MULTIPLE HEALTH RISK BEHAVIOURS AMONG ADOLESCENT MALES IN INDIA

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ABSTRACT

Adolescence is a critical transitional period that includes the biological changes of puberty, the need to increase independence, preoccupation with the self, and normative experimentation. A number of health risk behaviours begin in adolescence that affect health both at the time and in later years. Some of these behaviours contribute to the leading causes of mortality and morbidity among adolescents, such as suicide attempts, injuries and the various risks associated with unprotected sexual behaviour, conditions related to tobacco or alcohol use and overweight or obesity. Even though the information regarding the health risk behaviours of adolescence would help in formulating policies and programs for improving adolescent health, researches in this field is very scarce in India. In this study I made an attempt to analyse risky behaviours of adolescents (15-19 age group) in India using data from men's file of NFHS-4, (2015-16). The overall profile of adolescents were explained through contingency tables. As the objective of the study include the sexual behaviour also, the further analysis were restricted to the adolescents who ever had sex in life time. The prevalence of health risk behaviours were also examined. Determinants of these risky behaviours are analysed using logistic regression analysis. The results can be contributed in identifying factors that should be targeted in future interventions for promoting healthier behaviours in adolescents. The findings of this study alarmed the risk taking behaviour of Indian adolescent males regarding sexual behaviours and substance use patterns.

KEY WORDS: *Adolescents, risky sexual behaviours, multiple health risk behaviours, HIV/AIDs*

INTRODUCTION

Adolescence is seen as a time of experimentation and increased danger of participating in dangerous practices. WHO defines 'Adolescents' as individuals in the 10-19 years age group and 'Youth' as the 15-24 year age group. Sexually transmitted diseases (STDs) are a serious health problem for adolescents, occurring in an estimated one-quarter of sexually active teen-agers. Many of the health problems – including STDs – result from specific risk-taking behaviors (William L. Yarber and Anthony V. Parrillo,1992). In The International Conference on Population and Development (ICPD) held in Cairo in 1994 distinguished young people as a particular gathering needing focused on wellbeing projects and administrations. Furthermore, adolescence is increasingly seen as the "gateway to health" because the behaviour patterns during adolescence tend to last throughout adult life (Dehne & Riedner, 2001).

Around the globe, India has the largest population of adolescents in the world, being home to 243 million individuals aged 10-19 years. They constitute about 21% of the Indian population, and there are 358 million young people in India between the ages of 10-24 years. If we utilized this human wealth intellectually, India could harvest the treasure of the demographic dividend. If India would be able to take advantage of its demographic dividend would result upon how much India invests in its young people- not just to make them skilled ones but as confident, healthy well-protected persons who can

contribute to their own lives as well as of society. However, for young citizens to be healthy, responsible, and active members of society, we need to ensure that those adolescents transit into adulthood in a protective and enabling environment. Early initiation of smoking, drinking, and tobacco chewing are well known to have both immediate and long-term adverse health and social consequences. Health risk behaviours among adolescents are those behaviours that can have adverse effects on the overall development and welfare of adolescents or that might prevent them from future success and development (Linda N et.al, 2017). These include behaviours that may cause immediate physical injury (such as fighting), as well as behaviours with cumulative adverse effects (substance use).

The behavioural patterns established during these developmental periods help to determine their present health status and their risk for developing chronic diseases during adulthood. Habits, which is good and bad, are often formed in this age range, which impacts the health and social wellbeing of adolescents throughout their lives. Young people's unsafe practices frequently result from their insufficient information on and involvement in such practices and their absence of comprehension of the dangers in question. Early commencement of smoking and drinking are outstanding to have both prompt and long haul antagonistic wellbeing and social outcomes. Hence, substance utilizes during pre-adulthood are viewed as hazard taking conduct.

There is proof that tobacco utilization is expanding in India, especially among youths and youthful grown-ups. While India's large and growing youth population as well as their growing tobacco consumption rates, increases, India is likely to experience heavy losses to both human life and its economy due to tobacco consumption (Agarwal, 2012). The young generation is becoming prey to this social evil and facing the remote consequences of such high-risk behaviors, which are increasing in the incidence of sexually transmitted diseases (STDs) (including HIV), unsafe and illegal abortion, adolescent pregnancy and motherhood, juvenile delinquency and many more. At present, the Government and various non-governmental organizations (NGOs) working in the field of health are concentrating towards particular communicable and non-communicable (lifestyle) diseases. However, the ongoing psycho-social problems in the country due to the increasing trend of experimentation–"taking a chance" behaviour are undermined, especially among adolescent males.

RELEVANCE OF THE STUDY

Alcohol use is likewise on the ascent in India. Because of quick changes in the participation in social media and way of life, alcohol consumption is getting widespread among the adolescents. In spite of the fact that, wellbeing effects of liquor utilization are not as clear as that of tobacco smoking, there is sufficient proof to propose that overwhelming drinking prompts

liver harm and other medical issues, just as a large group of social, physical, enthusiastic, and money related issues for the family. The wellbeing needs of youths have not been inquired about nor tended to satisfactorily; especially their regenerative wellbeing needs are regularly misjudged, unrecognized or thought little of. There is proof that liquor utilization and other substance misuse lead to expanded sexual hazard taking. In India, while marriage denotes the beginning of sexual action among the vast dominant part of young ladies, there is developing proof of pre-marriage beginning of sexual movement in youthfulness especially among youngsters. In addition, sexuality and talks around this issue is an unthinkable in most Indian social orders. So as to detail and actualize viable youthful wellbeing arrangements and projects it is fundamental that the commonness of immature hazard taking conduct and the elements related with them are recognized. The greater part of the examinations on substance use among Asian teenagers depend on extraordinary gatherings of youth or little examples of youth in restricted geographic areas. Just a predetermined number of studies have given an account of these practices at national levels. There is an expanding pattern of hazard taking conduct among youths in India yet minimal exact proof exists on its determinants. Various wellbeing hazard practices (MHRB) among teenagers represent a risk to their wellbeing, including HIV/AIDS.

There is an increasing trend of risk-taking behaviour among adolescents in India but little empirical evidence exists on its determinants. Also very few studies have reported on the relationship between age at sexual debut and risky behaviour at a national level in India. Analysing unsafe practices of adolescents gives important data for planning proper health programs for propelling adolescent's wellbeing. Besides that in Indian scenario there is very few studies concentrated on adolescents at national level and therefore this paper is an attempt to explore the adolescent risk-taking behaviour at national level.

OBJECTIVES

The most turbulent state of human development is agreeably the adolescent stage. In this study, we explore the determinants of multiple risk behaviours among adolescent males in India. The main objectives are:

1. To find out the prevalence of health risk behaviours of adolescent males
2. To estimate the prevalence of Risky sexual Behaviours among adolescent males
3. To analyse the determinants of Multiple Health Risk behaviours (MHRB) of the adolescents in India.

DATA AND METHODOLOGY
DATA

This study uses data from the National Family Health Survey (NFHS-4, 2015-16) to provide nationally representative estimates of prevalence, and socio-economic and demographic correlates of risk-

taking behaviour among adolescents aged 15-19 years in India.

METHODOLOGY

We used National Family Health Survey (NFHS-4, 2015-16) data for this study. Briefly, NFHS-4 is a nationally representative sample. Preliminary table on profile of adolescents included all the adolescent males between the age group 15-19 years. That is the preliminary table is based on 19082 adolescent males aged 15-19 years residing in the sample households. But further analysis is based on the adolescents who has ever experienced sex (1718 adolescent males). Adolescents often engage in risky behaviours such as smoking, drinking alcohol, using drugs, and early unprotected sexual activity. The information about smoking, drinking and chewing of tobacco and pan masala for these respondents were included in analysing the Health Risk Behaviours. Various socio-demographic and sexual behavioural determinants were solicited from the NFHS data.

The data provide detailed information on household members about their socio economic and demographic characteristics and some indicators of family characteristics, which gives a unique opportunity to analyze their effect on adolescent risk-taking behaviours. The independent variables included age; sex; caste; educational level; sex of household head, size of the Family where they live, age at sexual debut, number of current sexual partners and condom usage. Sexual debut was considered early if it occurred at age 15 years or younger and late otherwise. Number of current sexual partners was considered risk if the number is two or more.

Risk-taking behaviours such as tobacco chewing, tobacco smoking, alcohol drinking, age at sexual debut, and number of current sexual partners are considered as Health Risk Behaviours. Risky Sexual Behaviour in the analysis was defined as a combination of five risk taking behaviours related to the sexual behaviour. These Risky sexual behaviours include; having sex at an early age (<15 Years); sexually active with in four weeks, having multiple sexual partners (>=2); paid money for exchange of sex, and unprotected sexual behaviours (condom not used in last sex is taken as risk). The **Multiple Health Risk Behaviour Index** is defined as the co-occurrence of two or more health risks which is coded dichotomously. The dependent variable for logistic regression analysis was the Multiple Health Risk Behaviour Index (MHRBI) which is coded as 1 if *yes* and coded as 0 *otherwise*.

Contingency tables and multivariate logistic regression were used for analysing the data. Profile of adolescent males were explored using contingency table. Bivariate Chi square analysis was used for analysing the association between the background characteristics and both the Risky Sexual behaviours and **Multiple Health Risk Behaviour Index** (MHRBI) of adolescent males. Variables that were significant (p-value<0.05) in the bivariate analysis, based on the Chi square test, was included in the multivariate logistic regression model. The 95% confidence intervals (CIs) are reported. Odds Ratio (OR) also used to interpret the strength and direction of association.

RESULTS
SOCIODEMOGRAPHIC CHARACTERISTICS OF ADOLEASCENT MALES

Table 1 depicts the socio-economic and demographic background of male adolescents in India. The total adolescents in the age group 15 to 19 is 19082, and among them, the two age group of adolescents represents the early adolescence (15 to 17 years) and older adolescence (18 to 19) years. In this study, the majority were in the younger group (60%), and if we consider the place of residence, the majority belonged to the rural area. While considering the educational background, a small percentage (4.5) of them have no formal education, and major share holds in the secondary education category (84%). Religious variations were also visible in the table. Hindus represents about 74%, Muslims, about 15%, and Christians were only 7%. Among them, more than half are belonged to the general category, while others were from SC (18.6%) and ST (17.2%). Even though the legal marriageable age for males is 21 years, 2.2% of adolescents were ever married. The wealth index is one of the major factors that can be affected by the health risk behaviors of adolescents. About 41% of them were .belonged to a poor family, and about 37% were from rich families. The size of the family can also be helpful in moulding the characters of adolescents in the family. In joint families, the attention they get will be different from that of the nuclear family. From this table, it is clear that about 60% of adolescents belonged to families with 5 to 10 members. In 3 percentage of families, there were more than ten members. A lion share of the adolescents resides in a male-headed household.

TABLE 1. Back ground characteristics of adolescent males (aged 15-19 years old) in India.

CHARACTERISTICS	CATEGORY	FREQUENCY	PERCENTAGE
AGE OF RESPONDENT	15-17	11520	60.4
	18-19	7562	39.6
PLACE OF RESIDENCE	URBAN	5844	30.6
	RURAL	13238	69.4
	NO EDUCATION	852	4.5
	PRIMARY	1145	6.0
	SECONDARY	16046	84.1
EDUCATION	HIGHER	1039	5.4
	HINDU	14134	74.1
	MUSLIM	2897	15.2
	CHRISTIAN	1233	6.5
RELIGION	OTHERS	818	4.3
	SC	3543	18.6
	ST	3278	17.2
CASTE	OTHERS	11321	59.3
MARITAL STATUS	NEVER MARRIED	18659	97.8
	EVER MARRIED	423	2.2
SEX OF HOUSEHOLD HEAD	MALE	16327	85.6
	FEMALE	2755	14.4
	1-4	6377	33.4
	5-9	11344	59.4
HOUSEHOLD SIZE	10+	510	2.7
	POOR	7735	40.5
	MIDDLE CLASS	4209	22.1
WEALTH INDEX	RICH	7138	37.4
TOTAL		**19082**	**100**

PREVALENCE OF HEALTH RISK BEHAVIOURS

The Table 2 represents the prevalence of health risk behaviours among these adolescents. During the transition from childhood to adulthood, adolescents struggle to make lifestyle choices and establish patterns of behaviour that affect both their current and future health. Since the risky sexual behaviours are only among those who ever had sexual relations, the study restricted to those adolescent males (1718) only. This study elucidates the alarming rate of alcohol use among adolescents. The sexual debut before attaining age 15 is considered to be a risk habit among adolescents. But from this table, it is clear that the adolescents who initiated their sexual life before 15 years of age and above 18 years are almost same (29 and 30 respectively) and 41 percentage of adolescent's sexual debut was in between 15 and 17 years. The overall prevalence of current smoking among our study participants is also alarming. About 32 percentage of adolescents reported that they were currently using alcohol and 22.5 percentage had a smoking habit .Tobacco use with Pan masala was higher (25%) than that of chewing tobacco.(1.7%).Another important health risk behaviour under consideration was number sexual partners. About 23 percent adolescents reported that they had two or more sex partners in the last twelve months.

TABLE 2 Prevalence of health risk behaviours among adolescent males those who ever had sex

HEALTH RISKS		ADOLESCENTS	
		Number	**Percentage**
AGE AT FIRST SEX	**<15**	**499**	**29.0**
	15-17	**704**	**41.0**
	18+	**515**	**30.0**
ALCOHOL CONSUMPTION	**NO**	**1166**	**67.9**
	YES	**552**	**32.1**
SMOKING CIGARETTE	**NO**	**1332**	**77.5**
	YES	**386**	**22.5**
CHEWING TOBACCO	**NO**	**1689**	**98.3**
	YES	**29**	**1.70**
PANMASALA/TOBACCO	**NO**	**1289**	**75.0**
	YES	**429**	**25.0**
SEXUAL PARTNER	**SINGLE**	**1239**	**72.1**
	2or more	**479**	**22.8**
TOTAL		**1718**	**100**

REPRODUCTIVE AND SEXUAL HEALTH OF ADOLEASCENTS

Adolescents in India have diverse sexual and reproductive health problems. Some of the important determinants of adolescent reproductive and sexual health are given in detail. Risky sexual behavior is yet another health risk behavior. Determining the risky behaviors of adolescents provides valuable information for designing appropriate intervention programs for advancing adolescent's health. A variety of health risk behaviors begin in adolescence that affects health both at the time and in later years. Risky sexual behaviors have a long term adverse effect on sexual life. So it should be avoided. Table 3 represents the association of risky sexual behaviors of adolescent males in India with their background characteristics. From the below table, it is evident that most of the background characteristics are significantly associated with the risky sexual behavior of adolescents. But here among the oldest group, the risk is higher, and rural boys engage more in risky behaviors than their counterparts. While marital status is considered, the never-married possesses a great risk. Religious variation is merely low among the groups. Rather than poor, rich pupils have high-risk sexual behaviors. When the household size is considered, among adolescents who belonged to a family with less than five members, the chance of engaging in risky sexual behavior is higher than that of their counterparts. There is no significant associated between the Risky sexual behavior and caste of adolescents.

TABLE 3 Bivariate analyses of risky sexual behaviours among adolescents by socio-demographic backgrounds, India, 2015-16.

CHARACTERISTICS	CATEGORY	RISKY SEXUAL BEHAVIOUR (%)	χ^2 value
AGE OF RESPONDENT*	15-17	16.00	36.498
	18-19	29.40	
PLACE OF RESIDENCE*	URBAN	32.60	17.70
	RURAL	22.50	
RELIGION*	HINDU	24.00	4.904
	MUSLIM	26.20	
	CHRISTIAN	31.00	
	OTHERS	31.60	
MARITAL STATUS*	NEVER MARRIED	28.70	50.320
	EVER MARRIED	9.90	

EDUCATION*	NO EUCATION	18.20	41.808
	PRIMARY	20.80	
	SECONDARY	24.00	
	HIGHER	49.20	
WEALTH INDEX*	POOR	18.20	67.352
	MIDDLE CLASS	22.70	
	RICH	37.70	
HOUSEHOLD SIZE*	1-4	29.30	6.106
	5-9	23.50	
	10 and above	25.40	
CASTE	SC	23.30	2.599
	ST	22.90	
	OTHERS	26.50	

*significance at 10%level, p≤0.1, **significance at 5%level p≤0.05, *** significance at 1%level, p≤0.001.

People who engage in any one risk behaviour are likely to engage in others too, there may be shared biological and environmental factors which influence the development of these multiple behaviours, and so prevention and treatment interventions may impact on more than one outcome. Table 4 represents the association of co-occurrences of multiple risk behaviours with the socio economic and demographic factors. Education plays a key role in the MHRB. Among illiterate adolescents the risk is comparatively high than those who have higher education. Almost all the variables are statistically significant with the multiple risk behaviour of adolescents. Multiple risk taking behaviour are more among young adolescents than their counter parts. Religion shows high significance value (with χ^2 **value** 90.64) where Christians have 52 percentage risk than other religion. Never married and illiterate adolescents have higher chance of having risk than their counter parts. Also currently working and scheduled tribe boys shows more chance to have multiple risks.

TABLE 4 Bivariate analyses of adolescent males with co- occurrence of multiple health- risk behaviours (MHRBI) by their background characteristics.

CHARACTERISTICS	CATEGORY	MHRBI (%)	χ^2 value
AGE OF RESPONDENT*	15-17	22.40	6.81
	18-19	17.40	
PLACE OF RESIDENCE*	URBAN	24.50	8.42
	RURAL	17.20	
RELIGION*	HINDU	17.30	90.64
	MUSLIM	11.20	
	CHRISTIAN	52.20	
	OTHERS	19.00	
MARITAL STATUS*	NEVER MARRIED	20.90	10.86
	EVER MARRIED	11.40	
EDUCATION*	NO EUCATION	22.30	3.872
	PRIMARY	21.50	
	SECONDARY	18.90	
	HIGHER	13.60	
WEALTH INDEX*	POOR	17.90	1.673
	MIDDLE CLASS	20.80	
	RICH	19.80	
CASTE*	SC	16.80	39.43
	ST	29.50	
	OTHERS	15.3	
WORK STATUS*	NO	15.40	14.28
	YES	22.60	

*significance at 10%level, p<0.1, **significance at 5%level p<0.05, *** significance at 1%level,p< 0.001.

DETERMINANTS OF MULTIPLE HEALTH RISK BEHAVIOUR INDEX (MHRBI)

The below table (Table 5) depicts the determinants that are associated with multiple risk behaviours of adolescent males in India. Results of Binary Logistic regression clearly revealed that age, education, religion, marital status and work status are the important predictors of multiple risk behaviours among adolescent males. As getting older the chances of experiencing multiple risk behaviour are increasing. Older adolescents are 43% more likely to be engaged in risk behaviour than younger ones. While the locality is compared, rural boys are likely to have about 50 % more chance to take multiple health risks in their life. Ever married males have two times more risk than never married males. Among religious groups, other category possess more chance to involve in multiple risk than Hindus. Wealth index is also an important factor that predict multiple risk behaviour among adolescent males. Rich boys are likely to be more risky than poor. Work status also have an important role in the multiple risk behaviour of adolescents. Working males shows less chance to be risky than their counter parts.

TABLE 5 Determinants of Multiple Health Risk Behaviours among adolescent males in India

CHARACTERISTICS	CATEGORY	EXP(β)
AGE OF RESPONDENT***	15-17®	
	18-19	1.43
PLACE OF RESIDENCE***	URBAN ®	
	RURAL	1.496
RELIGION***	HINDU®	
	MUSLIM	0.871
	CHRISTIAN	0.462
	OTHERS	3.576
MARITAL STATUS***	NEVER MARRIED®	
	EVER MARRIED	2.373
EDUCATION**	NO EUCATION®	
	PRIMARY	1.352
	SECONDARY	1.33
	HIGHER	1.13
WEALTH INDEX*	POOR®	
	MIDDLE CLASS	0.863
	RICH	1.071
WORK STATUS***	NO®	
	YES	0.486

*significance at 10%level, p<0.1, **significance at 5%level p<0.05, *** significance at 1%level,p<0.001.

DISCUSSION

This study explored the prevalence and determinants of selected Health Risk Behaviours among adolescent males in India. Tobacco and alcohol use are behavioral risk factors for developing numerous types of cancers, such as lung, esophageal, oropharyngeal, and colon (Boffetta P et al. 1998). The result of this study elucidates an alarming rate of alcohol use and its impact on risk-taking behaviors among adolescents in India. The results showed a higher proportion of adolescents ever having sex. Today's adolescent enters puberty earlier and is taller, heavier, and healthier than the adolescent of their older peers. Our study revealed a sizeable proportion of respondents having sexual risk behaviors. Earlier age of onset to sexual activity, more sexual partners, less consistent use of condoms, more sexually transmitted diseases (STDs) were also reported among adolescents in India. The reason might be that adolescents are introduced into smoking, drinking, and risky sexual behavior by their friends. But this study lacks in that direction because of the unavailability of data. There are many different protective and risk factors that might have an impact on adolescent risk-taking behavior but are not considered in this study, such as parent–youth interaction, peer influence, etc. Our findings also demonstrate the factors positively associated with Risky sexual behaviours such as age, place of residence, marital status, and education, and wealth index.

Contrary to our expectations, the findings show that work status was negatively associated with multiple health risk behavior. In this large, cross-sectional, population-based study in India, we found significant risk-taking behavior among adolescents, which is determined by their socio-economic and demographic characteristics. The major findings of this study revealed that Indian male adolescents engage

heavily in behaviors that are detrimental to their health. It is therefore concluded that those findings are important as they tend to show that adolescent's background factors are significantly associate with their health risk behaviors, thereby suggesting the urgent need for programs and policies that can help the adolescents to desist from such behaviors. The findings also suggest that education plays an important role in preventing risky behaviors.

Our findings, along with the results of many studies (Berenbaum SA et al. 2015, Rosario M et al. 2014, & Patton GC et al., 2012) underscore the need for implementing outcome oriented approaches on adolescent's health care and behavioural risks. More attention needs to be directed to empower adolescents to enrol in higher education and to increase school connectedness. Adolescents who are educated and healthy are more likely to become contributing members of society and contributors to economic success. As a consequence, it is expected that findings from this study will be substantial and very beneficial from public health perspectives. Additionally, results from this research may be recognize the need for programmes that teach children and teenagers the basic concepts of health and fitness and how to improve present and future health status.

CONCLUSIONS

The findings of this study bring about the importance of conducting further analysis on which factor influence more in the risk-taking behavior of our adolescents. Moreover, this study arrived at a conclusion that, this research provides insights into the risk-taking behaviors of adolescents that need to be considered if intervention programmes and preventive strategies are to be designed to promote adolescent's health in India.

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