Original Research Article

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Prevalence of health risk behaviours among the school going adolescents of Gwalior township

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ABSTRACT

Background: The high-risk behaviors are defined as behaviors which threat health and well-being of adolescences, youth and other society's members. Habits and behaviour that acquired in adolescent have influence in adulthood as well. Health risk behaviors such as alcohol use, smoking, substance use, unsafe driving, unintentional injuries and violence and sexual risk behaviors among adolescents is widely prevalent. Adolescent have tendency to experiments new things, they want to explore new things because of this they have risk taking behavior, this nature is also due to hormonal surge and emotional predominance. The aim and objectives of this study was to estimate the prevalence of health risk behaviors and on the basis of key findings suggest recommendations.

Methods: This study is based on self-reported experiences of health risk behavior by school going adolescents. Adolescents are selected by the simple random sampling, and data is collected by the semi-structured, self-administered questionnaire.

Results: 26% adolescents experience road traffic accident, 4.5% experience assault. 11% were used to smoke, 9% nonsmoking products, 2.67% uses alcohol some time in their life. 9% adolescents experience symptoms of RTI.

Conclusions: Adolescent stage is a period of various changes so they need proper care, support and counseling to cope with this transition phase.

Keywords: Adolescents, Health risk behavior, Sexual behaviors

INTRODUCTION

The high-risk behaviors are defined as behaviors which threat Health and well-being of adolescences, youth and other society's members. Habits and Behaviour that acquired in adolescent have influence in adulthood as well. Adolescent is a period of transition from childhood to adulthood characterized by rapid physical growth, significant physical, emotional, psychological and spiritual changes. Adolescent have tendency to experiments new things, they want to explore new things because of this they have risk taking behavior, this nature

is also due to hormonal surge and emotional predominance. Multiple health risk behaviors (HRBs) among adolescents pose a threat to their health, including HIV/ AIDS. Health risk behaviors such as alcohol use, smoking, substance use, unsafe driving, un intentional injuries and violence and sexual risk behaviors among adolescents is widely prevalent. The objectives of this study was to estimate the prevalence of health risk behaviors and on the basis of key findings suggest recommendations.

The CDC 1990 develop Youth Risk Behavior Surveillance System (YRBSS) monitors six categories of

health-related behaviors that contribute to the leading causes of death and disability among youth and adults, including behaviors that contribute to unintentional injuries and violence, sexual behaviors related to unintended pregnancy and sexually transmitted diseases, including HIV infection, alcohol and other drug use, tobacco use, unhealthy dietary behaviors and inadequate physical activity.

METHODS

Present study is cross sectional observational study conducted among adolescents of schools of Gwalior Township from 1st January 2016 to 31st December 2016, including 400 adolescents (299 male and 101 female), to know the prevalence of health risk behavior among school going adolescents of Gwalior township.

Study settings

Gwalior is located at 26.22°N 78.18°E in northern Madhya Pradesh 300 km (186 miles) from Delhi. As of 2011's India census, Gwalior has a population of 19,53,505. Males constitute 53% of the population and females 47%. Gwalior has an average literacy rate of 87.20%, higher than the national average of 74%: male literacy is 90.85%, and female literacy is 78.82%. In Gwalior, 13% of the population is under 6 years of age³.

Sampling

For the study purpose the whole Gwalior township was divided into three zones namely Lashkar, Gwalior and Morar. From each zone two schools was selected randomly. From each school study participants (i.e., adolescents) was selected randomly.

Sampling frame

Adolescents were selected from three zone, i.e., Adolescents from two schools (one private and one government school) from zone Lashkar, zone Morar, and zone Gwalior respectively.

Sample size

400 adolescents of Gwalior township.

Sample size calculation

To calculate the sample size (95% confidence level) we can use the following formula:

$$nr = \frac{4pq}{d},$$

where nr=required sample size, p = proportion of the population having the characteristic, q=1-p and d=the degree of precision. The proportion of the population (p) may be known from prior research or other sources; if it

is unknown use p=0.5 which assumes maximum heterogeneity (i.e., a 50/50 split). The degree of precision (d) is the margin of error that is acceptable. Setting d=0.02, for example, would give a margin of error of plus or minus 2%.

We take the worst case scenario and set p=0.5 (and therefore q=1-0.5=0.5). we are prepared to accept a margin of error of $\pm 5\%$ so we set d =0.05. To determine the minimum sample size we then apply the formula: So our minimum sample size would be $400.^4$

Criteria for selection

Inclusion criteria

Only those who were within the age group of 10-19 years and those who give their willingness to participate in the study.

Exclusion criteria

Those who was less than 10 yrs more than 19 yrs and those who was not given their consent

Methodology

First of all list of various government and private (non-government) schools of Gwalior was taken from district education office. 6 schools, three governments and three private from the list were selected randomly than 67 adolescents from each school were selected randomly. Verbal consent from the Head/ Principle of the respective school was taken after explaining the type and purpose of the study. The inform consent from each of the participant was taken before asking the questions of the questionnaire. They were assured that in the confidentiality of the study participants and concerned school would be strictly maintained.

Data analysis

After data collection compilation, tabulation and analysis will be done by using Microsoft Excel and EpiCalc 2000 statistical software. Recommendations will be made on the basis of findings.

Ethical consideration

Ethical approval for the study was taken from the Ethical Committee of G.R. Medical College, Gwalior before beginning the study. The study does not require any invasive or non-invasive diagnostic procedure. The study does not require withholding of any drug prescribed by treating doctor or starting any new drug. The study doesn't interfere with any diagnostic or treatment procedure adopted by treating physician. The study does not involve any investigative procedure nor was the subject exposed to any hazardous investigation during the course of the study.

RESULTS

Prevalence of unintentional injuries (road traffic accident and violence)

Table 1 show that 26.25% adolescents have experienced a road traffic accident in their life. 27% males and 23.76% females have experienced an accident.

Table 2 shows 23.25% adolescents drive without helmet or seat belt, 12% uses mobile phone while driving, 10% drive without license.

Table 3 is shows that 4.5% adolescents have experienced assault and all are male.

Table 4 shows that among 299 male respondents 33 (11.03%) were smokers, out of these 9 (27.27%) smoke daily and out of 9,6 smoke less than 5 cigarettes per day. 23 (67.64%) smoke occasionally. Out of 33 smokers 15

(44.11%) started smoking between 15-17 years.15 out of 34 (44.11%) smoking since less than 1 year.

Table 5 shows 9.36% have used nonsmoking product mainly pan masala and pansupari.

Table 6 shows out of 299 male adolescents 8 (2.67%) have habit of alcohol consumption.

In present study 2% adolescents have experience of sexual intercourse and all use condoms for contraception (Table 7). There is no adolescent who responded regarding pregnancy and abortion in present study.

Table 8 shows that 9% adolescents have experienced symptoms of reproductive tract infection, 9.36% adolescents male and 7.92% female adolescents have experienced symptoms of reproductive tract infection. Burning micturition (5%) is most common symptom followed by white discharge and itching (3%), ulcer and swelling over genitals experienced by 1% adolescents.

Table 1: Distribution of adolescents according to their experience of road traffic accident.

Experienced road traffic accident	Male (n=299)	Female (n=101)	n=400
Yes	81 (27.09%)	24 (23.76%)	105 (26.25%)
No	218	77	295

Table 2: Distribution of adolescents according to health risk behaviour related to unsafe driving (n=400).

Name of health wish habanian	Presence of risk behaviour	
Name of health risk behavior	N	%
Drunken driving	2	0.5
Rash driving	6	1.5
Driving without license	40	10
Using mobile phone while driving	48	12
Drive without helmet or seat belt	93	23.25
Experienced Road traffic accident	105	26.25
Experience of assault	18	4.5

Table 3: Distribution of adolescents according to their experience of assault (whether they have assaulted someone or someone assaulted them).

Experienced assault	Male (n=299)	Female (n=101)	n=400
Yes	18	00	18 (4.5%)
No	281	101	382

Table 4: Distribution of male adolescents according to cigarette smoking habit.

Variable	Sub variable	N (%)
Smaling (n. 200)	Yes	33 (11.03)
Smoking (n=299)	No	266 (88.96)
Frequency (n=33)	Daily	9 (27.27)
	Once a week	0.00
	Twice a week	1.0
	Occasionally	23 (67.64)
	<5	6.0
Daily intake (n=9) according to no. of cigarettes	5-10	2.0
	10-15	0.0

Continued.

Variable	Sub variable	N (%)
	15-20	0.0
	>20	1.0
Age at commencement (in years) (n=33)	10-14	10.0
	15-17	15 (44.11)
	18-19	8.0
Duration of consumption (in years) (n=33)	<1	15 (44.11)
	1-2	14
	3-4	2
	>4	2

Table 5: Distribution of male adolescents according to use of non-smoking product (n=299).

Use of non-smoking product	N	%
Tobacoo chewing	6	2.006
Pan masala	9	3.01
Gutka	5	1.67
Pan supari	8	2.67
Kheni	0.0	0
Others	0.0	0
Total	28	9.36

Table 6: Distribution of male adolescents according to habit of alcohol consumption.

Variable	Sub variable	N (%)
Alashal congumntion (n-200)	Yes	8 (2.67)
Alcohol consumption (n=299)	No	291 (97.32)
	Once or twice in a week	0.00
Engagon av (n=9)	3 or 4 times in a week	0.00
Frequency (n=8)	Daily	2.0
	Occasionally	5
	<40	3.0
Intake of (n=8) Amount of alcohol (in ml)	40-80	3.0
	80-160	0.0
	>160	1.0
Age at commencement (in years) (n=8)	10-14	0.0
	15-17	5
	18-19	3.0
	<6 month	3
Duration of consumption (in years) (n=8)	6 month-1	2
	1-2	1
	>2	1

Table 7: Distribution of adolescents according to experience of sexual intercourse.

Sexual intercourse	Male (n=299)	Female (n=101)	Total (n=400) (%)
Present	7.00	1.00	8.00 (2)
Absent	292.0	100.0	392.0 (98)

Table 8: Distribution of respondents according to ever experienced symptoms of reproductive tract infection in adolescents.

RTI* symptoms	Male (%)	Female (%)	Total (%)	
White discharge and itching	10 (3.34)	2 (1.98)	12 (3)	
Burning micturition	15 (5.01)	5 (4.95)	20 (5)	
Ulcer and swelling over genitals	3 (1)	1 (0.99)	4 (1)	

Conitnued.

RTI* symptoms	Male (%)	Female (%)	Total (%)
No symptoms	271	93	
Total	299	101	36 (9)

RTI*: Reproductive tract infection.

DISCUSSION

Prevalence of unintentional injuries (road traffic accident and violence)

In the present study 26.25% adolescents have experienced an accident in their life. Among them 27% were males and 23.76% females. In the previous studies done it was reported by Sharma et al from Chandigarh that RTI constituted 11 % of the total unnatural deaths among 16-20 years age group.⁵ Dandona reported an annual nonfatal RTI incidence rate adjusted for sex among 10-14, 15-19 of 23.5, 30.1, 100 persons per year, respectively.⁶ These findings are consistent with present study.

Findings in present study also reported that 4.5% adolescents have experienced assault and all are male. In previous studies done by Sharma et al it was reported that 13.5 per cent adolescents aged 14 to 19 years had threatened or injured someone with a weapon in past 12 months; 49.1 per cent boys and 39.6 percent girls reported being involved in a physical fight in past 12 months.⁷

Prevalence of substance abuse

Smoking: Among 299 male respondents 33 (11.03%) were smokers.

Consumption of alcohol: Among 299 male adolescents 8 (2.67%) consume alcohol.

Prevalence of health risk sexual behavior

In present study 9% adolescents have experienced some symptoms of reproductive tract infection, among them 9.36% were male and 7.92% were female adolescents. Burning micturition (5%) is most common symptom followed by white discharge and itching (3%), ulcer and swelling over genitals experienced by 1% adolescents. Common symptoms (of RTI) reported in female adolescents are burning micturition (4.95%), followed by white discharge per vagina (1.98%) and ulcer over genitals (0.99%).

These findings are comparable with previous studies conducted by Kerubo who reported that 24% adolescents reported one or more symptoms; most commonly vaginal discharge (11%), pain (9%) or itching (4%).⁸

Kajal Jain et al found that 16.42% of the girls suffered from one or the other symptoms of RTI of which 80.3% suffered from excessive vaginal discharge. About 14.28% of the girls sought treatment from government facilities.

Afrin et al examined reproductive health problems among 126 adolescent girls of 13-18 years in view of menstrual problems. She found that 34.92% and 4.76% suffered from white discharge and itching respectively. 10

It was finally concluded that adolescents suffer from reproductive health problems which demand awareness, motivation, education and appropriate health care facilities to improve their reproductive health.

In present study 2% adolescents have experience of sexual intercourse. All use condom for contraception. Unsafe and unprotected sex is associated with increased risk of acquiring STD and HIV. Kumar et al in his study in never married boys and girls aged 15-24 yearS reported that 21.7% males and 4.6% females reported having had premarital sex.¹¹

CONCLUSION

More than one out of four adolescents have experienced road traffic accident and significant number of them is in the habit of using mobile phone while driving, driving without license and rash driving. Some adolescents have experienced assault. 11% adolescents are smoker, 9% uses nonsmoking products and 2.67% uses alcohol. 9% adolescents experiences symptoms of STI.

Recommendations

All parents should ensure that their adolescents obey traffic rules and do not use mobile phones during driving. There should be strict enforcement of laws related to traffic rules. Prohibiting sale of tobacco, alcohol and other substance of abuse to minors is utmost important. Establishment of adolescent friendly health services (AFHS) is highly recommended. They should provide reproductive health services, sexual and reproductive health education, STD/HIV screening, treatment and counseling. Adolescent stage is a period of various changes so they need proper care, support and counseling to cope with this transition phase.

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