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Original Article

Determinants of youth sexual behaviour: program implications for India

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Abstract. The objective of this paper is to review the current trend of premarital sexual behaviour among youth in India and the factors influencing this behaviour. Studies done in India in the last two decades were considered for the review. However due to paucity of data it could not be a systematic review and data from other developing countries was considered for comparison. Available data indicates high level of premarital and unsafe sexual activity among youth in India. Limited evidence reveals that the risk and protective factors, which play a role in determining the sexual activity of youth in developing countries are different from those in the west and they are more centered on the youth themselves. Small-scale studies done in India also highlight the factors related to the environment such as peers and family apart from individual factors. However the review highlights the need to conduct large-scale representative studies to explore the comprehensive picture of risk and protective factors that could apply to the youth in India, which has a diverse socio-cultural milieu across regions. Programs must focus on the interventions, which improve the protective factors and reduce the risk factors and not focus only on risk awareness alone. Adolescent's access to friendly services and an enabling environment in the community can improve their health seeking behavior. However multiple players other than health sector such as education, media and social agencies need to work in unison to promote protective factors that prevent unwanted health outcomes due to unsafe premarital sex.

Key words: Adolescent Sexual and Reproductive Health (ARSH), premarital sexual activity, risk and protective factors, safe sex, adolescents and youth

1. Introduction

Adolescents complete their physical, emotional and psychological journey to adulthood in a changing world that contains both: opportunities as well as dangers. They need a balanced healthy social, physical and mental environment to enable them to cope with a list of vulnerable and delicate issues. The adolescents are tempted more and more to experiment with sexual activities resulting in divergent sexual behaviors and casual sexual relationships. They are exposed to risks of unwanted teenage pregnancy, sexually transmitted infections including HIV/AIDS, drug abuse, nutritional disorders and sexual exploitation at workplace, especially child labor.

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Many are exposed to violence and fear on a daily basis. Some of the pressures they are under or the decisions they make can change their lives or even end them. These outcomes indeed reveal unacceptable losses that put the health and prosperity of the society at risk. Adolescents are especially vulnerable to sexual and reproductive ill health as they often have unexpected sex and find access to services difficult or denied. Unsafe sex is the second most important risk factor for disability and death in the world's poorest communities and the ninth most important in developed countries (1). Sexual and reproductive health services are absent or of poor quality and underused in many developing countries.

In India, on account of rapid urbanization, there is a growing need for economic independence; the average age for marriage has risen considerably. To add to it are the strong familial and social norms related to sexual activities making them further vulnerable. The rampant prevalence of myths and misconceptions,

inadequate reproductive health services and indifferent attitude of service providers further contributes to the suffering of adolescents. Compared to many western countries the burden of premarital sex in India is low (15-20%). However these figures can't be considered low looking at the mere population size of adolescents in India, which contributes to almost 30% of the total population. The mere size makes a huge number and given the resource poor settings, it is difficult to tackle the consequences of premarital sex such as unwanted pregnancies, unsafe abortions, prevalence of RTI/STI and HIV in this population. Hence, interventions for improving adolescent sexual and reproductive health need to be more specific in order to make them more effective.

The current scenario in India based on the research findings on adolescent reproductive health clearly shows that adolescents are indulging in pre-marital sex more frequently and at an early age. The incidence of teenage pregnancies in unmarried girls is rising and most of them face the risk of induced abortions under unsafe conditions. The incidence of sexually transmitted infections including HIV infections has increased rapidly during the last one decade. Nearly half of all HIV infections occur among persons aged between 15-25 years age. This has been substantiated by the data which shows that a significant proportion of unmarried adolescents form clients of commercial sex workers.

Adolescents often do not take informed decisions about whether or not to have sex and, if they do, whether or not to use condoms and/or other contraceptives often resulting in unprotected premarital sexual activity. Their young age and/or poor knowledge on matters related to sexuality, reproductive health coupled with their inability or unwillingness to use family planning and health services increases their vulnerability and exposes them to a significant risk of experiencing negative consequences (2-4). Gender discrimination coupled with the stigma about discussing sex and sexuality issues with young people further contributes to risk taking behaviours amongst youth, thus, influencing their sexual and reproductive health (5-7). Engaging in sexual activity is often equated as an expression of masculinity amongst boys in certain societies. This, most of the times is high-risk in nature (8-13). Certain factors related to one's family strongly influence adolescent sexual activity and also play a major role in a manner in which boys are stereotyped into gender roles on sexuality and masculinity issues (12,14-16).

Sexual awareness seems to be largely superficial. Social attitudes clearly favour cultural norms of premarital chastity particularly for females thereby leaving limited decision-making power in their sexual relationship (17). Double standards exist whereby unmarried adolescent boys are far more likely to be sexually active than unmarried adolescent girls. They are also more likely to approve of premarital sexual relations for themselves. Further, their movements are less likely to be supervised and they have more opportunities to engage in sexual relations.

As adolescent health is an important component of the Reproductive and Child Health (RCH) program of Government of India, specific Adolescent Reproductive and Sexual Health (ARSH) strategy has been laid down. Preventive, curative and promotive services at primary health care level for adolescents, are being operationalised in the ongoing program of RCH phase II in the country. The strategy has primarily focused its responsibility on the health sector to co-ordinate the involvement of other sectors in reaching out to adolescents.

2. Material and methods

The current review was done considering both published and unpublished quantitative studies done in India in the last two decades on exploring premarital sex and factors contributing to its outcome. But due to the paucity of such studies in the Indian context, this review could not be a systematic review. However for comparison, recent reviews on the situation in the United States and some developing countries were used. All the studies were cross sectional study designs and population based or School/College based.

2. 1. The demographic and health profile of adolescents in India

In our country 30% of the population is in the age group 10-24 years. Youth (15-24 years) contribute to nearly 20% of this population (18). Despite this, they form a vulnerable and neglected group. Of the 1.5 million girls married under the age of 15 years, nearly 20% are already mothers (19). Mortality in female adolescents aged between 15-19 years is higher than adolescents belonging to the age group of 10-14 years and contributes to 20% of the overall maternal deaths. More than seventy percent girls and about 25% males in the age group of 10-19 years suffer from severe or moderate anemia (20). About 40% of girls and boys have low Body Mass Index. Age specific fertility rate in the age

group of 15-19 years contributes to 19% of the total fertility rate. Amongst currently married women, the unmet need of contraception is the highest in the age group of 15-19 years ie.27% and among 20-24 yrs about 21%. Infant mortality rate among children born to mothers below 20 yrs of age is 77%. Addictions among young people are on the rise. Over 35% of all reported HIV infections in India occur among young people in the age group of 15-24 years, indicating that young people are highly vulnerable. Majority are infected through unprotected sex. About 53% of children face sexual abuse (21).

2.2. Prevalence of premarital sexual activity and practice of safe sex in India

In India, the available evidence suggests that between 20 to 30% of all male adolescents and up to 10% of all females adolescents are sexually active before marriage (17). Some large scale studies with their findings are quoted below:

As per NFHS-3 sexual intercourse by unmarried youth was reported among 5% males and 0.4% females in the age group of 15-19 years and 8.9% males and 0.8% females in the age group of 20-24 years. Among them, use of condom was reported only by 31% males and 18% females in the 15-19 years age group and 41% males and 16.8% females in the age group of 20-24 years. High risk sexual activity however was reported by 63% males and 0.7% females among 15-19 year olds and 18% males and 0.2% females among 20-24 year olds and condom use was reported by 31% - 41% males and 20- 25% females in the respective age groups. Among those who were sexually active, about 11% females and 28% males in 15-24 years age group complained of one or the other STI (22).

A representative survey of young people was conducted in both rural and urban settings in India in the year 2006-2008. Six states were mainly included namely Andhra Pradesh, Bihar, Jharkhand, Maharashtra, Rajasthan and Tamil Nadu. Unmarried females and males and married females aged 15-24 years were included. This was in view of the paucity of married males in these ages and therefore married males aged 15-29 years were considered. One-tenth to over one-fifth of young men and 5-15% of young women reported an experience of pre-marital romantic partnership. Sizeable proportions of young men (9-17%) and few young women (2-7%) had engaged in premarital sex (23). A recent review of non-consensual sexual experience of young people aged 13-24 years suggests that 2-20% of adolescent and young women have experienced non-consensual sexual relations (24).

Small-scale community-based studies of 15–24-year-olds in urban slums and rural settings in Maharashtra reveal that overall 16–18% of young men and 1-2% of young women reported having had premarital sex. (25,26) There seems to be common pattern as regards to the age of coital debut among boys, which is seventeen years as reported in a number of studies. Findings from youth survey across different states confirm that pre-marital sex is by and large unsafe. Findings also show that sizeable proportions of sexually experienced youth had indeed engaged in multiple partner relations before marriage. While few young women reported that they had engaged in sexual relations, very few reported multiple pre-marital partners. Moreover, consistent condom use was also limited. Among youth who reported pre-marital sex, fewer than 10% of young men and women in most states reported that they had always used a condom (23). National AIDS Control Organization has also reported that sexual activity is frequently risky. **C**asual sex and relations with sex workers are often reported by young males (27). A behaviour surveillance study conducted by AVERT in seven districts of Maharashtra among female college going students revealed 95% female college students had reported penetrative sex and only 26% among them did not use condoms (28).

2. 3. Risk and protective factors as determinants of premarital sexual activity - (Refer to Table 1)

While programs try their best to increase scientific knowledge on various health aspects that affect youth of today hoping to demote risk-taking behaviour, studies increasingly have demonstrated that this approach is inefficient as behaviour change is very difficult and takes a very long time. Other indirect factors that play a major role in shaping these behaviours need to be looked at to give comprehensiveness to the Behaviour Change Communication programs. This would help in identifying those young people who are at risk of having sex and more so unprotected sex. These factors are termed as risk and protective factors.

"Risk factors" are those that encourage one or more behaviors that might lead to pregnancy or sexually transmitted disease (e.g., initiating sex at a young age or having sex frequently and with many sexual partners) or discourage behaviors that might prevent pregnancy or sexually transmitted disease (e.g., using contraception or condoms in particular). Similarly, "protective

factors" are those that do just the opposite i.e. they discourage one or more behaviors that might lead to pregnancy or STD or encourage behaviors that might prevent them. These factors could be broadly classified at two levels i.e. individual and environment, based on the values about sexual behavior, their perceptions of family values and peer norms about sex, their attitudes about condoms and other forms of contraception, their educational and career plans and their connection to their parents and their schools, all of which are likely to affect whether or not youth have sex and whether or not they use protection against pregnancy and sexually transmitted diseases (Table 1).

Various studies done in developed countries have identified a number of key factors relating to the individual that appear protective against unsafe sex. These include life skills such as self esteem, negotiation, problem solving and decision making (29-32). Supportive family, ideal school and peer environment also prevent risk taking. Living with parents, good parent child communication, absence of violence and good family connectedness has proved to be protective against unsafe premarital sex. (29) Behaviour of peers and their indulgence in premarital and unsafe sex are important underlying factors that influence early sexual initiation (30,31,33,34). Larger peer groups and higher levels of social interaction lead to greater opportunities for youth to form romantic partnerships. Substance use and exposure to pornography were inversely associated with safe sex. (31, 33)

A Carribean survey of over 15,500 young people in nine Caribbean countries highlights four health compromising behaviors studied namely involvement in violence, sexual intercourse, tobacco use and alcohol use. Logistic regression was used to identify the strongest risk and protective factors, and also to create models for predicting the outcomes, given the combinations of the risk and protective factors. Rage was the strongest risk factor for every health compromising behavior for both genders, and across all age groups, and school connectedness was the strongest protective factor. For many of the outcomes studied, increased protective factors were associated with as much or more reduction of involvement in health compromising behaviors than a decrease in risk factors. This research suggests the importance of strengthening the protective factors in the lives of vulnerable youth, not just reducing risk (35).

A review of risk and protective factors affecting adolescent reproductive health in developing countries has revealed that studies are more concentrated around the individual and to a lesser extent on the environment. This contrasts to similar research conducted among samples in United States (39). Early onset of puberty, male gender, older age, permissive attitudes towards sex, cigarette smoking, alcohol use, viewing pornography, having friends who are sexually active, discussing SRH issues with friends, polygamous family structure and living in urban area were significant risk factors related to sexual debut. However having females in school, stable family connections and living with both parents were significant protective factors. Education and schooling were shown to be key factors for not only reducing the risk of early sexual initiation, pregnancy and early childbearing but also for increasing the likelihood that adolescents will use condoms and contraception when they have sexual intercourse. The review demonstrates that adolescents who perceive their friends or peers to be sexually active are significantly more likely to engage in sex themselves as well as have multiple sexual partners. In fact, the perception that one's peers are sexually active was one of the strongest identified risk factors.

Studies conducted in India although very sparse have revealed certain individual level factors associated with premarital sexual activity. Educational attainment was negatively associated with both types of relationships (romantic and sexual) for young women, but only with sexual relationships for young men (25,26,36). Less exposure to growing up and other sexuality related education in schools was also strongly associated with premarital sexual activity (37). Individual factors-notably access to resources, attitudes favorable to premarital sex, exposure to pornographic materials, failure to divert their mind when aroused with sexual feelings were all associated with premarital sex. Exposure to alcohol, drugs or pornographic films was positively associated with sexual relationships for both young women and men. Indulgence in violence related activities and not being able to control the sexual urge were statistically found significant among sexually active boys (37). Multivariate analysis revealed that those who indulged in violence related activity were 8 times more likely to be sexually active and 0.16 times if they lacked self-control.

Closeness to parents was negatively associated with premarital sexual relationships only for young women. Young women whose father beat their mother were more likely than other young women to form opposite sex partnerships, and those beaten by their family themselves had an elevated risk of entering sexual partnerships.

Table 1. Risk (-) and protective factors (+) that affect adolescent sexual behaviour, pregnancy, childbearing, HIV AIDS and STIs

Environmental factors	Individual factors
Family	Sexual beliefs, attitudes, and skills
Family structure	- More permissive attitudes towards premarital sex
+ Father is present	+ Ideal age for sex is older
- Stepfather is present	+ Greater skills to resist unsafe sex
- Higher number of children in household	+ Positive attitudes towards condoms/contraceptives use
Mobility	+ Lower perceived barriers of condoms use
-Residential mobility	+ Believes condoms prevent HIV/AIDS
Positive family dynamics	+ Perceives social support for condom/contraceptive use
-Parent's marriage in conflict	+ Greater self-efficacy to use condoms/contraceptive
Family modeling of sexual attitudes	+ Greater self efficacy to talk to partner about condom/ contraceptive use
+ Mother has traditional sex values	+ Visited by family planning worker
+ Parents approve of condoms/contraception	Educational achievement
Peer	+ In school
Popularity	+ Higher educational aspirations
Higher number of friends	+ Literate
Peer attitudes and behaviors	+ Higher academic performance
-Sexually active peers	- Left school early
- Peers have been pregnant	- Repeated a grade
- Positive norms for HIV/AIDS preventive action	Union status
- Friends drink alcohol	- Engaged
Romantic partner	- Divorced/separated/widowed
Characteristics of partner	Biological factors
+/- Age of current partner	Younger pubertal development
	Living arrangements
	- Lives out of home , Migrant
	Relationship with partner
	+ Longer duration of relationship before sex
	Problem or risk-taking behaviors
	-Substance abuse, attends discos/ clubs
	Emotional well-being
	- Low future aspiration
	Exposure to media
	- Views pornographic material
	- Watches movies/videos regularly
	Previous sexual behaviors
	- Anal intercourse
	- Victim of sexual abuse/forced sex
	- Poor genital hygiene
	+ Regular use of condoms
	- History of STD
	-Genital discharge

(K Mmari and Robert Blum, July 1, 2005, Department of Population and Family Health Sciences, John Hopkins Bloomberg School of Public Health)

Youth who reported strict parental supervision were no less likely than others to enter relationships (25). Findings from a qualitative study of youth in a Delhi slum setting also showed that despite of strict parental supervision, girls found ways of forming romantic friendships and engaging in sexual relations (38). Staying away from home, spending less of their leisure time with parents was positively associated with premarital sex among males. At the family level, individuals who perceived their family environment to be restrictive or uncomfortable were more likely than others to report sexual experience (28). Further, frequent interaction with peers was positively associated with romantic and sexual relationships for both young women and men (25). Unable to negotiate or say "No" to something that their peers wanted them to do was also associated with premarital sexual activity (37).

3. Discussion

The declining age at puberty and the increasing age at marriage has created a growing period in which young people may engage in premarital sexual relations. Likewise, evidence that large proportions of youth remain in school for extended periods suggests that opportunities to spend time together in acceptable places away from the watchful eyes of parents will increase. The trends of premarital sexual activity among adolescents and young people in India in the last two decades have not shown an increase and have been below 30% for males and less than10% among females. Young people reported various reasons for engaging in sexual activity such as sexual arousal, want of experience, curiosity, fun, love, and few said it was forced. However the findings of the study done by AVERT in six districts of Maharashtra stand apart from the rest of the data in the Indian context. There seem to be a number of commonalities across different studies reviewed. Males consistently seemed more likely than females to have reported having premarital sex. It is well documented that males tend to exaggerate the sexual encounters and females tend to underreport them due to the dual social norms. Drugs, alcohol and watching pornography, having peers who were sexually active as also staying away from family were associated with premarital sex. However factors like indulgence in violence and inability to divert mind when sexually aroused emerged as risk factors for premarital sexual activity in a few studies, which need to be explored further. This new dimension needs to be looked at within the existing awareness programs. It highlights the need to teach and talk not only about safe sex and condoms but also encourage adolescents to divert mind when sexually aroused and refrain from activities that predispose to violence. Knowledge on safe sex and increased sexual activity as reported in some studies needs to be interpreted carefully as it could be possible that those who indulge in sexual activities equip themselves with better knowledge on safe sex compared to others (28,37,40).

Table 2. Role of different sectors in improving adolescent reproductive health common programming framework developed globally by WHO, UNFPA and UNICEF - Action for adolescent health towards a common agenda recommendations from a joint study group WHO, UNFPA, UNICEF

Issues	Health sector	Education sector	Media	And many others: labour, criminal justice, social services, parents, peers, etc.
Information and life skills	+	+++	++	++
Services and counselling	+++	+	+	+
Safe and supportive environment	+	++	++	+++
Opportunities to participate	+	+	+	++

+ Denotes the grades in which different sectors can play a major role and influence adolescents

Having a counselor in school, parents communicating on sexual and reproductive health issues, adolescents discussing sexuality issues with parents, are some variables, which were not reported by any groups in India and seem to be generally non existent at present in India. Most parents were staying together which again did not show any effect unlike in western literature where

high divorce rates are related to early sexual initiation (41). However, strict parental supervision did not prove to be a protective factor. Studies done in African countries also showed that communication with parents and family members about avoiding sex and the use of contraception had only nominal effects among youth (42). Religious beliefs, education, occupation and income of parents also did not influence the sexual behaviors of youth (37). These studies reveal that having restrictions and supervisions and strict social norms on youth of today seem to be less effective. Gatekeepers and peers must communicate with adolescents and young people on issues of sex and sexuality, the risk of experimentation and empower them to make safe decisions in order to achieve better reproductive health outcomes.

A review of risk factors associated with premarital sexual activity in developing countries showed that they were primarily related to the adolescents' themselves (39). Very few factors outside the individual were found to be related to sexual risk behaviors. Only one study in the Indian context looking at premarital sex as an outcome was available for this review. Most of the studies were from African context. However the conclusions cannot be generalized to developing countries as such because the socio-cultural milieu is very different in Africa compared to India even though both are developing countries. At the individual level with the exception of exchanging sex for money, the factors that were found significant for adolescent reproductive health outcomes in developing countries were also found significant in the United States of America. However our review did not highlight any such factor in the Indian context. Education status or being academically good turned out to be significant protective factor. However, with the growing literacy rates and young people finding many more opportunities to interact with the opposite sex while in school/college, this dimension needs further exploration in India.

4. Conclusions

Under the RCH-II framework of Government of India, a National Adolescent Reproductive and Sexual Health (ARSH) Strategy to implement adolescent health component in the existing public health system has been designed. The strategy highlights the need to create awareness and a supportive environment for improving health-seeking behaviour of adolescents. It focuses on awareness generation communication program and a service delivery mechanism to provide adolescent friendly services. Access to information regarding the health status of adolescents in India is critical for effective planning of interventions. A good step in this direction is the NRHM's mission in commissioning a secondary data analysis of relevant data available from National Family Health Surveys and with the support from WHO a report was published in July 2009 entitled "Reproductive and Sexual Health of Young people in India."

With the available data and the ARSH strategy in hand, the policy makers and program managers must critically assess which interventions work the best. This review highlights that health services and standalone awareness programs do not seem to bring in the necessary positive change in adolescent sexual behaviours. For this, it is very essential that we understand what risk and protective factors play a role in the Indian context that influences such behaviors, and how they operate. This would help target those youth who are at greatest risk for negative reproductive health outcomes. This would further strengthen the effectiveness of programme interventions of both Reproductive and Child Health and National AIDS Control Organization.

Intervention designers and youth service providers need to consider not only specific type of risk factors for early sexual initiation but also accumulation of certain factors in the life of adolescents, that may not be significant on their own (43). In this way, an understanding of individual or cumulative risk factors can provide insight to design interventions and thus improve their effectiveness. Adolescent programs need to target more than one risk behavior simultaneously. Apart from a host of individual level factors that have shown to influence adolescent sexual behaviors, the role of peers, parents and prevailing social norms need to be explored further. There is a need of a larger representation of adolescents from urban and rural areas as well as in school and out of school adolescents to study factors that could be very unique to India given the variety of socio-cultural norms within a country framework.

Also needed are efforts to work on individual level risk and protective factors that may or may not be health related but yet influence adolescent sexual behavior. Among environmental factors, the only factors that can be influenced by programs are to do with peers and address parental inhibitions about discussing sexual matters with their children and encourage greater

openness and interaction between parents and children. Reducing gender disparities and creating equitable socialization patterns and ways of developing closer interaction with both daughters and sons could ensure a supportive environment to the adolescents. Individual level factors related to sexual beliefs, attitudes and skills can be influenced by behavior change communication programs with involvement of other sectors that deal with adolescents along with provision of adolescent friendly services. Sexuality education must be made universal and should address relationship issues as well as consent and safety from an early age in schools and other settings in which young people congregate.

The common programming framework developed globally by WHO, UNFPA and UNICEF for adolescents has included four issues namely information and life skills, services and counseling, safe and supportive environment and opportunities to contribute and participate. There are multiple players to contribute towards this framework namely health, education, media and other social sectors (Table 2).

The challenge is therefore for programs to ensure that multiple stakeholders work in unison and facilitate the process whereby young women and men are fully informed and equipped to make safe choices and negotiate wanted outcomes.

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