This may even lead to homosexual behaviour and thus this concept of identity development has huge implication in adolescents. 'Gender Role' is described as all those things that a person says or does to disclose himself or herself as having the status of boy or man, girl or woman, respectively. A gender role is not established at birth but is built up cumulatively through experiences encountered and transacted through casual and unplanned learning, explicit instruction and inculcation. Gender role is responsible for the differential attitude and behavior of the adolescent males and females. Adolescent girls are expected to develop some shyness in social situations, whereas boys are expected to act boldly. Gender inequality begins around the adolescence [2].

Knowledge of sexuality and detailed information regarding the same is a very blurred area in the context of Indian culture. As sex education has still not become a part of the curriculum of Indian schools, no formal education or information is available to children and adolescents. Adolescents of India gather their knowledge from their surroundings like information provided to them by peer groups, or as it comes in print media or over the internet. The information so gathered is often uncensored and unfiltered, sometimes even presented in an improper manner or come out to be wrong information. These wrong inputs often result in formation of myths in these adolescent minds, which in turn, drag them into serious problems like untoward sexual experiences. It even may bring undue concern regarding normal sexual behaviors and thus cause significant distress to them. Adolescent, as it is known as the age for exploration, also holds true regarding sexual matters. As sexuality is a hidden area for most Indian adolescents, as it is generally taken as

something which cannot be discussed openly in Indian culture, various myths and misconceptions regarding them lingers in the adolescent minds. A stereotypical social setup offers little scope for open discussion on sexual matters between Indian parents and their adolescent wards, resulting in no provision for effective resolution of the myth surrounding sexuality for adolescents. All these pave way for high prevalence of a distorted notion about sexuality among Indian adolescent population.

Culture and Adolescence

Culture has a great impact on the matters of belief, practices and behaviors of its followers. How adolescents are raised, how they need to behave, and how openly they can discuss the matters of sexuality depend on the culture. Conservative societies forbid the discussion on the adolescent problems, and exhibit more gender inequality. Sexual taboos have their root in cultural beliefs and have important implications in the sexual health and morbidity. Many societies still hold misconceptions about menstruation, and masturbation. Elders never educate on the basic concepts of bodily changes that occur during adolescence, keeping them in dark. There has always been an issue of comfort regarding sharing of knowledge on sexuality with offspring in India. The social regulations and pattern of cultural response is quite different in our country in comparison to developed countries like the USA.

Indian Culture, Adolescence and Sexuality

India is one of the oldest cultures to study sexuality and seems to be quite open in appraising sex as an art and science. The different attitudes and practices regarding sex first appeared in historic texts of various religions, which are examples of oldest literatures. Somewhere in between 1st and 6th century the classical 'Kamasutra' (Aphorisms of love) was written which included 'Dharma', 'Ärth' and 'Kama'. They represented religious duty, welfare of the world and aspects of life which are sensual [3]. Paintings on Ajanta caves, sculptures of Khajuraho are few examples of the deep interest and admiration Indians have towards sexuality. But with foreign invasion later, much of the ancient literature went missing and gradually new norms were set.

Till date, our society is ridden with many sexual myths and taboos like Dhat Syndrome, and masturbation in females. There is no provision for sex education either at home or in school and no specified health service addressing adolescent sexual problems exists. On top of it, in their day-to-day lives, common Indian people are very traditional and conservative in their outlook [4]. Discussing sexual matters is forbidden. There is huge pampering of Indian children which lasts at least till 6-7 years. Before puberty, a natural approach to sexuality and nudity prevails, especially in rural areas. As child grows up into adolescent, parents start expecting that he/she behaves sensibly, like an adult. Adolescent boys and girls can no more have close interactions as they did few years ago. No information is given about the natural changes that an adolescent witness in his/her body and mind.

Due to social stigma, adolescent girls are not educated about menarche before hand. A recent study found that only one third of rural girls were told about the menstruation by their mothers and only one fourth were explained the

reason [5]. Often girls feel anxious and distressed about this sudden development. In some societies, girls are not allowed to cook, to enter sacred places and even to take bath during menstruation. Due to lack of proper toilets and privacy in rural areas, girls often miss schools and colleges during menstruation [6]. Girls are prepared to handle household responsibilities and sometimes their education stops at this stage. The silence of the Indian culture on issues related to sexuality compound problems like the treatment seeking behaviour for neurotic and anxiety disorders (e.g. Dhat syndrome), the HIV epidemic, infections in the genital tract, sexual violence (e.g. female genital mutilation), contraceptive use and abortion services. Masturbation is a practice which is considered a taboo and unaccepted among girl population. For boys, however, it is considered a preparation for mature sex life. Though boys at the younger ages may masturbate together without shame, at little more mature ages, they all give it up.

A recent study on the upper middle class adolescents of Mumbai found that they still follow traditional norms and believe that they should wait till they become adults before being sexually active [7]. Another study assessed the sexuality among Indian urban school adolescents. The incidence of having sexual contact was 30.08% for boys and 17.18% for girls. Around 6% boys and 1% girls reported having had sexual intercourse [8]. Another study found that adolescent population had first encounter with sexual experience at the age of 15-24 years [9].

Western Culture, Media and its Impact on Indian Society

The scenario of adolescent sexuality in west is different. Youth Risk Behavior Survey (YRBS), conducted in US in 2005, reported that 46.8% of all high school students have had coital experiences. The figure was 67.6% for African-American youth. One in ten adolescent females becomes pregnant each year [10]. There was another study by Halpern et al., which observed the sexual behavior of adolescents of western population and also the factors which attributed to those behaviors [11]. The study found out that 9 out of 10 had lost their virginity before marriage. The virgin population was found to be younger, with less physical maturity, higher religious inclination and mostly had an attitude of disapproval for sex from parents [11]. It was seen that most adolescents of late teenage years or in early 20's have already experienced oral or vaginal sex irrespective of whether they were married or not [12,13]. Exposure to vaginal sex in early in life increases the risk of sexually transmitted diseases which can also possibly be due to more number of sexual partners [14,15,16]. This risk is inversely proportional to age [16,17]. By the late teenage and early 20's, most individuals experience oral or vaginal sex irrespective of marital status as found in different studies from USA. It was seen that early exposure to vaginal sex during adolescence increased the risk of sexually transmitted diseases; however, the risk gradually declines with age. It was also reported that, those who were exposed early to vaginal sex were found to have more number of sexual partners which might have a link with the increased risk of sexually transmitted diseases. It has been found that in western countries 'openness' to sexuality is so prevalent that 75% of boys and 50% of girls have had at least one sexual intercourse with the other sex by the age of 18. It has also been reported

that teenage population of America aged 15-19 years have the highest rate of pregnancy among all industrialized countries [19]. The sweep of globalization and blind pursuit of the 'open' culture of the west may have cast a significant impact on a society like India. It has also been observed that in Indian metropolitan cities these findings from the studies discussed here are mimicked [20,21,22]. One of the very common sources of information is pornography which hardly gives any knowledge regarding marital sexual relationships or gender equality [1]. In a study, it was found that friends were the sources of information for 75% of the young population whereas for 50 % it was pornography films or books [23].

Rapid globalization, media and information technology has affected the traditional societies also. Adolescents are also affected to a great extent due to their keen interest in electronic media like television and the internet. Adolescents are exposed to implicit and explicit sexual material via these media, but they are not provided with the basic sex education. These factors may lead to early sexual experiences with further negative consequences [24].

The Problems

There is a genuine scarcity of formal sex education for adolescents in schools in most developing and emerging societies. Even if present, it is grossly inadequate. Due to this scarcity, there is a higher chance of unprotected sexual activities, unwanted pregnancies and also the occurrence of sexually transmitted diseases. Various health challenges regarding reproductive and sexual aspect concerns most adolescents. Most of these challenges are due to marriage in early age, abortion practices which are unsafe, high risk behaviors, and lack of awareness about contraception and reproductive issues regarding health, infections of genital tract and infections which are transmitted sexually (STIs) including HIV/ AIDS and non-consensual sex [25]. This creates an 'unmet need' for reproductive and sexual health care. This unmet need varies among adolescent age groups which are married or not. Thus behavior of seeking help also depends upon the marital status of the adolescent. Besides that, public sector reproductive health services are more oriented to give services to adult married women. Adolescents who are not married always show a hesitation toward seeking help from health sector because of the fear that these services are not confidential, and also due to inability to pay, requirement of parents' approval and negative or insensitive attitude of health care providers. Girls from adolescent age group and are married also rarely seek support due to sheer embarrassment and the taboo associated with reproductive and sexual health problems. The study has also shown the prevalence of programmatic constraints in the form of non-availability of health personnel at the health facility and poor awareness [25].

There is always a risk of pregnancy, HIV infection, STIs and other such health and social hazards after the initiation of sexual activity. In order to prevent this, in 'open' societies and developed nations, condoms are distributed in school to decrease the health hazard. This brings into focus the question of the present situation in our country. It is imperative that both being too 'open' or too 'close' have its own disadvantages. Closeness due to culture and thus lack of information regarding sexual education leads young people to gather information from sources which provide it in a distorted form. This results

in that the young people remain unaware of such information which is actually needed in growing days.

Future Directions

Gender inequality needs to be addressed more seriously. The task starts with the naming, challenging and changing the negative gender norms and building norms that value girls at par with boys. At the individual level, adolescents need to be educated about puberty. Various challenges presented by menstruation need to be tackled. At the family level, girls need to be supported during their menses. At the community level, we need to improve the access to sanitary products, running water, functional toilets and privacy. Social leaders should contribute in changing the perception of the menarche and menstruation to one of promise and pride, rather than of shame.

Adolescents need comprehensive, accurate and developmentally appropriate sexuality education. Improving adolescents' knowledge and understanding of sexual and reproductive health, including HIV/AIDS, and thus improving their skills in life to take care of their own health is a crucial step in the direction of meeting their health needs and fulfilling their rights. Adolescent-centered health services can prevent sexual and reproductive health problems and detect and treat them. Effective ways should be developed to deliver contraceptive information and services to adolescents. Sexuality education programs should be brought into practice in India keeping in mind the social, cultural ethos. Government should address the social and cultural barriers in this regard.

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Sex Education: Role of Mental Health Professionals in India

Dr. Vijay Krishnan | Dr. Siddharth Sarkar

Abstract

Sex education in India is a victim of competing interests. On the one hand, there exist deep societal taboos against public discussions on sexuality and on the other, a young and rapidly growing population creates unprecedented requirements for new thinking on sexual health. Placed in the interface of this conflict, mental health professionals need to carefully consider the context and aims of sex education. Here, we present an overview of the key debates surrounding the development of an appropriate curriculum for sex education, and the role of the mental health professionals in relation to other key stakeholders (e.g., educationists, parents and peers, and civil society members).

Introduction

India represents a particular paradox in the field of sex education. There has been a historical policy push towards regulating sexual activity, with India being the first developing country to formulate a family planning policy as early as 1951 [1,2]. The motivation varied from a need to control a burgeoning population, to the more recent need to control sexually transmitted infections, including HIV. At the same time, India remains a deeply conservative society, where discussions of sexual activity have been considered a taboo [3,4]. Health professionals must negotiate this conflict frequently in their practice, since it is one that is intimately connected with health outcomes. It is also one in which the transmission of appropriate information demands expertise, and skills to engage with the prior beliefs of the audience.

What Is Sex Education?

Literature abounds in terms that are roughly equivalent to sex education-'Family Life Education', 'Lifestyle Education', 'Adolescent Education', 'Family Planning Education', and so on. Apart from reflecting societal needs to use euphemisms while talking about sexual activity, they also represent differences in the scope and curriculum of sex education [5]. Knowledge about sex is conveyed either informally or formally by peers, by parents or other adult caregivers, by teachers, or by health professionals; and the expected outcome of this education naturally varies with this context [5–8]. Here, we shall restrict ourselves to the aspects that are related directly to the WHO's definition of sexuality:

"Sexuality is a central aspect of being human throughout life and encompasses sex, gender identities and roles, sexual orientation, eroticism, pleasure, intimacy and reproduction. Sexuality is experienced and expressed in thought, fantasies, desire, beliefs, attitudes, values, behaviours, practices, roles and relationships [9]."

The above definition makes it clear that discussions of sexuality cannot easily be separated from their relational context. We will discuss the general issues relating to providing information about sexuality and sexual relationships to groups, as this is the context in which the term 'sex education' is most often used. Therefore, this article will not discuss individualized information that might need to be conveyed in a clinical context, which are more often part of mental health professionals' daily practice. It is within this framework that we would strive to define a role for mental health professionals.

What is the Purpose of Sex Education ?

Sex education has several purposes, which will be dealt here in detail.

The importance of sex education cannot be over-emphasized. First and foremost, sexuality in all its dimensions comprises an important aspect of human behavior, and being able to regulate one's own sexual urges and behavior is part of living a healthy life. As is the case with other complex behavior, there is an intricate interplay of sociological, psychological and physiological factors that are involved, and need to be accounted for in discussions of sexuality. At the same time, misconceptions about sexuality are highly prevalent, as demonstrated by surveys [3,10,11]. The rates of unplanned and early pregnancies remain high [12], and are associated with high rates of morbidity and mortality [13].

Adolescence is a particularly risky period, with studies showing that women are at the highest risk for intimate partner violence and sexual violence between the ages of 15 and 17 [14]. A considerable proportion of the AIDS burden in India lies amongst the adolescent population. Studies conducted by the Department of Child Welfare have come up with a disturbing finding that a majority of children have experienced some form of sexual abuse [15]. Sex education remains an important component of the efforts to tackle all these health-related problems, and is therefore, a priority for educators and health professionals.
While doing so, educators must be aware of certain issues.

- **The social construction of gender, and the prevalence of gender stereotypes:** That might be unintentionally reinforced by the educator (that women do not initiate sex or explore

sexual relationships; that women must dress modestly to avoid sexual assault; that sexual victimization affects only women; and other issues related to consent for sexual activity).

- **A life course perspective:** The information that needs to be conveyed depends on the age and gender of the recipients. Some advocates for sex education have argued that sex education is best initiated at an early age, in order to cover all aspects including identification and protection against childhood sexual abuse. This has shaped the sex education curriculum in a number of countries [9,16]. Others have suggested that discussions on sexuality are best restricted to those who are married, as being more representative of sexual expression in Indian culture [17]. Another school suggests that no general discussions of sexuality should take place.
- **The cultural context:** Surveys have demonstrated that sexual activity quite commonly occurs outside the marital context and in adolescence, both in urban and rural India, and this information must be considered in shaping institutional stances. A recent meta-analysis concluded that sex education aiming at abstinence performed poorly when compared to comprehensive sex education on a number of parameters, including knowledge of sexually transmitted infections, and age at initiation of sexual contact [18].
- **The social realities of the subject:** Examples from the west may not be appropriate while discussing the relationship between sexual experimentation and parties, drinking or dating, which are often used in manuals of sex education when they are transposed directly from the western context [4]. Differentiated opinions on sexual activity, ranging from strong support for abstinence and a heterosexual orientation, to more liberal views, the entire gamut of sexual experiences may be discussed during the sex education course.

The Indian Context

Surveys on sexual activity

A number of surveys have shown an early age of sexual activity, particularly in metropolitan areas. The average age of first intercourse in two surveys in Mumbai, for example, was found to be between 13 and 14 years of age and other surveys amongst school-going and college-going adolescents have data to suggest that anywhere between 14% and 40% of young men, and between 5% and 40% of school-going and college-going adolescents are sexually active [11,19]. These surveys are likely to represent only the populations in which the studies were conducted (the educated urban on the one hand and the under-privileged urban on the other) and may not be universal to the entire population. Researchers have also had to negotiate cultural sensitivities while surveying minors, including taking consent from parents and teachers (this may have introduced a selection bias). However, they do run against the general impression of India being naturally conservative, and suggest that it would be wrong to conflate sexual activity and marriage, even in the Indian context.

This data may also be supplemented by the data which suggests that under-age marriage, particularly for women, is still a reality in India, and that for a number of Indian women, the first pregnancy still occurs in the adolescent period.

Knowledge about sex

The above mentioned studies as well

as others have also delved into the respondents' knowledge and attitudes towards contraception, safe sex, and HIV/AIDS. These studies indicate that a vast majority of adolescents do not have access to knowledge that would be essential for them to avoid high-risk sexual intercourse and the consequences there of [20].

Curricula

The National Council for Educational Research and Training (NCERT) has brainstormed including sex education in schools since 1993. However, a curriculum for sex education was finally introduced in 2006/2007 under 'Adolescent Education Programme' which was produced in collaboration with the National AIDS Control Organization (NACO) and UNICEF [21]. This programme was withdrawn after several states protested against including sex education in the school curriculum [22,23]. Some states have gone on to produce their own sex education curriculum, and these texts have been subjected to criticism [4]. This troubled course probably reflects difficulties in achieving a consensus that satisfies the competing requirements—scientific, political and social. Interestingly, a survey of teachers in Delhi demonstrated overwhelming support for giving some kind of sex education to school children, although it was met with opposition on including topics related to pre-marital sex, masturbation or abortions [24].

How Mental Health Professionals Get Involved ?

Mental health professionals may have to deal with discussions on sexuality as part of their daily clinical practice. Traumatic sexual incidents such as childhood sexual abuses are well documented risk factors for development of depression, personality disorders and schizophrenia in later life and may be linked with depression, adjustment disorders, anxiety disorders or post-traumatic stress disorder. Alternatively, alterations in sexual activity may be part of a mental illness.

In addition to these clinical presentations in which mental health professionals may encounter persons in need for accurate information about sexuality, a number of other situations must be borne in mind which may require additional questioning, and may be incidental to the presentation, but may carry great relevance.

- Those with alternate sexualities and gender incongruence, which are associated with difficulties in adjusting to these differences
- Children or adolescents who are in need of support while adjusting with sexual development and sexual relationships

What is the Role of Mental Health Professional ?

The first and most important role for mental health professionals is to serve as advocates for appropriate sex education. Professional associations particularly must recognize that this is an important area where mental health professionals need to formulate their position, making use of the best available evidence. Such a position must recognize the importance of sex education as mentioned above, and should be culturally appropriate. In our view, this must be based on an understanding of sexuality and its contributions to a healthy life.

As discussed previously, sex education is disseminated through a number of outlets, and the quality of this information varies considerably

with the source. It would be difficult to single out one section as being primarily responsible for sex education responsibilities. Mental health professionals' roles, therefore, would necessarily be collaborative with the other stakeholders such as parents, educators and civil societies and government bodies. At each level, it would be necessary to recognize the relative strengths of each contributor. Mental health professionals may be able to contribute in various ways, but particularly in assisting with the development and dissemination of a curriculum that integrates physiological and biological information with an understanding of the psychological and developmental elements that are part of adolescent sexual activity. Another possible role for mental health professionals is to collate data on the current status and population needs for sex education, and to evaluate intervention programmes by designing appropriate studies.

Conclusion

Although sex education has been recognized as an important tool for encouraging adolescents towards healthy relationships, they have not been successfully implemented so far in India. A curriculum that is backed by scientific evidence, pragmatic about adolescent sexual experimentation, while accounting for cultural sensitivities, needs to be developed after wide consultation. Mental health professionals have a duty to collaborate with other health professionals, educators and civil society groups, to assist in developing and implementing such a curriculum.

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Sexuality Education: When, Where, How and What? An Indian Perspective

Dr. Adarsh Tripathi

Abstract

Sex education is a highly controversial topic in India. Indian society being a sexually conservative society, discussions and deliberations about sex education in public are frowned upon and has resistance from many quarters. Though, sex education plays an important role in development of adolescents into responsible adults, young people are deprived of this in many parts of the world including India due to traditional ideologies, religious values and cultural inhibitions. This article discusses important aspects of sexuality education like content, modus operandi and practical issues of implementation.

Introduction

Sexuality is an important personality dimension and refers to a whole range of behaviors associated with the psycho-biological phenomenon of sex. Additionally, expressions and experiences of sexuality are socio-culturally embedded, politico-historically influenced and behaviourally constructed and reflected. Sexual health is fundamental to the physical, psychological and emotional health and the well-being of individuals, couples and families, and to the socio-economic development of communities and countries. It also has a significant influence on the overall development, functioning and placement of an individual in family and society. Awareness, acceptance and a clear understanding of one's own sexuality may prove to be crucial for an individual. Especially, sexual health, when viewed affirmatively, encompasses the rights of all persons to have the knowledge and opportunity to pursue a safe and threat-free sexual life.

Numerous definitions of sexual health have been proposed. The most commonly used definition is perhaps given by the World Health Organization (WHO). WHO defines sexual health as "A state of physical, emotional, mental and social well-being in relation to sexuality; it is not merely the absence of disease, dysfunction or infirmity. Sexual health requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination and violence. For sexual health to be attained and maintained, the sexual rights of all persons must be respected, protected and fulfilled" [1].

Sex education plays an important role in overall growth and development and helps prepare young people for a healthy and fulfilling life. However, due to restrictions in culture, sexually conservative traditional ideological views, religious value systems, denial and embarrassment of society in general and policy makers in particular, young people are deprived of their right to receive proper sexuality education in many parts of the world and in India also. As a result, millions of young people around the world are devoid of crucial information related to sex and sexuality. Discussions related to sexual health related topics are widely considered a taboo in Indian societies [2]. Sex and sexuality education attract apprehensions and obstacles from wide variety of people in society therefore, it still remains a controversial area. A large part of controversy arises due to a misconception that sexuality education can increase the sexual experimentation among the adolescents and that it would compromise the moral fabric of the society. But, the truth is exactly the opposite. Though, universal comprehensive sex education was proposed in Indian schools by central government, opposition from parents, teachers, socially influential people and politicians led to banning this proposal in many states like Maharastra, Madhya Pradesh, Gujrat and Chhatisgarh etc as education is the state matter in India and federal structure of the constitution allows states to take their own decisions.

Sex and Sexuality education addresses the biological, psychological and the spiritual dimensions of a person's wellbeing and thus, helps young people to form attitude, belief and values about their own identities and relationships [3]. It has been stressed that sex education is like immunization. It can help to prevent physical, psychological, marital and social problems related to sexuality [4]. A WHO document titled 'Developing Sexual Health Programs: A Framework for Action' has defined a framework for operationalizing and promoting sexual health across a variety of settings. It identifies five key domains in which action must take place if the sexual health of people is to be promoted, namely, laws; policies and human rights; education; society and culture; economics and health systems [5]. It largely remains relevant to Indian situation also. A conceptual framework for sexuality education is presented in figure 1.

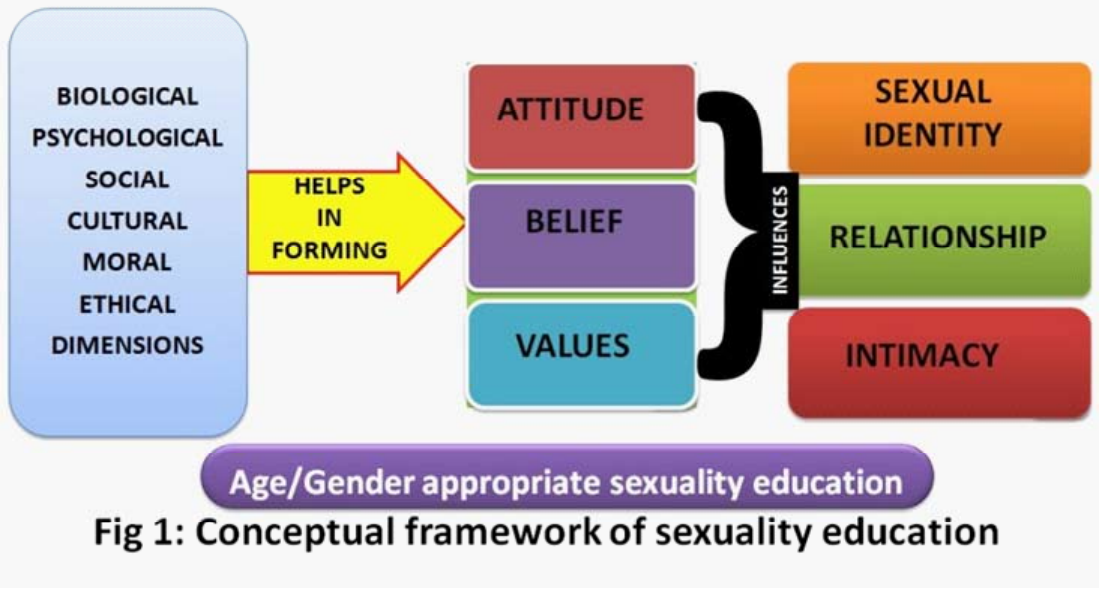

Fig 1: Conceptual framework of sexuality education

When Should Sexuality Education Begin ?

It is a lifelong process of acquiring information, forming attitude, belief and values. It should begin whenever a child asks questions, regardless of the age of the child [4]. Children are curious about almost everything they see and sexuality is no exception. Age appropriate scientific and objective information, honest and frank responses assures that children can develop a healthy outlook for sexuality. Although, there is virtually no lower age limit to start this education, the level and degree of information will greatly vary according to the intellectual development and understanding of an individual. Contrary to popular belief, it does not increases further or inappropriate curiosity of the child [6]. Parents should disclose the correct names of genital organs to their children, else they learn slang words from friends or media. Information should be provided before it is needed. Early and appropriate sexuality education increases the comfort and confidence of interaction on child in such matters and help in protecting children from potential sexual abuse by making them vocal and seeking early help if any untoward things happen.

How and Where can Sexuality Education be Given?

Sexuality education can be imparted in many forms and settings. It can be formal, and informal both for in and out of the school. It is better to include overall health promotion and disease prevention model [3]. Often, it is taught in a graded manner like every other subject. Gender, culture, social perspective and religious sensitivity should be understood and can be incorporated as far as practicable. Permission of parents can be sought and it can be kept optional if it is provided in schools. In the long run, this increases the acceptance and the effectiveness of the education. The subject is an emotional one, therefore, the language, the manner of conducting

and the setting provided should be socially acceptable. There should be transparency, fair communication with parents and possibility of receiving feedbacks for the programs. Studies have found that comprehensive school-based sex education interventions adapted from effective programs and those involving a range of school-based and community-based components can have the largest impact [7]. Integration of sexual health with the overall health promotion program can be ideal. Selection of trainers is an important aspect and should be done very carefully. An open, honest, modest and considerate approach is needed for the trainer. A proper training of the trainer too is essential before starting formal sexuality educational programs.

What is Taught in Sexuality Education?

Sexuality education programs are likely to be more effective if it approaches sexuality in a more positive way. Various programs have different components of sexuality education. Many a times, people involved in sexuality education have experienced defensive reactions and outright oppositions. Hence, sexuality education is sometimes disguised with a variety of other names like Family Life Education, Population Education or Adolescent Health Education.

Appropriate contents of sexuality education are framed in a way that participants would be able to gain a positive view of sexuality, have information and skills about taking care of and promoting sexual health, prepare for mature, responsible and mutually satisfying relationships, learn to enjoy, control their sexual behaviours and understand a positive view of sexuality, i.e. not merely focussed on abstinence only. They should have freedom from guilt, shame and false belief from sexuality, know and avoid sexual abuse as potential victim and perpetrators, stay away from unauthorized, popular but unscientific sex literature and stay away from quackery if sexual health related issues arise [4]. It should include anatomical, physiological and psychological development, social and cultural attitude and values, common myths and misconceptions related to sexuality and sexually transmitted infections. Issues related to homosexuality, gender violence, sexual abuse and masturbation are to be incorporated. It should also provide the participants, necessary skills and attitude to negotiate transitions during sexual developments, control unhealthy peer pressure and appropriate communication skills and language. Studies have found that adolescent in India have insufficient knowledge related to sexual health and even brief sexual education session may be beneficial and it reduces the possibility of engagement in risky sexual behaviour [8].

Conclusion

Sexuality education programs can be highly strategized to help improve sexual and reproductive health of society as well as effectively reduce sexual diseases/dysfunctions, sexual abuse, gender-based violence and prevent the spread of sexually transmitted infections. If implemented properly, it helps improve responsible decision making and often delays the age of first sexual experiment. Flexible and innovative strategies are needed for a country like India to fulfil its needs for sexual education. Gradual but consistent efforts can really improve the level of sexual literacy in India.

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Sex Education: Understanding the Western Model

Dr. Ananya Choudhury | Dr. Khushboo Bairwa

Abstract

Sex education, loosely refers to some form of information pertaining to human sexuality which may include the sexual anatomy, sexual activity, reproduction, reproductive health, reproductive rights, safe sex, age of consent, birth control and sexual abstinence, etc. Sex education may encompass some or all of the above mentioned areas of study. Traditionally, some sexual information was provided to the adolescents, mostly prior to their marriage by their parents. In the late 19th century, sex education in some form was initiated in the schools in the western world. However, the sex education so imparted not only lacked proper structure and factual information but also was provided inconsistently. With the outbreak of AIDS and a staggering rise in the number of teenage pregnancies in the west, increased importance was started to be laid on sex education. Since then, various countries have adopted various models of sex education with various levels of success and failure.

Introduction

Sex education has been a major concern in the recent past in the west due to a number of issues like teenage pregnancy and the spread of sexually transmitted diseases including HIV/AIDS. These conditions galvanized support towards spreading awareness among the people, placing increased emphasis on the need for sexuality to become a part of school curriculum.

Coming to India, although we are endowed with rich ancient literature on sexuality in the form of Vatsyayana's 'Kamasutra', the current Indian scenario shows we are still far behind in providing basic sex education to most adolescents in the country, whether formally or informally [1].The situation in India is quite grave as there has been little provision in place for imparting formal training to healthcare providers and faculties dealing with this, which makes the condition more challenging [2].

In the west, the overall situation is much better as there has been a provision in place for imparting sex education in schools. In some western countries such as Belgium, Denmark, Ireland, Netherlands, Sweden, etc., it has been made compulsory and has become a part of the school curriculum, whereas in England, and the federal states of the USA, though it is not compulsory, they have preformed guidelines to be followed. The role of the parents and the family as a whole has also been duly defined by the states, so as to involve the family as a whole in sex education.

Sex education has been called by different names in different countries such as Family Life Education, Sexuality Education, Sexual Health Education, Sex and Relationship Education etc. These different terminologies reflect certain interest and values specific to the geographies.

Sex education is thought to be limited to the basic anatomy, physiology and reproduction [3]. Sexuality education seems to be more comprehensive and takes into account the broader context in which sexuality is experienced, on the other hand some view it with suspicion as it also provide information regarding homosexuality [3].

In the European countries, they permit as 'Sex and Relationship Education' that has a more comprehensive approach with additional emotional touch, involvement of parents and teaching wide range of subjects without taboo [4].

In India, where till date, the stigma associated with sex education still persists, the term Family Life Education has been used to define roles of different genders in various social contexts and in further providing knowledge to maintain good sexual health in various stages of life [5].

There has been no clear definition of sexuality. WHO dubs it as an integral part of personality of everyone, man, woman and child. It is a basic need and aspect of being human that cannot be separated from other aspects of life and it influences thoughts, feelings, actions and interactions, and thereby our mental & physical health [6].

In the USA, the sexuality information and education centre (SIECUS) defines sexuality as a lifelong process of acquiring information and forming attitudes, beliefs, values about identity, relationships and intimacy [7].

Likewise, sexuality is explained in different domains which include cultural, social and political domains across the globe and the younger generation is taught accordingly the concept of sex education in various forms.

Sources of Sex Education

Sex education can be obtained formally or informally. Informally, a person can receive sex education from parents, friends or religious leaders. It can also be received from books, magazines or from sex education websites.

Schools and healthcare providers provide formal sex education. Even in schools, sex education may be a part of certain subjects like biology, health, home economics or physical education or it may be a fully separate course in the curriculum in high school or junior school.

Sex Education in the West

USA

The surge in teenage pregnancies in the early sixties followed by the spread of HIV/AIDS pandemic led to the acceptance of formal sex education in the USA. Sex education in the USA has been broadly based on two distinct models – Abstinence Only Until Marriage (AOUM) and Comprehensive Sex Education (CSE) [8]. Also, there have been newer concepts added to these programs like Planned Parenthood and the use of IT for dissemination of knowledge among adolescent population in the manner that is most acceptable and understandable to this group.

Abstinence only until marriage which remains the most commonly practiced program till date in the USA is driven by political & religious mandates. These are mainly funded programs by government and various agencies. The implementation of these programmes are through guidelines formed by SIECUS wherein education is imparted from Kindergarten to 12th grade [7].

At the federal level, the US congress has continued to substantially fund AOUM. In FY 2016, funding was hiked to $85 million per year [9]. This was approved despite the opposition and concern from medical and public health professionals, sexuality educators, and the human rights community that AOUM withholds information about condoms and contraception, promotes religious ideologies and gender stereotypes, and stigmatizes adolescents with non-heteronormative sexual identities [7,8,10, 11, 12].

Therefore, the major chunk of sex education lies in the abstinence-only program which is based on the concept of complete abstinence before marriage. It urges young people to say 'No' but lacks in diversifying the knowledge in preventing high-risk behaviour, the use of contraception, sexual orientation, etc. AOUM still continues to be the main programme to teach the adolescents, although the parents also desire that their wards should receive a more comprehensive knowledge of the subject as shown by various reviews done in California-2007, Carolina-2006, Texas-2011, Mississippi-2011 [13-16].

European Countries

Sexuality education is mandatory by law in nearly all the countries of the European Union. The content and quality varies as per social, cultural and political backgrounds. As stated in the Safe Project (IPPF European Network) in 2007, sexuality education aims at "disseminating general and technical information, facts and issues which create awareness and provide young people with the essential knowledge and training in communication and decision making skills they need to determine and enjoy sexuality both physically and emotionally, individually as well as in relationships" [17] .

Sexuality education is mandatory in most Member States of the European Union, except Bulgaria, Cyprus, Italy, Lithuania, Poland, Romania and the United Kingdom [18]. However, the knowledge and attitudes towards sexuality education varies between different states as well as within the states themselves, i.e., in rural and urban provinces.

For example, in Austria, sex education is mandatory in schools since 1970 and regulated by the Ministry of Education; the lessons start from the primary school level being imparted by teachers, with the inclusion of parents [4]. In Denmark, along with the formal education, external experts such as prostitutes, homosexuals or HIV-positive persons are invited to speak in schools about their experience [4]. In the Netherlands, sexuality education begins at the age of four [1].The Dutch consider that sex education is necessary to instil a sense of responsibility in youth regarding sexual activity and to make them independent in decision making and set their own sexual boundaries [19]. The Netherland model also ranked top in sexual health rating among industrialized countries. The Netherlands have the lowest rate of unplanned pregnancy, abortion, and teen pregnancy in the western world [20]. Rate of contraception used at first intercourse touches 85% here [21]. However, in Poland, discussion on sexuality is a taboo at school as well as at home. In Spain, the subject is hardly ever taught in schools in rural areas.

In the United Kingdom, sex education is better known as Sex and Relationship Education, which is imparted in schools and starts at the age of 11, through a nationwide biological curriculum known as Sex and Relationship Guidance published in 2000. However, it provides freedom to the parents to withdraw their children from such courses but not from the curriculum itself.

According to the report, 'Sexuality Education in Europe' Sweden is a pioneer as far as sexuality education is concerned as they have a teen birth rate of 7 per 1000 lower than France, Canada and Great Britain [22] and lower teenage abortion of 17.2 per 1000 [23]. It follows a national curriculum for sexuality education and follows guidelines and policies by the Swedish National Agency for Education. Their aim is to promote awareness and openness and to avoid ignorance and risky behaviours among young people by providing teaching methods like group education, individual counselling as well as awareness campaigns on condoms and other activities.

Overall, the best practises are observed in Benelux, Nordic countries, France and Germany [21]. Though, there have been great variations and disparities observed among the European states, the overall provision of sex education has proven an uphill task and improving.

Implication and Success

Around the globe, there have been multiple ways of teaching and various programmes are ongoing to teach the important aspect of sexuality and its implications in life. However, there have been mixed opinion regarding the need to impart it in schools, age of starting the education, what to teach, how to convey the information. Family and cultural values, religious restriction and political mandates still remain to be the major factors which guide sex education in any country.

The success of any programme depends on the acceptance of the people for whom it is being targeted and the people who are being affected. Thus, after having an outlook of the various programmes and policies of the various states, it can be presumed that the adolescent group of population requires that, such information, should be provided in a cordial environment and that the programme should understand the needs and interests of this group of population apart from the information being medically accurate. Getting

accepted by the parental population also is a major factor which affects their outcome. Also, making the parents a part of such programmes, undoubtedly, adds to the success. To be in unison with the states' cultural, religious and political sentiments too adds to the future progress of any such policies. However, if the conflict of interest arises, the effect could be the other way round. So, this has to be well understood by the policy makers.

Conclusion

Health is a basic human right, so is sexual health. The vital years of the adolescence pave the future path of any nation. That's why, providing righteous and necessary knowledge on sexuality becomes all the more essential. The need of the hour is to understand that imparting knowledge on sexual health is not only necessary in the early adolescent days but also in their later life, relationships, decision-making and many future endeavours. Currently, there is also a rising need of roping in information technology to impart such education. Also, any states that aims to target maximum population cannot do so only by formal education schemes, there has to be groups, NGO's, community programmes to target maximum audience, through both formal and informal way of communication.

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Reproduction & Risk Factor Awareness : A Review

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Abstract

Infertility is a global phenomena that affects people worldwide. In our society child bearing and motherhood defines a woman's identity. Hence, the social stigma of infertility impacts women heavily. Primary prevention of infertility is one of the most important factors for reducing its occurrence. Life-style factors, such as delayed marriage and delay in child bearing on account of education and career, stress, obesity, smoking and alcohol use, sexually transmitted infections, menstrual irregularities and environmental pollutants, have been increasingly found to be associated with reduced fertility. Increasing the level of knowledge of these factors may help to decrease the incidence of infertility by allowing couples to avoid certain risk factors that might lead to it. Moreover, patient education has been found to be a key aspect of patient satisfaction with infertility care. But knowledge of the causes of infertility appears to be lacking among young adults living in various developing countries. This review article focuses on the risk factors associated with infertility among the reproductive adults.

Introduction

Parenthood is a social role and the desire to have a child is a universal phenomenon. But many people don't get the chance to realize the joy of parenthood due to the infertility problem. Infertility is a global phenomenon that affects 60 to 168 million people worldwide [1]. Infertility affects one in six to seven couples. Infertility may occur due to factors in the male (20%) or female (33%) or both the sexes (39%), or due to unknown causes (8%)

[2]. Hence, evaluation of both partners is needed simultaneously. World Health Organization (WHO) defines primary infertility as inefficiency to conceive after a year of unprotected sex and secondary infertility in case of failure to conceive following previous pregnancy. According to WHO, the national prevalence of primary and secondary infertility in India is 3% and 8% respectively [3, 4]. Usually, investigations for infertility are recommended after 12 month of exposure, but may be required earlier, if female age> 35 years or there is a history of oligo/amenorrhea, pelvic surgery, tubal infection or chemotherapy.

The most common causes of male infertility are impaired sperm count, undescended testicles, testosterone deficiency, blockage of epididymis and retrograde ejaculation. The common causes of female infertility include polycystic ovarian syndrome, hormonal imbalance, fallopian tube block, fibroids, early menopause and pelvic adhesions. The importance of infertility as a public health problem affecting the individual and the family's mental and social wellbeing has resulted in its inclusion in the national program for reproductive and child health [5]. Knowledge about infertility is inadequate in many parts of the world. A global survey of almost 17,500 women (mostly of childbearing age) from 10 countries revealed that knowledge regarding fertility and biology of reproduction was poor [6]. Many women have little awareness of the period of the month in which they are most fertile and when to seek treatment [7,8]. The risk factors for infertility include smoking, obesity, alcohol consumption, advanced maternal age, sexually transmitted infections, and many others [9]. According to Bunting and Boivin et.al, knowledge about fertility issues is a core motivator for fertility problems [10]. Global surveys revealed that inadequate knowledge of women regarding fertility is the key culprit for the problem [11]. In Bunting and Boivin, et.al. study, participants also showed inadequate knowledge about risk factors associated with infertility [12].

Increasing the level of knowledge of these factors may help reduce the incidence of infertility by allowing couples to avoid certain risk factors that might lead to it. This knowledge may also help wider society to understand and empathize with the infertile couple, which may lead to a decrease in the psychological burden on those who are affected. While there is widespread acknowledgement of the importance of patient education within the infertility field, there is limited research and probe into what knowledge infertility patients actually possess and how they gain infertility related information in resource poor settings where health literacy is typically low. Moreover, patient education has been found to be a key aspect of patient satisfaction with infertility care [13, 14]. Since 1978, IVF has become a well-established treatment of infertility, but still the success rate is far below expectations despite continuous effort and newer strategies. According to HFEA 2011, clinical pregnancy rate is only 24.7% among IVF treated women. In India, infertility segment is growing by leaps and bounds. Researches exploring the knowledge, behaviors, perceptions and practices regarding infertility or certain treatment options have been carried out in developed countries, but very limited data is available on the Indian population despite high prevalence of infertility.

Risk Factors

Age and Fertility

Fertility varies among populations and declines with age in both men and women, but the effects of age are much more pronounced in case of women. For women, the chance of conception decreases significantly after the age of 35 [15]. Fertility in women peaks between 20-24years of age. Female fertility decreases with increase in age, relatively little till age 30–32 years and then declines progressively. The decline is 4–8% in women aged 25–29 years, 15–19% in those aged 30–34 years, 26–46% in women aged 35–39 years , and as much as 95% for women aged 40–45 years [15]. A Dutch study observed that the probability of a healthy live-birth decreased by approximately 3.5% per year after age 30.

There is also increased incidence of clinically recognized miscarriage rate & decreased live birth rates. The miscarriage rates in natural conception cycles are generally low before age 30 (7–15%) and rise with age, only slightly for ages 30–34 (8–21%), but to a greater extent for ages 35–39 (17–28%) and older (34–52%) [15]. Success rates of ART also decline as age increases due to decrease in numbers of retrieved oocytes and embryos, increase in embryo fragmentation rates and decreased implantation rates [15]. Studies showed that there was a lack of awareness of the significance of age for declining fertility among childless Canadian women [16] and Australian women [17] and among the university students in Sweden [18]. But Bunting and Boivinet.al., study showed that people were better aware of the relationship between age and declining fertility [12].

Obesity and Fertility

Overweight is a body weight, including muscle, bone, fat, and body water, in excess of some standard or ideal weight. Body mass index (BMI), Waist-hip ratio (WHR) and waist circumference are the parameters used to measure obesity. In women, obesity is associated with menstrual irregularities, ovulatory dysfunction, altered endometrial receptivity, decreased fertility, and increased risks of miscarriage and obstetric and neonatal complications [19]. Data from cross-sectional studies indicate 30-47% of overweight and obese women have irregular menses and non-ovulatory cycles [20].

Obesity lowers the chance of pregnancy following IVF, requires higher dose of gonadotrophins, high rate of cycle cancellation and has an increased miscarriage rate [21]. Obesity can affect fertility in both men and women. Abolfotouh et.al. [22] and Brannian et.al. [23] study also showed that obesity affects fertility in both men and women. Infertile couples were found to be more knowledgeable about this issue, possibly because of the prevalence of obesity in this group of patients. In Bunting and Boivin et.al. study [12], participants believed that healthy habit has an impact on pregnancy rates. Bunting and Boivin et.al. study [24] showed that 72.9% women were aware of the fact that a woman's weight affects her chances of conceiving a child.

Irregular Cycle and Infertility

Irregular or infrequent menses indicate ovulatory dysfunction. Prevalence of an ovulatory cycles is highest under age 20 and over age 40. Most women have cycles that last from 24 to 35 days, but at least 20% of women experience irregular cycles [15]. Normal cyclic menses result

usually from normal ovulatory function. Irregular cycle is the most common clinical manifestation of anovulation. Disorder of ovulation account for 20 – 40% cases in infertile couples. Ovulatory dysfunction may result in anovulation or oligoovulation. Ovulatory dysfunction occurs due to thyroid disease, hyperprolactinemia and PCOS disorder, obesity, ovarian failure and hypothalamo-pituitary disorders. Menstrual history alone often is sufficient to establish a diagnosis of an ovulation. In Abolfotouh et.al. [22] study, it was found that 64% women were aware that irregular cycle may be a cause for delay in pregnancy.

Effect of Dysmenorrhoea and Dyspareunia on Fertility

Dysmenorrhea (pain during menstruation), chronic pelvic pain, dyspareunia (pain during sexual intercourse), cyclic bowel or bladder symptoms, subfertility, abnormal bleeding, and chronic fatigue are the common symptoms of endometriosis [15]. Mean age at time of diagnosis of endometriosis ranges between 25 and 35 years. Prevalence of endometriosis in reproductive age women probably vary between 3% and 10%. It has been seen that 32% women of reproductive age with pelvic pain; 9–50% infertile women; and 50% of teenagers with chronic pelvic pain or dysmenorrhea have endometriosis. Classical studies suggested that 25–50% of sub-fertile women have endometriosis and 30–50% of women with endometriosis are sub fertile [25].

Fertile Period

Cycle fecundability is the probability that a cycle will result in pregnancy and fecundity is the probability that a cycle will result in a live birth. The period in regular menstrual cycle during which conception is most likely to occur is usually spans from day 10 to day 18 after the onset of menstruation. Sperm retains fertilizing ability for 72 hours but the egg is viable for only 24hours after ovulation. In irregular cycle, it is very difficult to know the time of ovulation and it needs monitoring. In addition, cycle fecundability increases with the frequency of intercourse during the fertile window [26]. As a consequence, the likelihood of conception can be maximized by increasing the frequency of intercourse beginning soon after cessation of menses and continuing to ovulation in women having regular menstrual cycles. The length of the fertile window may vary among women, altering the likelihood of success [27]. As a result, regular intercourse to optimize cycle fecundity should be recommended. Thus, it becomes all the more crucial to correctly know about the fertile period for a woman, the period when she may be trying to conceive. However, Ali.et.al [28] study finds that only 46% women were aware about it. In an Australian study, it was observed that only 32% of women correctly identified the most fertile time during the menstrual cycle [17] but Linda Rae Bennet [29] study found that 70% women were able to identify it.

Genital Tract Infection and Infertility

The second most common cause of infertility, lower genital tract infection gains access to uterus, fallopian tube and ovaries by ascending through the normally protective cervical barrier. The effects of PID further leads to tubal infertility, ectopic pregnancy, tubo-ovarian abscess and endometritis. Fallopian tubes bear the biggest brunt in the process of infertility most common infection related to infertility includes tuberculosis, chlamydia, gonorrhea, poly microbial infection

and nonspecific pelvic inflammatory disease. Early initiation of treatment may not prevent complications but can limit it from spreading further. The prevention of pelvic infection is more effective than treatment. In the Untied States, nearly 30% of lower genital tract infection leads to PID and results in infertility in 20% of cases. Post-infection tubal damage due to PID is responsible for 30-40% cases of infertility [30]. In Abolfotouch et.al. and Ali et.al. study, 50% of respondents were found to be aware of genital tract infection as a risk factor for infertility [22,28]. Since genital tract infection, diagnosis and treatment can prevent the major sequel to the tubal block, awareness of genital tract infection as a risk factor is highly required in our society.

Stress and Infertility

Stress, diet and exercise form a triad associated with chronic anovulation and hypothalamic amenorrhea. Psychological distress is found to be common in couples suffering from subfertility, which can be considered as both cause and effect of infertility [31]. Infertility may impact patients self-esteem and body image which may serve to reinforce the potentially stress-inducing notion that the individual is a patient with medical problems. In a study, the authors concluded that infertile women have different personality profile and their stress level (measured by serum prolactin and cortisol) were elevated compared to the control group [32]. Coping with stress may ultimately provide assistance to conception through stress reduction and help people reduce treatment termination. In Domar's review of the association of psychological distress and ART, outcome concludes women undergoing ART procedures report significant levels of negative psychological symptoms both prior and after an unsuccessful treatment cycle. From a psychological standpoint, women facing infertility exhibit significantly more tension, hostility, anxiety, depression, self-blame and suicidal ideation [9]. In the study by Abolfotouh et.al, 72% of respondents were aware that psychological distress affects fertility [22].

Fertility and Heredity

In general, fertility problems are not hereditary but depend on the causes of infertility. Some fertility problems are hereditary. Common causes for infertility that can in fact be hereditary are endometriosis, premature ovarian insufficiency and PCOS (Polycystic Ovarian Syndrome). Many women are unable to conceive and deliver a healthy baby due to genetic factors. Sometimes an inherited chromosome abnormality and a single-gene defect passed from parent to child results in infertility. Poor egg quality or low ovarian reserve is not generally considered to be hereditary causes of infertility. Blocked or damaged fallopian tubes are generally not hereditary.

Environmental Pollutant and Fertility

Compounds which disrupt communication between different cells affect the endocrine system, fertility and cause reproductive dysfunction called as Endocrine disrupting chemicals (EDC). EDC are thought to effect reproduction by directly or indirectly mimicking, stimulating, antagonizing, altering or displacing natural hormones. EDCs also raise prevalence of endometriosis in industrialized countries [33]. The possible mechanisms by which environment adversely influences fertility can be physical, chemical and psychosocial. Chemical mechanism is based on occupational exposure, i.e., solvents, welding,

agriculture, alcohol, smoking, caffeine, air, food and water. Pesticides, phthalates, heavy metals, polychlorinated biphenyles results in irregular menses, reduced fertility, fecundability and decreases the success rate in IVF and lengthens time to achieve pregnancy [31].

Exercise and Fertility

Women who are involved in strenuous recreational exercise or other forms of demanding physical activity, such as dance, have a high prevalence of menstrual irregularity and amenorrhea. Evidence suggests that moderate regular exercise positively influences fertility and assisted reproductive technology (ART) outcomes but high intensity exercise reduce fertility. A systematic review identified only three studies examining the effect of exercise on fertility in overweight and obese women with PCOS [34]. Compared to diet alone or no treatment, exercise helps improve menstrual function and/or ovulation frequency. A study has reported a trend for a higher pregnancy rate for exercise compared to diet (35% versus 10%, p=0.058). Studies of the effects of 12–24 week lifestyle interventions comprising diet, exercise and/or behavioral change in overweight infertile women with or without PCOS report improved ovulatory and menstrual regularity and reduced risk of miscarriage compared to pre-intervention. National and International evidence-based physical activity guidelines recommend at least 30 minutes of moderate-intensity physical activity on most and preferably all days of the week in couples seeking ART [35]. For men and women who are overweight and obese, achieving and maintaining a modest weight loss may improve fertility and improve other obesity-related morbidities. In a study by Bunting and Boivin et al., participants correctly answered that regular exercise increases the chances of pregnancy, but in Ali.et.al. study, only 13% participants were found to be aware of it [28].

Smoking and Male Infertility

In males, it has been suggested that cigarette smoking negatively affects every system involved in the reproductive process and epidemiological data indicate that up to 13% of infertility may be attributable to cigarette smoking. Gamete mutagenes is is one possible mechanism whereby smoking may adversely affect fecundity and reproductive performance. Spermatozoa from smokers have reduced fertilizing capacity and embryos display lower implantation rates. Different articles have demonstrated a negative impact of smoking on human semen parameters, correlated with cigarettes smoked per day and the smoking duration. Nicotine has a significant influence on sperm morphology and sperm count. Most of the reports agreed that smoking reduces sperm production, sperm motility, sperm normal forms and sperm fertilizing capacity through increased seminal oxidative stress and DNA damage. There is ample evidence [36] to suggest that semen parameters and results of sperm function tests are 22% poorer in smokers than in nonsmokers and the effects are dose-dependent, but smoking has not yet been conclusively shown to reduce male fertility. In studies by Bunting and Boivin et.al., [12] and Daniluk and Koert study [16], women participants said that they think smoking reduces the sperm parameters.

Age and Male Fertility

There is modest age-related decrease in semen volume, sperm motility and morphologically normal

sperm count but not sperm density [15]. In studies of the effect of male partner age on pregnancy rates, female partner age and declining coital frequency with increasing age are obvious and important confounding factors. A British study (adjusting for the confounding effects of both partner's age and coital frequency) found that increasing men's age was associated with increasing time to conception and declining overall pregnancy rates; time to conception was 5-fold greater for men over age 45 than for men under age 25 [15]. Sperm chromosomal abnormalities may increase with age and adversely affect early embryonic development. There is at least some evidence to suggest that increasing male age may raise the risk of miscarriage in young women. Rise in FSH levels in men towards 30 years, suggesting age-related changes in the hypothalamic-pituitary-gonadal axis [15]. The testes and prostate also exhibit morphological changes with aging that might adversely affect both sperm production and the biochemical properties of semen. It has been seen that there is decrease in pregnancy rates and increase in time to conception with the increase in male age. But there is little or no overall measurable decline in male fertility before age 45–50, and male factors generally contribute relatively little to the overall age-related decline in fertility [37]. Daniluk and Koert et.al study shows that increase in man's age reduces the chances of fertility [16].

Secondary Infertility

If a woman has previously conceived but is subsequently unable to conceive despite cohabitation for at least 12 months, then she is said to have secondary infertility. According to demographic and reproductive health survey, prevalence of secondary infertility in India is 24.6% [30]. Most couples don't think infertility can occur with people who already have kids. But the truth is that this problem is quite common and growing in our country. Pelvic adhesions caused by endometriosis or previous MTP following first pregnancy or previous abdominal surgeries or hormonal disruption/imbalance after the first pregnancy could also cause secondary infertility.Tubal damage (scarring and adhesion leads to tubal occlusion) which mainly occurs due to upper genital tract infection is the common cause of secondary infertility [31]. Post abortal or puerperal sepsis can lead to tubal damage and peritubal adhesion leading to secondary infertility. Infection with Chlamydia trachomatis, Neisseria gonorrhoea and genital tuberculosis are the high-risk factors for tubal damage [15].

Conclusion

Infertility is a fairly common problem affecting10–15% of the population. Knowledge about fertility issues is a core motivator for seeking treatment for fertility problems. Global surveys revealed inadequate knowledge of women regarding fertility. Although there is a wide spread acknowledgement of the importance of patient education within the infertility field, there is limited research into the knowledge which infertile patients actually possess and also the way they gain infertility related information in resource poor settings where health literacy is typically low. Since the prevalence of infertility is on the rise due to late marriages, delay in child bearing in carrier oriented women, stressful and altered life styles, increasing the level of knowledge of these factors may help to decrease the incidence of infertility by allowing couples to avoid certain risk factors that might lead to it.

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Our Vision

Harmonious existence between male and female leading the mankind towards ultimate bliss

Our Goals

INDIAN INSTITUTE OF SEXOLOGY BHUBANESWAR (IISB)

- *Aims to facilitate the integration of knowledge and expertise across various disciplines like medicine, psychology, sociology, law and ethics for greater understanding of complexities of human sexuality*
- *Aims to adequately address the individual sexual problems and social issues*

Objectives

- *To bring experts of different disciplines to a common platform for sharing of knowledge and views on human sexuality*
- *To promote research on human sexuality*
- *To impart training on 'Sexology' and strengthen the discipline of 'Sexual Medicine'*
- *To encourage medical professionals to choose 'Sexual Medicine' as a career*
- *To create public awareness on human sexuality and gender issues*
- *To advocate any social change for betterment of mankind*

Sexuality Education in Ayurveda and Kamasutra

Dr. Saroj Kumar Sahu

Abstract

Ancient Indian system was always favorable in imparting effective sex education in the society. The erotic sculptures on temples like Khujurah, Konark and the popular literatures on sexuality like Kamasutra, Anangaranga proves that the ancient Indians were open about sexuality and sexual education for the betterment of mankind. This article discusses ancient Indian thoughts on sexuality particularly described in Ayurveda and Kamasutra which are still valid and appropriate in modern society.

Introduction

India has always been the torch bearer of many scientific advancements, social movements and reforms alike. Long before western scientists and sociologists could focus on sexuality, an intimate subject to mankind, Indian medicine, literature and sculptures have vividly described the subject. This article focuses on Ayurveda, one of the oldest systems of Indian medicine and Kamasutra, acclaimed to be the oldest text on human sexuality in the world. Ayurveda considers sex as a part and parcel of everyone's life. Making proper use of Rasayans, one becomes endowed with good physique, potency, strength, and complexion and, in turn, becomes sexually exhilarated and sexually potent. Rasayans act inside the human body by modulating the neuro-endocrino-immune system. Vaajikaran Rasayan is the special category of Rasayan, which improves the reproductive system and enhances sexual function. Vatsayana's Kamasutra similarly ascribes a deep, positive value to sex.

According to the ancient text, sex isn't simply for reproduction, but positive sexuality also matters. Sex is pivotal to one's physical and mental health. Kamasutra also offers a fascinating account of human psychology [1,2].

Ayurveda (Rules for Healthy Life)

Ayurveda considers sex as a part and parcel of everyone's life. But as with most of the rules of life, control and moderation are the keys to a healthy sex life. Here are a few healthy sex rules as outlined in ancient Ayurveda text books.

1. Sex should only be done with man on top position. In olden days, when sex was predominantly seen as the way to beget children this concept was prescribed for better conception. This sex position facilitates the entry of semen into the vagina properly.

2. Sex should be avoided during the menstrual period. Sex should not be done with a partner whose private parts are dirty, who are too obese or very emaciated. Sex should be avoided soon after delivery and with pregnant women. Like wise, the rules proscribes Sex when one feels the urge to urinate or defecate. Sex should also not be done in uncomfortable postures, as it may lead to injury.

3. Sex should not be done with a woman, other than one's wife. As a guiding rule, Ayurveda strictly recommends fidelity and faithfulness between partners. It concentrates more on love factor than lust factor. According to Ayurveda, sex should not be done with animals like the goat, buffalo, etc. Ayurveda strongly stands against bestiality. It recommends avoiding body orifices which are non-sexual like oral, anal, etc., for penetrative sex. It advises to avoid sex in the abode of the teacher, gods and kings, in monasteries, burial grounds, places of torture and of sacrifice and meeting of four roads. It also clearly lays down that sex should not be done with children and old women. One should avoid violence during sex. Ayurveda considers sex as the means to express mutual love and respect and not anger, enmity and hatred. Sex should also not be done with the person who does not possess good mental qualities. One sex partner may take advantage of the other.

4. One should not indulge in sex after a heavy meal. Sex is also a form of exercise. This advice is akin to the rule that one should not do exercise immediately after meals. It may cause indigestion problems and Vatadosha. Similarly, sex should not be done with hunger and thirst. When one is hungry, there is already increase of Vata and Pitta in the body. If somebody do sex when hungry, it may cause Vata and Pitta related issues like dizziness, headache, bloating, gastritis, etc.

5. One should not indulge in sex during illness. As per Ayurveda, sex and immunity power are inter-related. The immunity power is explained with the term Ojas. During illness, Ojas is depleted. If one indulges in sex when one is ill, it would further deplete the Ojas. This will delay the healing process. Abstinence is highly recommended during youth which boosts immunity [3,4,5].

6. After sexual intercourse, one should take bath,

apply scented paste, expose to cool breeze, drink syrup prepared from sugar candy, cold water, milk, meat juice, soup, Sura (fermented liquor prepared from grains), Prasanna (clear supernatant fluid of Sura) and then go to sleep; By these, the vigour of the body returns quickly to its abode again [6].

7. When it it comes to frequency, Ayurveda vividly outlines sex frequency in different seasons of a year for couples. During winter, person can have sex every day. This is because, the body strength is maximum during Shita (winters). The frequency should be once in three days in Vasanta (spring season) and Sharat (autumn season) because of moderate body strength during these seasons. The season with the lowest recommended frequency are Varsha (rainy) and Nidagha (summer) i.e., once in 15 days owing to low body strength during these seasons. Ayurveda cautions against having sex on days of special significance (new-moon, full-moon, eclipse, festivals, mourning days and others). This technique gives a break to both the partners from sex and brings back freshness.

8. As per Ayurveda, if one indulges in improper sex act, it may lead to giddiness, exhaustion, weakness of the thighs, loss of strength, depletion of tissues, loss of acuity of senses and premature death. If one obeys the prescribed sex rules, it would lead to good memory, intelligence, long and healthy life, nourishment, acuity of sense organs, good physical strength and slow ageing process.

In Charak Samhita, Chikitsasthana, Chapter II, sutra 40, it is mentioned that a person desirous of longevity should not enter into sexual activities before the age of sixteen years. Similarly in sutra 41 & 42, it is mentioned that a young boy of tender age does not possess all the tissue elements in their matured form. If he enters into a sex act, his body gets dried up like a pond having little water [3,5].

Vajikarana

In Sanskrit, Vaji means horse, the symbol of sexual potency and performance. Thus, Vajikaran means producing a horse's vigor, particularly the animal's great capacity for sexual activity in the individual. Vajikarana or Vrishyachikitsa is one of the eight major specialties of the Ashtanga Ayurveda. This subject is concerned with aphrodisiacs, virility and improving health of progeny. As per Charak Samhita, by proper use of Rasayans, one becomes endowed with good physique, potency, strength, and complexion. Rasayans are helpful in many common sexual dysfunctions, including infertility, premature ejaculation and erectile dysfunction. The therapy is preceded by living in strict compliance with the directions mentioned in Ayurveda classics, various methods of body cleansing and other non-medicinal strategies like sexual health promoting conduct, behavior and diet. Certain individualized herbal and herbo-mineral combinations are administered as per the nature of a person according to Ayurveda [7].

As per Charak Samhita, the man who seeks pleasure should resort to Vajikaran regularly. The medicines or therapy by which the man becomes capable of sexual intercourse with the woman with great strength like a horse, which endears him to women and which nourishes the body of the person is known as

Vajikaran. The Vajikaran bestows contentment, nourishment, continuity of progeny and great happiness. Vajikaran therapy is said to revitalize all the seven dhatus (body elements), therefore, restores equilibrium and health. It offers a solution to minimize the shukra (sperm and ovum) defects and to ensure a healthy progeny [7].

Vaajikaran Rasayan is a special category of Rasayana, which improves the reproductive system and enhances sexual function. They act on higher center of the brain, i.e., the hypothalamus and limbic system. Vajikaran also claims to have anti-stress, adaptogenic actions, which helps to alleviate anxiety associated with sexual desire and performance. Chauhan et al. (2010) in a study showed that administration of Vajikaran Rasayana viz. C. orchioides, A. longifolia and M. pruriens ethanolic extracts modulate the level of the pituitary hormones FSH and LH. This in parts can explain the positive effect of the herbs on sexual functioning [7].

As per Ayurveda, it is recommended that persons under 17 years of age and over 70 years of age should not consume Vajikarana preparations. These preparations have to be consumed by 'Jitendriyapurusha' or man who has control on his senses and desires. If Vajikarana preparations are consumed by 'Ajitendriyapurusha' or man who has lost control over his senses and desire, it may prove harmful to the society [6].

Kamasutra (Principles of Sexuality)

Kamasutra is the oldest existing Indian text about sexual pleasure. It is believed to be a digest of a large work by Nandi, an attendant of the God Shiva, implying a divine origin. Many also believe that Vatsyayana composed 'Kamasutra' (Aphorisms on Love), in a small volume as an abstract of the whole of the works of different authors such as Nandi, Shvetaketu, Dattaka, Babhravya, Charayana, Suvarnanabha, Ghotakamukha, Gonardiya, Gonikaputra and Kuchumara etc. Kamasutra is considered to be the most famous guide to sensual pleasure ever written, indeed, one of the most notorious books in the history of the world. Its acute insights into human nature are still relevant today [8,9].

The part of the Kama Shastra, which treats the sexual union, is also called 'Sixty-four' (Chatushshashti). The followers of Babhravya say, on the other hand, this part contains eight subjects, viz., the embrace, kissing, scratching with the nails or fingers, biting, lying down, making various sounds, playing the part of a man, and the mouth congress. Each of these subjects being of eight kinds, and eight multiplied by eight being sixty-four, this part is therefore named 'sixty-four'. But Vatsyayana affirms that as this part contains also the subjects, including striking, crying, the acts of a man during congress, the various kinds of congress, and other subjects, the name `sixty-four' is given to it only accidentally [8,10].

Besides the treatise of Vatsyayana, the following works on the same subject are procurable in India: The Ratirahasya (secrets of love), The Panchasakya (the five arrows), The Smara Pradipa (the light of love), The Ratimanjari (the garland of love), The Rasmanjari (the sprout of love), The Ananga Ranga (the stage of love) and Kamaledhiplava (a boat in the ocean of love) [8,9,10].

Sexual Union with respect to Size, Endurance and Temperament

A distinctive feature of the Kamasutra is its

classification of men and women according to the size of their genitals so that couples can combine for maximum pleasure. Positions that work well for couples of equal size may not be as good for couples of unequal size. Small, medium, and large genitals go together in different combinations, or unions. Thus, the best unions are small with small, medium with medium, and large with large. Union with one size larger or smaller is high or low; union with two sizes larger or smaller is very high or very low. Males are differentiated as hare, bull, or stallion according to the size of their sexual organ and females are defined as doe, mare, or elephant cow. Thus, there are three equal sexual unions when there is intercourse between similar partners. With permutations, there are six unequal genital combinations. When genitals of unequal size are combined and the man's is larger, there are two high unions with the combinations ordered stepwise. Non contiguous sizes make a very high union. In the opposite case, there are two low unions, and noncontiguous sizes make a very low one. Among these, the equal unions are the best. A man has dull sexual energy, if he is not sexually excited during intercourse, if he shows little virility, and if he cannot stand wounds. The same goes for the woman also. In the same manner, lovers are quick, average, and long-lasting when it comes to endurance. But there is a dispute regarding the woman. A woman does not reach orgasm just like a man. Her sexual itch is continually being removed by the man. When she is suffused with a sensation of psychological pleasure, she experiences a different feeling called sexual satisfaction. Thus, women are fond of a lover with sexual staying power. They are unhappy, if a man's sexual energy runs out before they have reached the climax [8,11].

Men's pleasure comes at the end of the sexual act, whereas, the pleasure of women is continuous. Woman's genital fluid is also visible, just like that of a man. But the difference in approach and the difference in psychology among man and woman towards sex is due to nature; the man as the active partner and the woman as the passive receptacle. The man is satisfied thinking, that he is the attacker, while the woman thinks, she is being attacked. Both the partners turn unhappy if a man's sexual energy runs out and they have not reached climax [8,11].

Sexual Union According to Passion and Time

There are nine kinds of union in terms of the force of passion or carnal desire in the partners. A man is called a man of small passion if his desire at the time of sexual union is not great, his semen is scanty, and if he cannot bear the warm embraces of the female. Similarly, there are men of middling passion, and men of intense passion. In the same way, women are supposed to have the three degrees of passion or sexual feeling as specified above in the case of men. Lastly, according to time, there are three kinds of men and women, the short-timed, the moderate-timed, and the long-timed. Vatsyayana is of the opinion that the semen of the female falls in the same way as that of the male. In regard to time, there are nine kinds of sexual intercourse. There being, thus, nine kinds of union with regard to dimensions, force of passion, and time, respectively. By making combinations of these, innumerable kinds of unions would be produced. At the first time of sexual union, the passion of

the male is intense, and his time is short, but in subsequent unionson the same day, the reverse is the case. With the female, however, it is the contrary, for at the first time her passion is weak, and her time is long, but on subsequent occasions on the same day, her passion is intense and her time short, until her passion is satisfied. They are unhappy if a man's sexual energy runs out and they have not reached climax [8,11].

Women Acting the Part of a Man and of the Work of a Man

When a woman sees that her lover is fatigued by constant congress, without having his desire satisfied, she should, with his permission, lay him down upon his back, and give him assistance by acting his part. She may also do this to satisfy the curiosity of her lover, or her own desire of novelty. There are two ways of doing this. First, at the time of the congress when she turns round, and gets on the top of her lover, in such a manner as to continue the congress, without obstructing the pleasure of it. Second, the female acting the man's part from the beginning of the congress. A woman during her monthly courses, a woman who has been lately confined, and a fat woman should not be made to act the part of a man [8,11].

Conclusion

Both Ayurveda and Kamasutra have vividly described human sexuality. In Charak Samhita, Chikitsasthana, Chapter 1, Sutras 3 & 4, it is mentioned that a person should always seek the intake of aphrodisiacs because, he can earn dharma (righteousness), artha (wealth), priti (love) and yasas (fame) through this therapy only. A person gets these benefits through his progeny and the aphrodisiac therapy enables him to procreate children. A sexually excited female partner is the aphrodisiac par excellence. She is the receptacle of the sex act. Kamasutra also says man, the period of whose life is one hundred years should practice Dharma, Artha and Kama at different times and in such a manner that they may harmonize together and not clash in any way. He should acquire learning in his childhood, in his youth and middle age, he should attend to Artha and Kama, and in his old age, he should perform Dharma, and thus seek to gain Moksha, i.e., release from further transmigration.

The Kamasutra of Vatsayana ascribes a deep, positive value to sex: it isn't simply for reproduction, sexual happiness also matters, and it's important for one's physical and mental health. It also gives a fascinating account of human psychology. In his discussion of harem intrigues, seductions, and liaisons, Vatsyayana brilliantly analyses the vulnerabilities and frailties of the human mind. This is where the Kamasutra is truly universal, since his analysis of human nature is still recognizable today anywhere in the world. It is a work that should be studied by all, both old and young. It can also be fairly concluded that those early ideas, which have gradually filtered down through the sands of time, proves that the human nature of today is much the same as it was long ago.

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