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### **A Study of Psychosocial Risk Status and Knowledge of Reproductive Health in Adolescents in Raipur City**

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#### **Abstract**

Adolescence is the period of physical and psychological development from the onset of puberty to maturity. The World Health Organization defines an adolescent as a person between ages 10 and 19 years. A dramatic shift in thinking from concrete to abstract gives adolescents a whole new set of mental tools, to analyze situations logically in terms of cause and effect, appreciate hypothetical situations, evaluate alternatives, introspection, decision making and cognitive abilities. Adolescents experience intense physical, psychological changes as they make transition from childhood to adulthood. This period of transition is the most vulnerable time. Adolescents are at risk of developing behavioral problems like school failure and drop outs, substance abuse, delinquency and violence, sexually transmitted diseases, unwanted pregnancies, domestic violence, stress and depression and risk-taking behaviour. It is the responsibility of the society to utilize this period constructively through education, counseling, mass media, awareness programmes and address the reproductive health needs of adolescents. The present study analyzes the psychosocial risk status and knowledge of reproductive health in adolescents in Raipur city. The study recommends implementation of provisions by government to provide continuous education and economic security for adolescents. Programmes like age-appropriate reproductive health curriculum should be introduced in schools and colleges with counseling facilities at school and primary health care levels.

**Keywords:** reproductive health, adolescents, contraception, sexuality, psychological development.

#### **Introduction**

Adolescence is the period of physical and psychological development from the onset of puberty to maturity. It is also referred to as teenage years or youth. Adolescence is defined by WHO as the age group of 10-19 years. In India, adolescents (10-19 years) constitute 21.4 percent of the population, comprising one-fifth of the total population. Adolescence is the transitional stage of development between childhood and adulthood, representing the period of time during which a

person experiences a variety of biological changes and encounters a number of emotional issues. Adolescence can be a specifically turbulent as well as a dynamic period of one's life. It has been identified as a period in which young people develop abstract thinking abilities, become more aware of their sexuality, develop a clearer sense of psychological identity and increase their independence from parents. G. Stanly Hall denoted this period as one of "Storm and Stress" and, according to him, conflict at this stage is normal and not unusual.

Adolescents report that they are far happier spending time with similarly-aged peers as compared to adults. Consequently, conflict between adolescents and their parents increase at this time as adolescents strive to create a separation and sense of independence. Young adolescents are particularly susceptible to conforming to the behavior of their peers. Adolescents are rich in memory, perceiving things, concept formation, association, generalization, imagination and decision making. Questioning on most of the things is prevalent. Adolescence is a period when rapid physiological changes and demands for new social roles take place. Emotional development is at its peak and there is no emotional stability in general. It is a period of rapid physical and psychological transition which makes adolescents particularly vulnerable to emotional conflicts and behavioral disorders.

Adolescents are facing multitude of problems throughout the world. Adolescents suffer from psychosocial problems at one time or the other during their development. The major psychosocial problems are substance abuse; internalizing disorders (depression, anxiety) and externalizing disorders (delinquency, aggression, educational difficulties). Many of these problems are transient in nature. Further adolescents may exhibit these problems in one setting and not in other (e.g. home, school). Several key transitional periods (moving from early elementary to middle school, moving from middle to high school or moving from high school to college) can present new challenges for these adolescents and symptoms of dysfunction may occur.

Nowadays, because of rapid industrialization and urbanization, majority of parents are employed and live in unitary set up, so unavoidably they get less time to look after their children. Under these circumstances, psychosocial and psychiatric problems are on the rise with increased risk-taking tendency and therefore susceptibility to behavioral problems at the time of puberty and new concern about reproductive health. Studies suggest that adolescents have limited knowledge about reproductive health, and know little about the natural processes of puberty, sexual or reproductive health. This lack of knowledge about reproductive health including the emerging threat of adolescence age unwanted pregnancies, sexually transmitted diseases and HIV/AIDS may have grave consequences for the country. Health problems of adolescents are very different from those of younger children and older adults. Due to lack of accurate information in the absence of proper guidance, adolescents are prone to various behavioral and reproductive health problems.

While the consequences of poverty do not spare the adolescent boys, the girls come through as the endangered sex. In the absence of general overall socioeconomic development, availability of safe drinking water, environmental sanitation and better access to public health care, including control of recurrent viral, bacterial and parasitic infections, nutritional and dietary supplementation are needed. There is a spate of work in the area of sexuality and reproductive health. Increase in the sexual activity, incidence of STDs/HIV and clinical abortions among unmarried adolescents are reported. Matters are further compounded by gender bias, myths and misconceptions associated with sexuality and reproductive health among adolescents combined with reluctance on part of the parents and schools to talk more freely about reproductive health. It is evident that fertility control through stringent implementation of legal age for marriage, nutrition and sex education, and protection of unmarried adolescent girls, demand urgent attention. Even though there is a large body of information on reproductive health, there is uneven coverage of studies on adolescents out of school as well as on the street related to their sexual practices. Studies on mental health, well being, and behavior problems among adolescents remain limited. The data suggest need for preventive, curative, and promotive measures dealing with mental health problems among the adolescents. Adolescents are the future of a nation. Their psychological well being is a responsibility of all including parents, teachers, health workers and policy makers with the view of fast modernization and increasing risk behavior. Unmet needs during this critical period have serious consequences not for the individual alone but for the family, community, society and nation at large.

### Aims and objectives

1. To determine socio demographic profile of the study adolescent group population in Raipur city during July 2013 to June 2014.
2. To assess psychosocial risk status of adolescents (10 to 19 years) in Raipur city by WHO's 'HEEADSSS' method of evaluation during the study period.
3. To assess the knowledge of adolescents on reproductive health.
4. To make suitable recommendation on the basis of study.

### Methodology

The present study has been conducted in the selected urban and slum areas of Raipur city, Chhattisgarh, India. According to 2011 census, the population of the Municipal Corporation area was 1010087. Effective literacy was 86.90%; male literacy was 92.39% and female literacy was 81.10%, sex ratio of 946 females per 1000 males. Climate tropical wet and dry climate. Moderate temperature remains throughout the year except March to June which can be extremely hot. The list of zones and its area was procured from the Municipal Corporation of Raipur; C.G. Sampling was done by multistage simple random sampling in which four zones were selected out of eight zones from the list of zones by lottery method. From each selected zone, four wards were selected randomly for study by lottery method. From each ward, one slum and one urban area were selected randomly. Thus, total 32 study areas were selected, 16 from slum and 16 from urban areas. Prevalence of adolescents was found to be 22.1% according to WHO 2011 data from which sample size was calculated by the formula:

$$n = Z^2 pq / L^2$$

Where,  $z = 1.96$ ,  $n$  = sample size = adolescents

Prevalence 22.1%,  $q = 100 - p$ ,  $L$  = permissible level of error in the estimated prevalence, taken as 15 (15% of 22.1 = 3.2)

The required sample size was calculated to be:

$$n = 1.96^2 * 22.1 * 77.9 / (3.2)^2 = 631 \text{ Adolescents.}$$

### Results and discussions

Study included 643 adolescents in which 321 boys and 322 girls divided into early, mid and late adolescence age 32.81%, 29.70% and 37.48% respectively. Adolescents were almost equally distributed in study areas with adolescents in slum 49.77% and urban areas 50.23% respectively. Majority of adolescents were in middle school 32.66%, followed by high and higher secondary 25.35%, 19.44%; rest were in primary school 14.46%, graduates 7.74% and illiterates 0.62%. Adolescents were 57.08% of class IV, 15.40% of class I, 14% of class II, 13.06% of class III and 0.47% of class V socioeconomic status. Out of 643 adolescents, 34 (5.29%) were employed in different kinds of works. Majority of study subjects were Hindus 92.38%, rest were Muslims 5.91%, Christians 1.09%, Sikhs 0.47%. Majority of them were of 1<sup>st</sup> and 2<sup>nd</sup> birth order 35.30%, 35.61% followed by 3<sup>rd</sup> birth order 18.51% and decreasing further. Adolescents' fathers education was equally distributed within the group with illiterate 15.40% and decreased 4.82%. Majority of them were unskilled 35.15% followed by professional and skilled, both nearly 18.5%. Mothers were mostly illiterate 31.10%, followed by primary and middle school education nearly 13.5%, and as level increases number of mothers getting higher education decreases. Mothers were mostly unemployed 74.34%, unskilled worker 13.69% and only 5.57% were professionals.

### Risk Status

In this study, prevalence of psychosocial risk status in adolescents was found to be 30.48% at mild risk, 36.08% at moderate risk and 33.13% at severe risk among which males were more 18.04% at severe risk than females. Females were more at moderate risk 19.44% and 15.55% at mild risk. Only 0.31% adolescents were found to be normal. Late adolescents were maximum at risk with 37.48% in which majority was in severe risk 24.26%, than early 32.81% followed by mid adolescents 29.70%. Adolescents in majority were at moderate risk 36.08% in which mid adolescents were more in number 16.64%. Early adolescents were more at mild risk 21.15%, mid adolescents were more at moderate risk 16.64%, late adolescents were more at severe risk 24.26%. In study done by Paul S (2006) in adolescents of South West Delhi, 48.4% were at psychosocial risk

in which 16% were at moderate risk and 32.4% were at high risk which is almost similar to our study findings. In a study done by Gupta MK (2011), 40.0%, 43.6% and 11.75% study subjects were categorized as mild, moderate and severe risk for psychosocial problems respectively. A study was conducted by Ahmad A (2007) on prevalence of psychosocial problems among 390 school going male adolescents. The study revealed that the prevalence of psychosocial problems was maximum 25.2% in mid adolescents and minimum 10.3% in early adolescents. A cross sectional study was conducted by Kishore S (2009) among 840 adolescents in Dehradun. The results showed overall prevalence of psychosocial problems to be 31.2%. Psychosocial problems were more in males (34.77%) as compared to females (27.6%). Arun and Chavan (2009) in a study on 2400 students in Chandigarh found that 45.8% had psychological problems. In a study done by Chhabra GS (2012) more than one third (39.6%) adolescents were having psychological problems, 62% of male adolescents were having psychological problems in middle age group of 14-16 years in comparison to early (31.7%) and late (18%) age groups.

### **Home**

Home contributes to 12.67% of the total risk status in this study. Violence at home strongly correlated with risk status of adolescents as found in our study. 29.39% experienced domestic violence at home and risk status goes on increasing with most in severe risk 18.97% and it was statistically highly significant. Similar findings were seen in study conducted by Chhabra GS (2012) in which 29% adolescents had experienced domestic violence. Solvenia study (2008) done by Sprah L showed bit lower percentage 18.7%. Also Lepisto (2010) showed much higher 67% parental violence against them.

Adolescents of lower socioeconomic status were more at risk as seen class I, class II were more in mild risk 7.47% and 6.69% were class III (at moderate risk 4.51%). Class IV and V were most in severe risk 23.17% and 0.32%. So, with lowering of socioeconomic status, psychosocial risk status goes on increasing. Almost similar finding was seen in study done by Ahmad A (2007), prevalence was found to be higher in lower socioeconomic class IV 30.8% as compared to class I 13.8%, class II 12.45% and class III 18.7%. A study conducted by Chhabra GS (2011) showed more prevalence in lower socioeconomic class 65.7% as compared to upper 18.8% and middle 11.6% socioeconomic class.

### **Education**

Education contributed 19.23% to the overall psychosocial risk status in this study. Adolescents who were not going to school were more in severe risk than mid adolescents i.e. adolescents of middle and high school. Study done by Ahmad A (2007) showed contribution of education in psychosocial risk problems to be 17.4% with greatest prevalence in mid adolescence (14-15 years) 25.2%, followed by late (16-19 years) 18.6% than early adolescence 10.3%. Prevalence goes on increasing with decreasing socioeconomic status i.e. class I had 6.9%, class II 12.3%, class III 18.6% and class IV 30.8% respectively. Study done by Chhabra GS (2012) showed contribution of education in psychosocial risk prevalence to be 36.9%, much higher than this study.

### **Addiction**

Out of 643 adolescents, 14.77% adolescents were addicted, majority in late adolescence 7.62%, 3.73% in mid adolescence and 3.42% in early adolescence. Among them, females were 4.20% mostly in late adolescence 2.95% and males 10.58% which increased from early to late adolescence. Adolescents residing in slums were addicted more 9.02% as compared to urban adolescents 5.72%. Female adolescents of slums were more addicted 2.95% than those of urban areas 1.24%. Majority were addicted to tobacco 58.45%, 30.28% took alcohol and 7.04% were addicted to some kind of drugs. Similar kind of finding was seen in study done by Prajapati M (2011), in which prevalence of addiction was found to be 15.9% among which tobacco was in majority 90.32% followed by alcohol 9.68%. In study done by Chhabra GS (2011), prevalence of addiction was found to be 53.1%, much higher than our study. In study done by Ahmad A (2007), prevalence of addiction was found to be 13.3% similar to our study, highest in late adolescents 20.9% than mid adolescents 18.7% and least 4.8% in mid adolescents.

### **Sexuality and Relationship**

Sexual status and related knowledge contributed to 20.20% of overall prevalence of psychosocial risk behaviour. Adolescents in relation were 32.04%, out of whom 10.26% were sexually active. Correlation was found to be highly significant. Similar finding was seen in study done by Prajapati M (2011) in Ahmedabad, in which 13.45% of adolescents (22.64% girls and 77.36% boys) were sexually active pre-martially. A study done by Jejeebhoy S (2000), revealed 20 to 30% of boys and 0% to 10% of girls are sexually active pre-martially. A study conducted by Chhabra GS (2012) in Amritsar, Punjab revealed much higher 79.4% of adolescents were sexually active. Only 9.64% adolescents had knowledge of safe sexual practices, out of which most of them were from slums 10.94%, rest 8.36% were from urban area. Study done by Prajapati M (2011) revealed that out of 13.4% sexually active adolescents, only 35.85% had knowledge of safe sexual practices and used barrier contraceptives.

### **Suicidal Ideation**

Adolescents thought of attempting suicide were 28.35%, out of which 24.73% actually tried to hurt or kill themselves. Among them, females 37.89% were more than males 18.75% who had ideation of suicide or hurting themselves. Similar finding was seen in study done by Siddharth T (2006) in which 25.4% females and 19.1 % males had suicidal ideation. Further 24.2 % females and 17.8% males, high suicidal ideation was seen in late adolescence with actual attempt to do it was 8.6% and 7.3% respectively. In a study done by Khurana S (2004), prevalence of suicidal ideation was found to be 25%, 16.6% planned for it and 8.3% attempted it. In the study of Chhabra GS (2012, prevalence of suicidal ideation was 20.4%, out of which 14% attempted it.

### **Puberty Knowledge:**

Adolescents having knowledge that physical and mental changes occur during puberty were 50.86% and were equally distributed in male and female of both urban and slum study areas. Adolescents who knew about the pubertal changes were 28.77%. Knowledge was seen more in males than in females. In a study done by Agarwal S (2007), higher prevalence 76% was seen regarding physical signs of adolescence, out of which 18% thought that only menarche was the sign of puberty.

Adolescents knowing correct age of menarche were 64.23% with female predominance in both slum and urban study areas with almost equal distribution. In study done by Bobhate S (2011), majority 54.4% replied correct age of menarche to be 13-14 years. Similar finding was seen in study done by Singh SP (2006), in which knowledge about age of menarche at 12-14 years was 79%, which is higher than our study.

Adolescents 60.81% said that proper genital hygiene should be maintained daily. In a study done by Bobhate S (2011), 69.3% had knowledge of maintaining proper reproductive hygiene.

### **Pregnancy and Contraceptive knowledge:**

In our study, 93.33% adolescents had knowledge that Oral Contraceptive Pills can prevent pregnancy, 3.89% did not have this knowledge. Regarding knowledge of emergency contraception, 50% of adolescents agreed that these are safe to use. 19.44% adolescents had doubt about the safety of emergency contraceptive drugs. 30.83% adolescents did not know which is safer.

Adolescents were interrogated regarding knowledge of different types of contraceptives. Majority replied barrier contraceptives (85.83%), followed by Emergency contraceptive pills 64.17%, Female sterilization 58.33%, Oral contraceptive pills 55.56%, Intrauterine device 34.17%, Withdrawl method 26.94%, Spermicidal jellies and foams 12.78%.

In the study done by Patanwar P (2013), 64.5% had knowledge of contraceptive methods. 35.4% adolescents did not have knowledge regarding Barrier contraceptives (8.9%), Intrauterine devices (2.7%), Oral contraceptive pills (1.3%). In the study done by Muzammil K (2009), 65.47% adolescents had knowledge of contraceptive methods, out of which, majority had knowledge of Barrier contraceptives (61.07%), Oral contraceptive pills (49.64%).

### **STD Knowledge:**

Adolescents were interrogated about the knowledge of signs and symptoms of sexually transmitted diseases (STDs) in male and female, 76% adolescents were not aware of pain, ulcer,

discharge; 14.72% adolescents were aware about the symptom of discharge, ulcer 11.11%, pain 5%. In the study done by Ahmad A (2007), only 9.2% adolescents had knowledge of STDs; rest of the 67.9% did not have knowledge and 22.8% did not respond. In the study done by Patanwar (2013), 84% adolescents had heard of STDs. Prevalence of knowledge about signs and symptoms, 8.5% replied pain, boils over genital region 7.5%, itching 3.9%.

On interrogating about the curability of HIV, 20.06% adolescents said yes, 16.08% said no and 63.14% said that they did not know. In a study done by Anjali S (2009), 33.4% adolescents believed that treatment can cure HIV, 45.9% said no and 20.7% did not know. On asking if HIV can be tested, 19.91% said yes, 9.33% said no, majority 70.76% did not know. In the study of Muzammil K (2009), 85.95% adolescents had knowledge of AIDS. On asking whether HIV can be prevented, 49.61% said yes, 6.60% said no, 44.63% did not know. 39.81% adolescents said HIV can be prevented by using barrier contraceptives, avoiding commercial sex worker 19.28%, avoiding used needle 16.02%, avoiding injectable drugs 9.95%, abstinence 1.40%.

For seeking reproductive health related queries, majority of adolescents said through television 80.25%, magazines and friends 51.4%, internet 44.63%, doctor's guidance 10.26%. Only 13.53% adolescents said that they will seek from their parents, out of which 12.75% preferred mother. In the study done by Ahmad A (2007), major source of information for adolescents were television 40.2%, which is less than our study, friends and peers 16.5%, radio 5.1%, parents 0.5%. In the study of Agrawal S (2007), 37.6% adolescents said electronic media and friends 17.6%. In case of reproductive health related problems, 38% said they will go to their parents, 32.8% to doctors, 26% to friends and only 1.6% to teachers.

Reproductive health teaching is necessary in school education according to 74.81%. In study done by Agrawal S (2007), 90% wanted reproductive health education should be provided at school. In study done by Patanwar (2013), 86.4% felt reproductive and sexual health should be added in school curriculum.

Table 1: Sex wise distribution of addicted adolescents according to their phase of adolescence

Addicted	Female				Male				Total			
	Yes	%	No	%	Yes	%	No	%	Yes	%	No	%
Early adolescence	4	0.62%	108	16.80%	18	2.80%	81	12.60%	22	3.42%	189	29.39%
Mid adolescence	4	0.62%	91	14.15%	20	3.11%	76	11.82%	24	3.73%	167	25.97%
Late adolescence	19	2.95%	96	14.93%	30	4.67%	96	14.93%	49	7.62%	192	29.86%
Total	27	4.20%	295	45.88%	68	10.58%	253	39.35%	95	14.77%	548	85.23%

Chi square = 9.819 d.f = 2 p = 0.007 Significant

Out of 643 adolescents, 14.77% adolescents were addicted majority in late adolescence 7.62%, 3.73% in mid adolescence and 3.42% in early adolescence. Among them, females were 4.20%, mostly in late adolescence 2.95% and males 10.58% which increases from early to late adolescence. The correlation was statically significant.

Table 2: Distribution of Psychosocial risk status according to adolescents Co education

Coeducation	Normal	%	Mild risk	%	Moderate risk	%	Severe risk	%	Total	%
Yes	2	0.31 %	176	27.37 %	178	27.68 %	114	17.73 %	470	73.09%

No	0	0.00 %	20	3.11%	54	8.40%	99	15.4%	173	26.91%
Total	2	0.31 %	196	30.48 %	232	36.08 %	213	33.12 %	643	100.00 %

Adolescents in co-education were more at mild 27.37% and moderate 27.68% risk, whereas adolescents not in co-education were seen more at severe risk i.e. 33.12%. The correlation was highly significant.

Table 3: Distribution of Psychosocial Risk Status according to Adolescents' Birth Order

Birth order	Normal	%	Mild risk	%	Moderate risk	%	Severe risk	%	Total	%
1	1	0.16 %	66	10.26%	80	12.44	80	12.44%	22	35.30%
2	1	0.16%	79	12.29%	79	12.29	69	10.73%	228	35.46%
3	0	0.00%	31	4.82%	52	8.09	36	5.6%	119	18.51%
4 to 7	0	0.00%	20	3.11%	21	3.27	28	4.36%	69	10.73%
Total	2	0.31 %	196	30.48 %	232	36.08	213	33.12%	643	100.00%

**Chi Sq= 13.463 d.f =12 p = 0.336 Not significant**

No significant correlation was seen among birth order of adolescents and prevalence of psychosocial risk status with maximum in moderate risk.

Table 4: Distribution of adolescents psychosocial risk status according to Mothers Education

Mothers' Education	Normal	%	Mild Risk	%	Moderate Risk	%	Severe Risk	%	Total	%
Illiterate	0	0.00 %	39	6.07 %	70	10.89	141	21.94	200	31.10
Primary	0	0.00 %	18	2.95 %	34	5.29	56	8.87%	89	13.84
Middle	0	0.00 %	24	3.73 %	35	5.44	37	5.75%	87	13.53
High	0	0.00 %	20	3.11%	28	4.35	40	6.22%	75	11.66
Higher Secondary	0	0.00 %	39	6.07 %	23	3.58	10	1.55%	70	10.89
Graduate	2	0.31 %	30	4.67 %	22	3.42	8	1.25%	61	9.49
Postgraduate	0	0.00 %	20	3.11%	15	2.33	9	1.41%	43	6.69

Died	0	0.00 %	6	0.93 %	5	0.78	9	1.22%	18	2.80
Total	2	0.31 %	196	30.64 %	232	36.08	213	32.97	643	100.00

**Chi Sq = 84.775 d.f=21 p = 0.0001 highly significant**

Risk status goes on decreasing with increasing level of education of mothers with maximum prevalence of risk among illiterates 31.10. The correlation was statistically significant.

Table 5: Adolescents Risk Status in correlation to Violence at Home

Violence at Home	Normal	%	Mild Risk	%	Moderate Risk	%	Severe Risk	%	Total	%
Yes	0	0.00 %	18	2.80 %	49	7.62 %	122	18.97 %	189	29.39 %
No	2	0.31 %	179	27.84 %	183	28.46 %	90	13.99 %	454	70.61 %
Total	2	0.31 %	197	30.64 %	232	36.08 %	212	32.97 %	643	100.00 %

**Chi Sq = 150.749 df = 3 p = 0.0001 highly significant**

Adolescents those having violence at home were 29.39% among which most were in severe risk 18.97 %. Those having no violence at home were more at mild and moderate risk. The correlation was found to be highly significant.

Table 6: Adolescents Risk Status in correlation to their Working Status

Working	Normal	%	Mild Risk	%	Moderate Risk	%	Severe Risk	%	Total	%
Yes	0	0.00	2	0.31	2	0.31	30	4.67	34	5.29
No	2	0.31	194	30.17	230	35.77	183	28.46	609	94.71
Total	2	0.31	196	30.48	232	36.08	213	33.12	643	100

**Chi Sq = 71.60 d.f = 3 p = 0.0001 highly significant**

Adolescents who are working were found more in severe risk category 4.67 %, whereas those who were not working were more in mild and moderate risk. The correlation was found to be highly significant.

Table 7: Adolescents Risk Status in correlation to their Hobbies

Hobbies	Normal	%	Mild Risk	%	Moderate Risk	%	Severe Risk	%	Total	%
Yes	2	0.31	186	28.93	129	20.06	63	9.80	380	59.10
No	0	0.00	11	1.71	103	16.02	150	23.17	263	40.90
Total	2	0.31	197	30.64	232	36.08	213	32.97	643	100

**Chi Sq= 183.33 d. f=3 p = 0.0001 highly significant**

Adolescents having hobbies in majority were in mild 28.93% and moderate risk 20.06%. Adolescents not having hobbies were more in severe risk 23.17%. The correlation was found to be highly significant.

### Conclusion

The present study is cross sectional, observational study conducted among 643 adolescents, out of which 321 male adolescents and 322 female adolescents were divided into early, mid and late adolescent age groups comprising 32.81%, 29.70% and 37.48% respectively. Adolescents were almost equally distributed in areas of slums 49.77% and urban 50.23% in Raipur city.

Majority of adolescents were at psychosocial risk, with 30.48% at mild risk, 36.08% at moderate risk and 33.13% were at severe risk, among which male adolescents were at greater risk 18.04% than female adolescents 15.1%.

Late adolescents were at greater risk with 37.48% than early adolescents 32.81%, followed by mid adolescents 29.70%. Adolescents in majority were at moderate risk 36.08%, out of which mid adolescents were more in number 16.64%. 33.13% of adolescents were at severe risk, out of which late adolescents formed majority 24.26%. Early adolescents were at mild risk 21.15%.

Adolescent risk status although almost equally distributed in urban and slum areas, but number of adolescents in slum areas were more in moderate and severe risk i.e. 19.75% and 19.59%, whereas urban adolescents were more at mild risk 20.06%.

Adolescents of middle school and high school were at greater risk 32.66% and 25.35% respectively. Adolescents of primary and middle school were at mild risk, adolescents of high school and higher secondary were at moderate risk and graduates were at severe risk.

Strong association was seen with adolescents of lower socioeconomic status. Class I and Class II were at mild risk 7.47% and 6.69%, whereas Class III were at moderate risk 4.51%. Class IV and V were mostly at severe risk 23.17% and 0.32% respectively. Thus, psychosocial risk status goes on increasing with lowering of psychosocial risk status.

Strong association was seen between psychosocial risk status and mother's level of education. Risk status goes on decreasing with increasing level of mother's education. Maximum prevalence of risk was among adolescents of illiterate mothers. Adolescents of co-education were at mild 27.37% and moderate 27.68% risk. But adolescents not in co-education schools were seen to be at severe risk i.e.15.4%. Adolescents those having violence at home were 29.39%, among which most adolescents were at severe risk 18.97%. Those having no violence at home were at mild and moderate risk.

Only 9.64% adolescents had complete knowledge of safe sexual practices. Adolescents with incomplete knowledge regarding safe sexual practices were in majority 90%, with 31.57% at moderate risk and 29.55% at mild risk. Only 55.83% adolescents had knowledge regarding prevention of pregnancy. Majority of adolescents knew about barrier contraceptives 85.83%, followed by Emergency contraceptive pills 64.17%, Female sterilization 58.33%, Oral contraceptive pills 55.56%. According to majority 29.44% adolescents, the best contraceptive method was barrier contraceptives, followed by Oral contraceptive pills 16.67% and Emergency contraceptive pills 14.17%.

Knowledge regarding symptoms and signs of Sexually Transmitted Diseases (STDs) was not satisfactory. Majority of them had knowledge of discharge from genital organs 14.72%, ulcer 11.11% and pain 5%.

Knowledge regarding HIV and AIDS was also unsatisfactory among adolescents. Only 19.91% adolescents had knowledge that HIV and AIDS can be prevented. Among these, majority of adolescents knew about barrier contraceptives 39.81% as a preventive method, followed by avoiding sex workers 19.28%, avoidance of used needles 16.02%, avoidance of injectable drugs 9.95%, avoidance of multiple sexual partners 1.40%. For seeking reproductive health related queries, adolescents rely in majority on 80.25%, on magazines and friends 51.4%, followed by internet 44.63%. Guidance of doctors was the choice of only 10.26% adolescents mainly by late adolescent age group. 13.53% would prefer to seek guidance from parents, out of which 12.75% preferred mother as compared to father. Radio was the least preferred method 0.31%.

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