

Research Article

A study on assessment of scholastic dropout and its determinants in adolescents residing in Raipur city of Chhattisgarh state

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ABSTRACT

Background: In India, adolescents (10-19 years) constitute one fifth of the total population providing promising pillar for our nation's future. Being a sensitive and key transitional period of life adolescents living environment (Family, school, Peers etc.) can present new challenges for these adolescents and symptoms of dysfunction may occur. Schooling constitutes major part of adolescent's life, moulding them for bright future but problem like scholastic dropout deprive them & can play as major factor determining their future perspective with regard to personal and social achievements. With this background, the present study was conducted to assess the prevalence of Scholastic dropout problems in adolescents, and its determinants in Raipur city (C.G.) India

Methods: Cross-sectional community based study was done, using multi stage simple random sampling 32 study (urban & slum) areas was selected. 643 adolescents were interviewed with prior consent by house to house survey.

Results: Problem of scholastic dropout was 10.89%. Major determinants contributing were socioeconomic status, mother's education, family violence, poor academic performance, Substance abuse.

Conclusions: Scholastic dropout seems to be small yet a prevalent problem in our society inspite of many government initiatives and as found in the study problem is multipronged indicating adoption of a holistic approach to alleviate whole environment in which adolescents live in.

Keywords: Adolescent, Scholastic dropout, Psychosocial

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 developmental stage is normal and not unusual.¹ Adolescents are rich in memory, perceiving things, concept formation, association, generalization, imagination and decision making. Questioning on most of the things is prevalent but they become satisfied in approval and recognition of their own views.

Adolescence is a period when rapid physiological changes and demands for new social roles take place. The adolescents, due to these changes often face a number of crises and dilemmas. Emotional development is at peak and there is no emotional stability in general. It is the period when the child moves from dependency to autonomy. It is a period demanding significant adjustment to the physical and social changes which distinguish childhood behavior from adult behavior. It is a period of rapid physical and psychological transition which makes adolescents particularly vulnerable to emotional conflicts and behavioral disorders.² 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 psycho social problems are substance abuse, internalizing disorders (depression, anxiety) and externalizing disorders (delinquency, aggression, Suicidal Behaviour, educational difficulties, dropping out, truancy). Many of these problems are of transient nature and are often not noticed. Further children 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 school to high school or moving from high school to college) can present new challenges for these adolescents and symptoms of dysfunction may occur.³ The School constitutes a large part of an adolescent's existence. School problems (Absenteeism, Poor academic performance, Dropout etc.) during the adolescent years may be the result of rebellion and a need for independence. Poor school performance predicts health-compromising behaviors and physical, mental and emotional problems.⁴ School is the place where adolescents get opportunity to share many personal issues with their peers. The conditions now prevailing in the educational institutions like mass schooling without any individual orientation oblige the teenager to submit to teaching methods and to the school system.⁵ School can reveal the subject's personal problems (anxiety, phobia or depression), but may equally create pathology by not recognizing the heterogeneity of individual development and differences in cognitive functioning. Thus school problem like dropout can be a major factor determining adolescent's future perspective with regard to personal and social achievements. With this background, the present study was conducted to assess the prevalence of Scholastic dropout problems in adolescents, and its determinants in Raipur city (C.G.) India.

METHODS

A cross-sectional community based study was conducted in the urban & slum area of Raipur city (C.G.) India from July 2013 to June 2014. Multi stage simple random sampling technique was used for data collection. The list of eight zone and 77 wards of Raipur city was obtained from the municipal corporation, Raipur (C.G.) Out of eight zone, four zones were selected by simple random

technique. Out of four zones, from each, four wards were selected by simple random technique. From each ward, one slum area and one urban area were included in the study using simple random technique. A total of 32 areas were included in this study. Sample size were calculated by using statistical formula, $n = Z^2 pq / L^2$, $z = 1.96$, $n =$ Sample size, $p =$ 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 631 adolescents. For making uniformity, 20 subjects from each of 32 areas were selected that comes 640. So a total 643 subjects were included in study. House to house survey was conducted.

Inclusion criteria: Age group (10 to 19 years), both male and female adolescents and willing to participate in study.

Exclusion criteria: All those who were not willing to participate in study.

Study criteria

Adolescents: The World Health Organization (WHO) defines an adolescent as any person between ages 10 and 19. This age range falls within WHO's definition of young people, which refers to individuals between ages 10 and 24.⁶

Early adolescence - (9-13 years of age)

Middle adolescence - (14-16 years of age)

Late adolescence - (17-19 years of age)

Dropout: Adolescent discontinued schooling in any class or age and still not joined/continued in any kind of educational institution.

Help of trained female medical professional was obtained to ensure better response and co-operation from the community. Briefing was made before survey to female medical professional. The information thus collected was recorded on predesigned and pretested Performa adopted from WHO 'HEEADSSS'⁷ approach widely used for psycho-social evaluation of adolescents. Data was compiled and processed and analysed in MS excel and SPSS software. Chi-square test was applied and P value of <0.05 was considered statistically significant for interpretation of finding.

RESULTS

Study sample characteristics

Table 1: In present study, total 643 subjects were interviewed and examined. The demographic and clinical characteristic of the subject are shown in the majority (37.48%) of the participants belongs to late adolescence followed by early (32.81%) then (29.70%) of mid adolescence.

Table 1: Background characteristics of study population.

Background characteristics	Number	Percentage
Age (year)		
Early	211	32.81
Mid	191	29.70
Late	241	37.48
Sex		
Male	321	49.92
Female	322	50.08
Education		
Illiterate	4	0.62
Primary	93	14.49
Middle	210	32.71
High & High Secondary	288	44.86
Graduation	47	7.32
Socio-economic status		
Upper	99	15.40
Middle	174	27.06
Lower	370	57.55
Religion		
Hindu	598	93.01
Muslim	38	5.91
Christian	7	1.09
Place of residence		
Urban	323	50.23
Slum	320	49.77

Males and females were almost equally distributed in study 49.92% and 50.08% respectively. The majority of the subjects were in high and higher secondary (44.86%) followed by middle (32.71%), primary (14.49%) and illiterates (0.62%). Majority (57.55%) belong to lower SES and Hindu religion (93.01%). Participants were almost equally distributed from both urban (50.23%) and slum area (49.77%).

Prevalence of socio-demographic determinants effecting scholastic dropout among adolescents

Table 2: In this study Scholastic dropout was seen more in later ages i.e., late adolescents having (7.15%) dropout followed by mid (3.27%) and early adolescence (0.47%) association was found highly significant ($P < 0.0001$) with male preponderance of (6.53%). Higher dropouts were seen in middle and high school levels (3.89%) & (3.73%) respectively, primary (2.18%) and at grade level (0.47%) only which was highly significant ($P < 0.0001$). Lower socio economic status adolescents had more dropouts (8.40%) followed by middle S.E.S (2.49%) were as upper S.E.S didn't have any dropouts, association was highly significant ($P < 0.0001$). Ratio of dropouts from those not was seen more in Hindus then Muslims also slight slum preponderance was seen than urban. Dropout rates was also seen higher among less educated mother and significant ($P < 0.0001$). Decrease in dropouts was seen with increasing educational level.

Table 2: Prevalence of socio demographic determinants affecting scholastic dropout among adolescents.

Variables	School dropout		Chi square test df; P value	Odd Ratio (OR) (CI = 95%)
	Yes	No		
According to phase of adolescence				
Early	3 (0.47%)	208 (32.35%)	$\chi^2 = 36.192$ df=2; P<0.0001	0.11
Mid	21 (3.27%)	170 (26.44%)		1
Late	46 (7.15%)	195 (30.33%)		1.90
Sex				
Male	42 (6.53%)	279 (43.39%)	$\chi^2 = 3.191$ df=1; P>0.05	1.58
Female	28 (4.35%)	294 (45.72%)		
Education				
Primary	15 (2.18%)	79 (12.29%)	$\chi^2 = 17.851$ df=2; P<0.0001	2.08
Middle	26 (3.89%)	185 (28.77%)		1.54
High	25 (3.73%)	264 (41.06%)		1.04
Graduation	4 (0.47%)	44 (6.84%)		1
Socio-economic status				
Upper	0 (0.00%)	99 (15.40%)	$\chi^2 = 17.851$ df=2; P<0.0001	0
Middle	16 (2.49%)	158 (24.57%)		∞
Lower	54 (8.40%)	316 (49.14%)		∞
Religion				
Hindu	67 (11.20%)	531 (88.80%)	$\chi^2 = 1.268$ df=2; P>0.05	∞
Muslim	3 (7.89%)	35 (92.11%)		∞
Christian	0 (0.00%)	7 (100.00%)		0
Place of residence				
Urban	33 (5.13%)	290 (45.10%)	$\chi^2 = 0.285$ df=1; P>0.05	0.87
Slum	37 (5.75%)	283 (44.01%)		

Mothers education				
Illiterate	39 (6.07%)	161 (25.04%)	$\chi^2=35.900$ df=4; P<0.0001	1.21
Primary to middle	22 (3.42%)	154 (23.95%)		0.71
High to high sec.	6 (0.93%)	139 (21.62%)		0.21
Graduate and higher	0 (0.00%)	104 (16.17%)		0
Deceased	3 (0.47%)	15 (2.33%)		1

Table 3: Prevalence of psycho-social determinants affecting scholastic dropout among adolescents.

Variables	School dropout		Chi square test df; P value	Odd Ratio (OR) (CI = 95%)
	Yes	No		
Adolescent close to in family				
Mother	27 (6.50%)	388 (93.49%)	$\chi^2 = 31.073$ df=3; P<0.0001	0.19
Father	2 (5.71%)	33 (94.28%)		0.16
Siblings	5 (26.31%)	14 (73.68%)		1
Others/No one	36 (29.68%)	138 (79.31%)		0.73
Any violence at home				
Yes	32 (16.84%)	158 (83.15%)	$\chi^2 = 9.860$ df=1; P<0.001	2.21
No	38 (8.38%)	415 (91.61%)		
Physical violence at you				
Yes	31(19.87%)	125 (80.12%)	$\chi^2 = 17.141$ df=1; P<0.0001	2.84
No	39 (8.01%)	448 (91.99%)		
Run away from home				
Yes	26 (27.37%)	69 (72.63%)	$\chi^2 = 36.454$ df=2; P<0.0001	1
Thought of it	15 (14.29%)	90 (85.71%)		0.44
No	29 (6.55%)	414 (93.45%)		0.18
Is school safe place?				
Yes	37 (7.51%)	456 (92.49%)	$\chi^2 = 24.907$ df=1; P<0.0001	0.29
No	33 (22.00%)	117 (78.00%)		
Repeat classes				
Yes	60 (9.33%)	91 (14.15%)	$\chi^2 = 169.294$ df=1; P<0.0001	31.78
No	10 (1.56%)	482 (74.96%)		
Change in grades last remember				
Increase	11 (1.71%)	241 (37.48%)	$\chi^2 = 178.991$ df=2; P<0.0001	0.02
Decrease	25 (3.89%)	315 (48.99%)		0.03
Don't know	34 (5.29%)	17 (2.64%)		1
Co education				
Yes	16 (2.49%)	454 (70.61%)	$\chi^2 = 100.807$ df=1; P<0.0001	0.08
No	54 (8.40%)	119 (18.51%)		
Getting along with friends at school				
Good	29 (4.51%)	505 (78.53%)	$\chi^2 = 96.651$ df=1; P<0.0001	0.1
Bad	41 (6.38%)	68 (10.58%)		
Future plan				
Yes	23 (3.58%)	356 (55.37%)	$\chi^2 = 22.086$ df=1; P<0.0001	0.29
No	47 (7.31%)	217 (33.75%)		
Working				
Yes	11 (84.62%)	2 (15.38%)	$\chi^2 = 74.346$ df=1; P<0.0001	53.22
No	59 (9.37%)	571 (90.63%)		
Substance abuse				
Yes	30 (31.58%)	65 (68.42%)	$\chi^2 = 49.198$ df=1; P<0.0001	5.86
No	40 (7.30%)	508 (92.70%)		
Feel sad all the time				
Yes	36 (19.46%)	149 (80.54%)	$\chi^2 = 19.677$ df=1; P<0.0001	3.01
No	34 (7.42%)	424 (92.58%)		

Prevalence of psycho-social determinants effecting scholastic dropout among adolescents

Table 3: Ratio of Scholastic dropouts was seen higher among adolescents who were close to no one/others (29.68%) and close to their siblings (26.31%) which was statistically significant ($P < 0.0001$) as compared to those adolescents close to their parents had less dropout rates. Adolescents having violence at home (16.84%) or physical violence directly against them (19.87%) were having more dropouts also adolescents who had ever ran away from home (27.37%) or thought of it (14.29%) had more dropout rates and association seen between them was highly significant ($P < 0.0001$). Further on asking about school and performance adolescents not feeling safe at school (22%) or having Poor academic performance like have to repeat class (9.33%), decreased grades (3.89%) or did not know their last grades (5.29%) had more dropouts similarly adolescents in Co-ed (8.40%), not getting along with friends (6.31%), has no plans for future (7.31%) had higher dropouts, association found was highly significant ($P < 0.0001$). Further ratio of adolescents involved in any kind of work producing income (84.62%) versus not (15.38%) similarly adolescents doing any kind of substance abuse (31.58%), Felt sad most of the time (19.46%) had higher dropout percentages ($P < 0.0001$).

DISCUSSION

According to the Bronfenbrenner's Theoretical model,⁸ a youth's successful performance in key social environments such as school, will affect the development of later problems.⁹⁻¹¹ Therefore, this study examine the impact of a variety of variables in order to understand what factors needed to address so that effective preventive programs can be developed to arrest the dropout rate. Study concluded that dropping out of school seems to be a process that provides signs that something is going wrong in adolescent's attachment to school. Scholastic dropout was found to be (10.89%). Almost similar finding was seen in DISE 2013-14¹² were National and state (C.G.) school dropout was found to (7.45%) & (8.16%) similar results were seen in study done by Joseph Gasper et al.¹³ showing school dropout to be (11.28%) which was bit higher than the study done by Calderon et al.¹⁴ having (6.2%) dropout. A national annual average dropout rate of 9.1 was seen in 2009-2010 and 6.9 in 2010-2011.¹⁵ Major socio demographic determinants associated with dropout were adolescents increasing age showing more dropouts in late and mid adolescence with male preponderance. Dropouts were seemingly high in middle and high school students than primary and graduates. Lower S.E.S adolescents were more prone to dropout with slight Slum preponderance. Mothers education had major effect as with increasing level of mother education dropout rate decreased considerably. Similar findings was seen in study done by Calderon et al.¹⁴ in which adolescents of late ages, in higher classes had more dropout rates. According to

Rumberger & Lim, 2008.¹⁶ Parental education and other family characteristics are correlated with the likelihood of dropping out of high school; for example, students whose parents are less educated or have lower incomes are more likely to drop out. A. Khokhar S. Garg et al.¹⁷ had similar findings like economic constrains attributing lower S.E.S, lower education status of parents those adolescents had more dropout. As the empirical evidences showed in the studies of Samarrai and Peasgood¹⁸ parent's education is a crucial factor for school dropout in this study too. Most of the parents of school dropout have never completed their secondary education and it's having correlation with their child's education also. Also in study done by Maithly and Saxena¹⁹ and Sharma R, Grover VL et al.²⁰ main reason being financial difficulties owing to Lower S.E.S and male gender. Same results was seen in study by R. Govinarajau, Venkatesan et al.²¹

Psycho social determinants significantly associated with dropouts were Problem family (like adolescent not getting along with family, having violence at home or physical violence on themselves, ran away from home), School problems (like not feeling safe in school, poor academic achievements, not getting along with friends at school), having no future plan, working to get paid, felt sad all the time and indulged in any kind of substance abuse. Similar findings was seen in study done by Maithly and Saxena¹⁹ and Sharma R, Grover VL et al.²⁰ in which main reason being interpersonal violence, less number of close friends, any kind of addiction and residing in resettlement colonies, slums or villages. Also in study done by R. Govinarajau, Venkatesan et al.²¹ showed poor academic performance, going off to work were reasons majorly contributing to institutional dropouts. Munni & Malhi²² reported that the adolescents exposed to violence had poorer school performance. Mohan et al.²³ & Cox et al.²⁴ in their studies found that addiction had strong association with dropout rates among adolescents. Similar findings was seen in study done by Calderon et al.¹⁴ were dropout rate was seen higher in adolescents having poor academic performance, doing substance abuse of any kind also working adolescents showed higher dropouts according to Khokhar S. Garg et al.¹⁷

CONCLUSIONS

Though dropout prevalence was found to be small (10.89%), still it continues to be prevalent and major challenge and as found in study, problem of dropout is multipronged needing a holistic approach to make suitable environment (Home, School, Peers, personal and intellectual) for adolescents which would in turn leverage the adolescents to continue education un-interrupted and will help reduce dropout rate considerably. Laws like Right to education and government programmes like Sarva Shiksha Abhiyan have helped to reduce this problem still strong financial policies are needed by the government to safeguard educational right of adolescents.

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