Original Article

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Assessment of Social Functioning among Adolescent School-going Children in Hooghly District, West Bengal, India: A Cross-sectional Study

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ABSTRACT

Introduction: Adolescents form a socially significant segment of the population. The analysis of social functioning, a sensitive indicator of underlying mental ailments, amongst them is a good measure to find out their mental health status.

Aim: To assess the social functioning skills and its associated factors among adolescent school-going children in Hooghly District, West Bengal, India.

Materials and Methods: A descriptive, cross-sectional questionnaire-based was conducted among 1056 (mean {SD} age=15.53±1.3 years} school-going adolescent children in four randomly selected English medium private co-educational schools, from Class IX to XII, in Hooghly District, West Bengal, India, for a period of two months from June 2022-July 2022. The Child and Adolescent Social and Adaptive Functioning Scale (CASAFS), a validated tool consisting of 24 items designed to measure psychosocial functioning, was used. A Likert scale scoring was done for each item. Adolescents scoring below the 75th percentile of the total score were classified as "poor social adaptive functioning skill" and those above 75th percentile as "good social adaptive functioning skill". The data was analysed using IBM Statistical Package for the Social Sciences (SPSS), version 23.0 software. Descriptive statistics like mean, median, percentile, standard deviation were generated. Analytical statistics like chi-square test was applied to find out the relationship between categorical variables i.e., social functional skill and socio-demographic profile and a p-value of <0.05 was considered as significant.

Result: Out of 1056 students included in the study. There were 318 (30.1%) Class IX students, 229 (21.7%) Class X students, 204 (19.3%) Class XI students and 305 (28.9%) Class XII students. The age of the students ranged from 13 to 18 years. 219 (20.7%) had the good social functioning skill and 837 (79.3%) had poor social functioning skill. The mean (SD) score of all the domains combined was 70.5 (8.05), with 'Family Relationship domain' having highest mean (SD) score 19.5±3.0 and 'Peer relationship domain' having the least mean (SD) score 15.9±3.1. 'Good social functioning skills' was significantly associated with those belonging to the age group of 17-18 years, having increased number of siblings (p=0.001) higher mother's educational status (p=0.003).

Conclusion: From the present study, it was observed that a very meagre number of students possessed good social functional ability. Improvement of social functioning skills indirectly helps in improving mental health and adolescents are the corner stones to initiate this process.

INTRODUCTION

Adolescence, the transitional phase of life, lying between childhood and adulthood, is well-characterised by physical, cognitive, and psychosocial growth. It can be categorised into three stages of development: Early (10-13 years), middle (14-15 years), and late (16-19 years) adolescence stage. According to World Health Organisation (WHO), out of 1.2 billion adolescent population, around 243 million reside in India, which is around 21% of the Indian population [1]. According to the WHO, worldwide, 10-20% of children and adolescents experience mental disorders. Half of all mental illnesses begin by the age of 14 years and three-quarters by mid 20s [2]. This phase of life is prone to many adversities. An adolescent strives to develop his/her individuality keeping in mind societal demands. The emotional, psychological and developmental maturity that an adolescent adapts during this phase is noteworthy. Modernisation, rapid urbanisation, familial changes, and societal disharmonies instigate an adolescent to take up wrong behaviour and maladaptive nature of thought process.

Social functioning is an individual's interactions with their environment and the ability to fulfill their role within such environments as work, social activities, and relationships with partners and family [3]. It can be effectively utilised as a sensitive indicator of underlying mental ailments, even before clinical indications and symptoms appear. Yet, mental diseases have been a significant problem in terms of identifying and quantifying social functioning [4]. The pattern of deficiency in social functioning may differ according to the form of psychological disorder. For example, depressed adolescents often tend to withdraw from family and friends, hesitate to participate in recreational activities, and find it difficult to fulfill work demands at school or at home [5-7]. Again, the adolescent age appears to be especially susceptible to the positive effects of youth development techniques, socio-emotional learning, and behavioural modeling [8]. Many psychiatric diseases can be prevented at an early stage by early detection and appropriate behavioural therapy of adolescents with weak interpersonal skills and undiagnosed mental disorders [9]. Studies have shown that adolescents with elevated depressive symptoms display lower levels of social functioning, including isolation from peers, poor academic performance, and poor family relationships. The pattern of deficits in social functioning may differ according

to the form of psychological disorder. For instance, depressed adolescents often withdraw from family and friends, refuse to participate in recreational activities, and find it difficult to fulfill work demands at school or home [5-7].

Hence, the estimation of social and adaptive functioning is important in establishing a baseline level for the adaptive behaviour and degree to which an individual meets personal independence and social functioning. These functionaries have often neglected domains among adolescents. In the above scenario, the present study was done to assess the social functioning among adolescent school-going children in Hooghly District, West Bengal, and also to find out the association (if any) between socio-demographic factors and social functioning.

MATERIALS AND METHODS

This was a descriptive, cross-sectional questionnaire-based study, conducted for a period of two months (June and July 2022) in Hooghly district, West Bengal, India. The study was conducted after getting approval from the Institutional Ethics Committee (BMC/IEC/589).

Sample size calculation: Sample size was calculated based on the prevalence of psychosocial problems among school going adolescents which was 26.8% [10] in a study conducted in Nepal. Using 10% relative precision and at 5% significance level and applying $\{(1.96)^2 \, PQ\}/L^2$ a minimum sample size of 1050 was calculated. A total of 1056 students were included in the study.

Inclusion criteria: Students aged between 13-18 years from classes IX, X, XI and XII, in co-educational English medium high schools, in Hooghly district, West Bengal, India were included in the study.

Exclusion criteria: Absentees on the day of visit and those who refused to participate were excluded.

Study Procedure

A list of 49 co-educational higher secondary English medium schools was obtained from District Inspector of Schools, Hooghly, West Bengal. Four schools were randomly selected by lottery method. The permission to conduct the study in the schools was taken from the heads of the schools well ahead of the data collection. Principals/Headmasters/Headmistress of the schools was requested to make announcement in school assembly, one day ahead about the visit. Consent to participate in the study was obtained from the guardians of the students, ahead of the day of data collection. On the day of data collection, the purpose of the study was explained and verbal assent was obtained. The school teachers actively cooperated during the whole period of the study. Anonymity and confidentiality was assured.

Questionnaire: A predesigned self-administered questionnaire, containing two parts was used. The questionnaire was made in English language and delivered to the students. It was first explained in detail to both the students and the teachers. The students were made to sit in their respective seats and then the questionnaire was distributed. After half an hour, it was collected from them. The first part of the questionnaire consisted of a socio-demographic profile that covered their personal characteristics such as class, age, gender, religion, number of siblings, and father's and mother's educational level. The second part consisted of CASAFS which was an authenticated self-reported instrument, consisting of 24 items designed to assess the social and adaptive functioning of children and adolescents, defined as the degree to which an individual fulfils various roles in his or her life [11].

The CASAFS comprises four subscales examining functioning in four key social role areas relevant to children and adolescents, namely: i) school performance; ii) peer relationships; iii) family relationships; and iv) home duties/self-care. Each dimension was represented by six items, which were randomly allocated within the questionnaire.

Scoring: A Likert scale scoring [11] was done for each item. Never=1 Sometimes=2 Often=3 Always=4. Three family relationship items (items 3, 7, and 11) that may not be applicable for all respondents had a fifth scoring category "Does not apply" that could be used by respondents. "Does not apply" responses were scored as 2.5 (the midpoint). Reverse scoring of Items 17, 18, 19, and 22 was done. These questions were negatively worded and needed to be reverse scored before calculating subscale and total scores. Recoded item 17, 18, 19 and 22 was scored as (1=4), (2=3), (3=2) and (4=1). The subscale scores were computed by adding the individual item scores on the set of items as follows:

i) School Performance Q1+Q5+Q9+Q13+Q17*+Q21
ii) Peer Relationships Q2+Q6+Q10+Q14+Q18*+Q22*
iii) Family Relationships Q3+Q7+Q11+Q15+Q19*+Q23
iv) Home duties/self-care Q4+Q8+Q12+Q16+Q20+Q24 (reverse score was done for these "*" items). The total score was the sum of all these four subscale scores (maximum possible score of 96). Higher scores reflected higher levels of social and adaptive functioning.

Adolescents scoring below the 75th percentile of the total score were classified as having "poor social adaptive functioning skill" and those above 75th percentile as having "good social adaptive functioning skill".

STATISTICAL ANALYSIS

The data was entered into MS Excel and data cleansing was performed. Data was then transferred into IBM SPSS version 23.0 software and analysed. Descriptive statistics like mean, median, percentile, standard deviation were generated. Analytical statistics like chi-square test was applied to find out the relationship between categorical variables, i.e., social functional skill and socio-demographic profile. A p-value of < 0.05 was considered as significant.

RESULTS

A total 1056 students were included in the present study. There were 318 (30.1%) Class IX students, 229 (21.7%) Class X students, 204 (19.3%) Class XI students and 305 (28.9%) Class XII students. The age of the students ranged from 13 to 18 years. The mean (SD) age of the students was 15.53±1.3 and median age was 16 years. Males were 606 (57.4%) and females were 450 (42.6%). Majority of the students were Hindus 1005 (95.2%) followed by Muslims 39 (3.7%) and rest were either Christians, Sikhs, Buddhists, or Jains 12 (1.1%). Most of the respondents had no siblings or had only one sibling {474 (44.9%); 453 (42.9%)}. Among the others, two siblings were present in 88 (8.3%) of the students, three siblings among 25 (2.4%) and 16 (1.5%) had four or more siblings. According to the educational profile of their parents, 73.9% of the mothers and 80.7% of the fathers completed education upto graduation or above.

[Table/Fig-1] shows the responses to the items in different domains by the students. Both 'Family relationship domain' and 'Home duties domain' was found to have 45% of respondents scoring 'good social adaptive functioning skill'. 'School function domain' and 'peer relationship domain' had more than 80% of the students showing 'poor social adaptive functioning skill' [Table/Fig-2].

The mean (SD) score of all the domains combined was 70.5 (8.05) with 'Family Relationship domain' having highest mean (SD) score 19.5±3.0 of social functioning skill and 'Peer relationship domain' having least mean (SD) score 15.9±3.1 of social functioning skill. Overall, 219 (20.7%) students had 'good social adaptive functioning skill' and 837 (79.3%) had 'poor social adaptive functioning skill' [Table/Fig-2].

Domains (N=1056)	Never n (%)	Sometimes n (%)	Often n (%)	Always n (%)	Does not apply to me n (%)
School performance domain					
I get good marks in maths	54 (5.1)	**524 (49.6)**	304 (28.8)	174 (16.5)	
I get good marks in science	42 (4.0))	357 (33.8)	**390 (36.9)**	267 (25.3)	
I get good marks in social science	114 (10.8)	**347 (32.9)**	277 (26.0)	320 (30.3)	
I get good marks in English	19 (1.8)	255 (24.1)	330 (31.3)	**452 (42.8)**	
I have trouble with my school work	73 (6.9)	180 (17.0)	**550 (52.1)**	253 (24.0)	
I am successful with my school work	37 (3.5)	265 (25.1)	376 (35.6)	**378 (35.8)**	
Peer relationship domain					
I go out to places with my friends	214 (20.3)	**536 (50.8)**	185 (17.5)	121 (11.5)	
I have friends of opposite sex	137 (13.0)	265 (25.1)	211 (20.0)	**443 (42.0)**	
I go to parties or school dances	**435 (41.2)**	371 (35.1)	133 (12.6)	117 (11.1)	
I have at least one or two special friends	82 (7.8)	115 (10.9)	112 (10.6)	**747 (70.7)**	
I spend most of my spare time alone	281 (26.6)	264 (25.0)	**351 (33.2)**	160 (15.2)	
I have difficulty making friends	157 (14.9)	113 (10.7)	255 (24.1)	**531 (50.3)**	
Family relationship domain					
I have good relation with my mother	13 (1.2)	57 (5.3)	98 (9.3)	**876 (83.0)**	12 (1.1)
I have good relation with my father	35 (3.3)	87 (8.2)	98 (9.2)	**825 (78.1)**	11 (1.0)
I get on well with my siblings	13 (1.2)	11 (1.0)	105 (9.9)	**453 (42.9)**	474 (44.8)
I get on well with my relatives	97 (9.2)	241 (22.8)	229 (21.7)	**489 (46.3)**	
I have fight with my parents	75 (7.1)	129 (12.2)	415 (39.3)	**437 (41.4)**	
I have an adult who I can talk to if I have a problem	311 (20.0)	205 (19.4)	125 (11.8)	**515 (48.8)**	
Home duties/Self-care domain					
I help around the house	50 (4.7)	**404 (38.3)**	313 (29.6)	289 (27.4)	
I keep my rooms and belonging tidy	135 (12.8)	279 (26.4)	241 (22.8)	**401 (38.0)**	
I keep my clothes clean and tidy	49 (4.6)	165 (15.6)	170 (16.1)	**672 (63.6)**	
I shower and keep myself clean	8 (0.8)	44 (4.2)	61 (5.8)	**943 (89.3)**	
I help with cooking at home	281 (26.6)	**475 (45.0)**	174 (16.5)	126 (11.9)	
I help up in cleaning up after meals	156 (14.8)	**348 (33.0)**	177 (16.8)	**375.5**	

[Table/Fig-1]: Distribution of the responses of the study subjects according to the various domains of CASAFS*.
*CASAFS: Child and Adolescent Social and Adaptive Functioning Scale

Domains	Score Mean (SD)	Social adaptive functioning skill	
		Poor n (%)	Good n (%)
School performance	17.2 (3.0)	896 (84.8)	160 (15.2)
Peer relationship	15.9 (3.1)	901 (85.3)	155 (14.7)
Family relationship	19.5 (3.0)	581 (55.0)	475 (45.0)
Home duties/self-care	17.7 (3.3)	578 (54.7)	478 (45.3)
Total score	70.5 (8.05)	837 (79.3)	219 (20.7)

[Table/Fig-2]: Distribution of CASAFS score among the study subjects by different domains (N=1056).
*CASAFS: Child and Adolescent Social and Adaptive Functioning Scale

Adolescents belonging to the age group of 17-18 years and of higher class (Class XII) had significantly higher 'good social functioning skills' as compared to other age groups (p=0.004; p=0.001). Higher number of siblings (p=0.001) and higher mother's education (p=0.003) were also significantly associated with 'good social functioning' [Table/Fig-3].

DISCUSSION

The present study was conducted with the aim to assess the social functioning skills and its associated factors among adolescent school children in Hooghly District, West Bengal. The present study being a rare one, and never done in the present study area, gave us an idea about the social adaptive functioning skill among adolescents. The total score combining all the domains of the CASAFS showed that only 219 (20.7%) students had 'good social adaptive functioning skill'. Similar was the finding in the study conducted by Rajkumari B et al., in Manipur [12] where 21.1% students were categorised as having 'good social functioning skill' and 25.5% students had 'poor social functioning skill' which was 79.3% in the present study. 'Family relationship domain' and 'Home duties domain' had the maximum 'good social adaptive functioning skill' score. In the 'Family relationship domain' a sizeable number of students had good relationship with father, mother, siblings and relatives. Almost 49% of them had an adult with whom they could talk to if needed.

Socio-demographic characteristics		Number (%)	Social adaptive functioning skill		
			Poor n (%)	Good n (%)	p-value**
Gender	Male	606 (57.4)	488 (80.5)	118 (19.4)	0.250
	Female	450 (42.6)	349 (77.5)	101 22.5)	
Age (in years)	13-14	289 (27.4)	211 (73.0)	78 (27.0)	**0.004**
	15-16	479 (45.4)	384 (80.1)	95 (19.9)	
	17-18	288 (27.3)	242 (84.0)	46 (16.0)	

Class	IX	318 (30.1)	229 (72.0)	89 (28.0)	**0.001**
	X	229 (21.7)	181 (79.0)	48 (21.0)	
	XI	204 (19.3)	165 (80.8)	39 (19.2)	
	XII	305 (28.9)	262 (85.9)	43 (14.1)	
Religion	Hindu	1005 (95.2)	795 (79.1)	210 (20.9)	0.661
	Muslim	39 (3.7)	33 (84.6)	6 (15.4)	
	Others	12 (1.2)	9 (75.0)	3 (25.0)	
No. of siblings	None	474 (44.9)	404 (85.2)	70 (14.8)	**0.001**
	One	453 (42.9)	339 (74.8)	114 (25.2)	
	Two	88 (8.3)	61 (69.3)	27 (30.7)	
	Three	25 (2.4)	20 (80.0)	5 (20.0)	
	Four and more	16 (1.5)	13 (81.2)	3 (18.8)	
Mother's educational status (n=1044)*	Illiterate	13 (1.2)	10 (76.9)	3 (23.1)	**0.003**
	Upto Cl VIII	21 (2)	17 (80.9)	4 (19.1)	
	Upto Cl X	89 (8.5)	70 (78.6)	19 (21.4)	
	Higher secondary	141 (13.5)	115 (81.5)	26 (18.5)	
	Graduate and above	780 (74.7)	615 (78.8)	165 (21.2)	
Father's educational status (n=1045)*	Illiterate	5 (0.5)	5 100.0)	0	0.980
	Upto Cl VIII	13 (1.2)	9 (69.2)	4 (30.8)	
	Upto Cl X	59 (5.6)	50 (84.7)	9 (15.3)	
	Higher secondary	116 (11)	97 (83.6)	19 (16.4)	
	Graduate and above	852 (81.5)	666 (78.1)	186 (21.9)	

[Table/Fig-3]: Association between social adaptive functioning skills of the study subjects with socio-demographic factors (N=1056).
*CI:Class; *missing values on account of death of parents **Chi-square test with p-value <0.05 was considered significant

In the study conducted by Rajkumari B et al., 77.6% said they 'always' had good relationship with their mother and 69.3% said they 'always' had good relationship with their father; only 45.2% felt that they 'always' had an adult who they can talk to, if they had a problem [12]. Mental health problem needs proper support from friends and family [13], hence good social functioning skill based on 'family relationship domain' is a positive way through.

In the 'home duties domain', almost 90% of them kept themselves clean by taking shower, 64% kept their clothes clean and tidy. This is a good initiative as we know that a clean body is needed for a clean mind and good mental health. In the 'peer relationship domain' it was found that overall poor social functioning skill is noted among 14.7% of the students in this domain. Considering individual questions, 70.7% of them had atleast one or two special friend, which was similar to the study conducted by Rajkumari B et al., in Manipur were a substantial portion of the respondents (66.7%) had the same [12]. In the present study, 33.2% of the respondents were often lonely spending most of their spare time alone. This was in contrast to the study conducted by Rajkumari B et al., where only 6.6% of them were often lonely [12]. As noted in other studies, individuals having good friendship in adolescence had better mental health, as compared to those who do not [14,15].

In the 'school performance domain' only 35.8% of the students were always successful with their school work. Still lower 15.3% of the adolescents did the same in the study by Rajkumari B et al., [12]. School being our second home, must be a comfort zone to learn and develop all kinds of social, mental, emotional and academic skills. In the present study, the authors found that adolescents belonging to the age group of 17-18 years had significantly higher 'good social functioning skills' as compared to other age groups (p=0.004; p=0.001). Similarly, in studies conducted by Devkota S et al., by Rajkumari B et al., and Bista B et al., significant association was found between age and occurrence of psychosocial problems [10,12,16]. As age progresses, adolescents are exposed to several challenges and some may not be able to cope up with these problems and hence there is rise on psychosocial problems. In the present study, higher number of siblings (p<0.05) and higher mother's education (p<0.05) were also significantly associated with 'good social functioning' but there was no association between gender and religion. This could be explained by the fact that adolescents with siblings had fair chances of sharing their thoughts and emotions and thereby, had good mental health. As far as mother's education is concerned, educated mothers could clarify mental thoughts of her children and help them develop good habits and culture, which in turn, helps in developing good mental health.

Similarly, studies conducted by Devkota S et al., and Timalsina M et al., in Kathmandu revealed that there was no association of religion and psychological problems [10,17]. Mother's educational qualification played a significant role in psychosocial development which was statistically significant in studies conducted by Rajkumari B et al., and some other studies too [12,13,18,19]. Again no such association between parental education was revealed in studies by Devkota S et al., and Timalsina M et al., in Kathmandu [10,17]. The role of higher academic grades and good social adaptive functioning skills is noteworthy. The higher the grade, higher is the social functioning and this finding was significantly associated in the present study. Studies conducted by Devkota S et al., revealed the same too but contrary findings were revealed in studies by Bista B et al., and Timalsina M et al., in Kathmandu which could be due to different set-up of the studies [10,16,17].

Limitation(s)

The present study was done among adolescents in only private schools with substantially large sample size. If Government schools could be included, a wider view could be obtained. Questionnaire based studies have their own limitations as concealment of facts, modification of facts, falsification, etc., but it still forms an important study tool, especially for screening purpose. School dropouts could not be assessed.

CONCLUSION(S)

As a very small percentage of students had 'good social functioning skill' the adolescents, the upcoming workforce of the nation, needs a healthy mind to lead a healthy nation. A reliable and valid assessment for social functioning that permits the identification of social and adaptive functioning deficits at an early stage in life and

thereby, guiding to the prevention of further social decline is the need of the hour. Using this tool as a preliminary screening tool to sort out children with impending or early signs of mental illness can be highly implemented.

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