

Socio demographic pattern, health problems and social behaviors of adolescents attending Teaching Hospital, Batticaloa, Sri Lanka

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Abstract

Adolescent period is one of rapid growth and development where many changes occur physically, socially and emotionally. Unhealthy behaviour patterns begun and established during adolescence commonly link to several illnesses.

The study was aimed to assess the socio-demographic pattern, health problems, social behaviors and the satisfaction towards the existing health care facilities in the adolescent age group.

A cross-sectional descriptive study was conducted among 170 adolescents (10-19 years) attending Teaching Hospital, Batticaloa during the study period. Adolescents admitted or attending all paediatric and surgical wards were recruited in an all-inclusive, consecutive basis. A pre-tested inter-viewer administered questionnaire was utilized to collect data.

Most (60%) of them were in the 10-14 year age group with a mean age of 13.6 (SD±2.52) years. Nearly 9%

were overweight and the mean body mass index was 19.83 (SD±4.46) kg/m². Fourteen percent had been admitted due to road traffic accidents which was high among 15-18 year age group (p>0.05). Significantly lower percentage of females (48%) compared to males (80%) had engaged in regular physical activity (p=0.00). A significantly higher percentage of female adolescents (2.4%) experienced suicidal thoughts at least once due to stress/depression (p=0.00). Majority of the adolescents reported better satisfaction on the expected care from health care professionals at the hospital and were highly satisfied with existing ward facilities and other health facilities.

A significantly higher percentage of female adolescents experienced suicidal thoughts due to stress/depression and lower percentage of female adolescents engaged in regular physical activity. Majority of adolescents were highly satisfied with existing ward facilities and other health facilities.

Keywords: adolescents, health problems, social behaviours, socio-demographic pattern, Batticaloa

Introduction

The World Health Organization (WHO) defines an adolescent as a person between 10-19 years of age¹. However, sociologically and biologically there is no universally accepted well demarcated beginning and end of adolescence^{2,3}. Adolescence is a period of fast growth

and development where many changes occur physically, socially and emotionally⁴. Erratic dietary intakes, alcohol consumption and smoking are behaviour patterns begun and established in adolescence, which commonly link to several illnesses developing later in life^{5,6,7}. Worldwide the total population of adolescents is 1.2 billion, the largest generation of youth in history⁸. Being the largest age population in the world, healthcare professionals need to plan healthcare policies for adolescents^{9,10}. Most of the developed countries have already commenced this process. The vast majority of the adolescent population (85%) lives in developing countries¹¹. Data from the demographic survey in Sri Lanka in 2004 reveals that 19.7% of the total population belong to adolescent age group¹². Adolescents deal with many sensitive issues as regards both their physical and psychological needs. Hence it is important to provide health care to this age group in a sensitive manner in an “Adolescent Friendly” hospital environment¹³.

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In Sri Lanka, adolescents seeking treatment from the health sector are admitted mainly to adult medical/surgical wards. There has not been an age sensitive approach to their needs. Very little is known about adolescent health needs and the satisfaction of adolescents about available healthcare facilities in the health institutions. This study was designed and planned at a time when discussions were being held to increase the age of admissions to paediatric wards from 12 to 16 years. For this to be implemented, there was a requirement for data on the disease patterns/type of needs of adolescents who seek health care from the health system. This would enable paediatricians to organize the services in an age sensitive and specific manner¹⁴. Hence, we feel that the evaluation of data from this study will be useful to identify priorities in healthcare delivery to this group of the population¹⁵. The investigators felt that since the adolescents of Batticaloa would have different issues and problems due to the socio-cultural differences, it would be important to include them in the study.

Objectives

To assess the socio-demographic pattern, health problems, social behaviors and the satisfaction towards the existing health care facilities in the adolescent age group.

Method

A cross-sectional descriptive study was carried out in all adolescents (10-19 years) admitted to all paediatric and surgical wards at Teaching Hospital Batticaloa. The adolescents were recruited to the study on an all inclusive, consecutive basis during the 6 month study period. The questionnaire was developed in English by the research team based on the objective of the study after intensive literature review. Then, it was validated judgmentally by the group of relevant expert. The validated questionnaire was pretested for acceptability, comprehension and to assess the clarity and suitability of the wordings used at Base Hospital, Kaluwanchikudy among 15 adolescent who fulfil the inclusion and exclusion criteria. Validated, pre-tested questionnaire was then translated to Tamil and Sinhala language separately by the bilingual experts. Translation, back translation method was used during the translation process. The translated Tamil or Sinhala version of questionnaire was used to collect the data. Data were collected from adolescents aged between 10 to 14 years by a trained interviewer who were nursing graduates. Those between 14 to 19 years were given a self administered questionnaire with language preference. This method was chosen as the researchers felt that those aged between 14 to 19 years would divulge information better if there was no interviewer involved. All data collection was done in a suitable place of the particular ward to ensure privacy while filling the questionnaire. Data were analysed using

Statistical Package for Social Science software version 16. The different social behaviour indicators were compared with gender using Chi-square test for categorical variables. $p < 0.05$ was taken as significant.

Ethical issues: This was a non-interventional study. Routine management warranted by the specific health conditions were provided by the health team in the particular ward. Permission to conduct study was obtained from the Directors of the hospitals and all relevant consultants in charge of the units. As the questionnaire contains some sensitive areas, the researchers have decided to obtain information from young adolescents using an interviewer administered questionnaire. Adolescents were not identified by name. Written informed consent was obtained from each study participant after giving all necessary information. Ethical clearance for the study was obtained from the Ethics Review Committee of the Sri Lanka College of Paediatricians.

Results

A total of 170 adolescents were recruited during study period. Majority of them (71%) was male and 60% were in 10-14 years age group with a mean age of 13.6 years ($SD \pm 2.52$). Nearly 9% were overweight and the mean body mass index was 19.8 kg/m^2 ($SD \pm 4.46$). The mean weight and height was 37.25 ($SD \pm 9.45$) kg and 137.58 ($SD \pm 15.32$) cm respectively. Socio-demographic characteristics of participants are shown in Table 1.

Fourteen percent had been admitted to the hospital due to road traffic accidents (RTA) and due to fever. RTA was significantly higher among male (14.1% vs. 0%, $p = 0.000$).

Majority of them (77.6%) lived with their parents and 73% had a closer relationship with their mother but there was no statistically significant difference between gender and relationship ($p = 0.312$). Further, a higher percentage of male have run away from their home for any kind of reason compared to female.

Significantly lower percent of female adolescents (48%) compared to male (80%) had engaged in regular physical activity (at least 30 minutes per day) for ≥ 4 days per week ($p = 0.000$). More female adolescents (32.0%) compared to male (28.3%) had reported that they watch television regularly. Male respondents were more likely than female to report having used alcohol (1.7% vs. 0%) and started at the mean age of 13 years. None reported of smoking. Significantly higher female adolescents had a boyfriend ($p = 0.00$) and reported having been involved in sexual activity with their partner, without using any family planning method (condom) compared to male. It is noteworthy to report that all females who had boyfriends were in the 15-19 year age group. Nearly 9% of all adolescents were using the internet (Table 3).

Table 1. Socio-demographic characteristics of participants with gender differences

<i>Characteristic</i>	<i>Male n (%)</i>	<i>Female n (%)</i>	<i>Total n (%)</i>	<i>P value</i>
<i>Gender</i>	120 (70.6)	50 (29.4)	170 (100.0)	0.04*
<i>Age (years)</i>				
10-14	78 (65.0)	24 (48.0)	102 (60.0)	
15-19	42 (35.0)	26 (52.0)	68 (40.0)	
<i>Religion</i>				0.23*
Hindu	68 (56.7)	34 (68.0)	102 (60.0)	
Islam	34 (28.3)	8 (16.0)	42 (24.7)	
Catholic	18 (15.0)	8 (16.0)	26 (15.3)	
<i>Educational level</i>				0.10*
Currently studying	114 (95.0)	44 (88.0)	158 (92.9)	
Not studying	6 (5.0)	6 (12.0)	12 (7.1)	
<i>Living district</i>				0.50*
Batticaloa	112 (93.3)	48 (96.0)	160 (94.1)	
Other district	8 (6.7)	2 (4.0)	10 (5.9)	
<i>BMI category</i>				0.11#
Under weight	54 (45.0)	20 (40.0)	74 (43.5)	
Normal	52 (43.3)	28 (56.0)	80 (47.1)	
Over weight	8 (6.7)	2 (0.0)	10 (5.9)	
Obesity	5 (5.0)	0 (0.0)	6 (3.5)	

* Pearson Chi-square, # Likelihood ratio

Table 2. Details of family attachment of the participants

<i>Family attachment</i>	<i>Male n (%)</i>	<i>Female n (%)</i>	<i>Total n (%)</i>	<i>P value</i>
<i>Living with</i>				0.34*
Parents	96 (80.0)	36 (72.0)	132 (77.6)	
Mother	20 (16.7)	10 (20.0)	30 (17.6)	
Extended family member	4 (3.3)	4 (8.0)	8 (4.8)	
<i>Time spent at home</i>				0.03#
Most of the time	98 (81.7)	36 (72.0)	134 (78.8)	
Frequently	10 (8.3)	2 (4.0)	12 (7.1)	
Occasionally	10 (8.3)	12 (24.0)	22 (12.9)	
Never	2 (1.7)	0 (0.0)	2 (1.2)	
<i>More relationship with</i>				0.31*
Mother	84 (70.0)	40 (80.0)	124 (72.9)	
Father	24 (20.0)	8 (16.0)	32 (18.8)	
Siblings	12 (10.0)	2 (4.0)	14 (8.3)	

(Continued)

<i>Characteristic</i>	<i>Male n (%)</i>	<i>Female n (%)</i>	<i>Total n (%)</i>	<i>P value</i>
<i>Discussing problems with</i>				0.06 [#]
Mother	82 (68.3)	38 (76.0)	120 (70.6)	
Father	18 (15.0)	2 (4.0)	20 (11.8)	
Siblings	8 (6.6)	4 (8.0)	12 (7.1)	
Other family member	10 (8.4)	6 (12.0)	16 (9.5)	
Friends	2 (1.7)	0 (0.0)	2 (1.0)	
<i>Run away from home</i>				0.45 [#]
Yes	4 (3.3)	0 (0.0)	4 (2.4)	
No	116 (96.7)	50 (100.0)	166 (97.6)	

* Pearson Chi-square, [#] Likelihood ratio

Table 3. Social habit and intimate relationship of adolescents

<i>Social habits</i>	<i>Male n (%)</i>	<i>Female n (%)</i>	<i>Total n (%)</i>	<i>P value</i>
<i>Engaged in regular exercise</i>				0.00 [*]
Yes	96 (80.0)	24 (48.0)	120 (70.6)	
No	24 (20.0)	26 (52.0)	50 (29.4)	
<i>Regularly watching TV</i>				0.63 [*]
Yes	34 (28.3)	16 (32.0)	50 (29.4)	
No	86 (71.7)	34 (68.0)	120 (70.6)	
<i>Alcohol use</i>				0.39 ^s
Yes	2 (1.7)	0 (0.0)	2 (1.2)	
No	118 (98.3)	50 (100.0)	168 (98.8)	
<i>Using internet</i>				0.68 [*]
Yes	12 (10.0)	4 (8.0)	16 (9.4)	
No	108 (90.0)	46 (92.0)	154 (90.6)	
<i>Having boy/girl friend</i>				0.00 ^s
Yes	0 (0.0)	6 (12.0)	6 (3.5)	
No	120 (100.0)	44 (88.0)	164 (96.5)	
<i>Had sexual relationship with boy/girl friend</i>				0.08 ^s
Yes	0 (0.0)	2 (4.0)	2 (1.2)	
No	120 (100.0)	48 (96.0)	168 (98.8)	

* Pearson Chi-square, ^s Fisher's Exact test

A significantly higher female adolescents experienced stress/depression than male adolescents (16% vs. 0%, $p=0.00$) and among them, 2.4% of female adolescents had suicidal thoughts at least once compared to male participants ($p=0.00$).

Majority of the participants believed that they were treated with respect by doctors, doctors made them feel comfortable, doctors listened to their problems and spent time with them. More than 90% of participants were satisfied with existing ward facilities and other health facilities (Table 4).

Table 4. Reported satisfaction towards the existing health care facilities

<i>Health care facilities</i>	<i>Male n (%)</i>	<i>Female n (%)</i>	<i>Total n (%)</i>	<i>P value</i>
<i>Treated respectively by doctors</i>				0.32 ^s
Yes	116 (96.7)	50 (100.0)	166 (97.6)	
No	4 (3.3)	0 (0.0)	4 (2.4)	
<i>Doctor makes you comfortable</i>				0.32 ^s
Yes	116 (96.7)	50 (100.0)	166 (97.6)	
No	4 (3.3)	0 (0.0)	4 (2.4)	
<i>Other staff make you comfortable</i>				0.99 ^s
Yes	116 (96.7)	48 (96.0)	164 (96.5)	
No	4 (3.3)	2 (4.0)	6 (3.5)	
<i>Doctor spend enough time with you</i>				0.76 [*]
Yes	112 (93.3)	46 (92.0)	158 (92.9)	
No	8 (6.7)	4 (8.0)	12 (7.1)	
<i>Doctor listen to your problems</i>				0.78 [*]
Yes	114 (95.0)	48 (96.0)	162 (95.3)	
No	6 (5.0)	2 (4.0)	8 (4.7)	
<i>Information kept confidential by doctor</i>				0.36 [*]
Yes	88 (73.3)	40 (80.0)	132 (75.3)	
No	32 (26.7)	10 (20.0)	38 (24.7)	
<i>Information kept confidential by other staff</i>				0.64 [*]
Yes	92 (76.7)	40 (80.0)	132 (77.6)	
No	28 (23.3)	10 (20.0)	38 (22.4)	
<i>Doctor respect your ideas</i>				0.48 [*]
Yes	106 (88.3)	46 (92.0)	152 (89.4)	
No	14 (11.7)	4 (8.0)	18 (10.6)	

(Continued)

Health care facilities	Male n (%)	Female n (%)	Total n (%)	P value
<i>Doctor explained all other treatment methods</i>				0.29*
Yes	92 (76.7)	42 (84.0)	134 (78.8)	
No	28 (23.3)	8 (16.0)	36 (21.2)	
<i>Satisfied with ward facilities</i>				0.00*
Yes	118 (98.3)	44 (88.0)	162 (95.3)	
No	2 (1.7)	6 (12.0)	8 (4.7)	
<i>Satisfied with other health facilities</i>				0.76*
Yes	112 (93.3)	46 (92.0)	158 (92.9)	
No	8 (6.7)	4 (8.0)	12 (7.1)	

* Pearson chi-square, § Fisher's Exact test

Discussion

A tremendous spectrum of health problems was observed among adolescents in the study. The consequences of adolescent's health problems may persist into their future lives. It has been shown that many health problems and the majority of the risky behaviours underlying later health problems start in adolescence¹⁶. Strong attachment with mother, which would facilitate the discussion of their issues, would reduce the risky behaviours in adolescents. Healthy eating behaviours have to be taken seriously in order to help overweight adolescents. A significantly higher percentage (2.4%) of female compared to male adolescents had experienced suicidal thoughts among our study participants. However, a study conducted in Teaching Hospital, Batticaloa among patients with a history of deliberate self-harm, found that significantly higher numbers of males had attempted suicide than females¹⁷. Further, a higher percentage (14.5%) of depression and suicidal thoughts was shown in a study done at North Colombo Teaching Hospital, Ragama compared to our study participants¹⁸. The difference in the health needs in the two regions need to be studied further.

The prevalence of a number of risky behaviours varies by gender, with males having higher engagement in alcohol use and usage of internet facilities. However, female adolescents have been found to have a lack of physical activity in the present study. The importance of physical activities has to be stressed to female adolescents so as to reduce the incidence of non-communicable disease as well as other health related issues in the future.

The reported sexual interaction was significantly associated with gender, a higher percentage of females being involved in sexual activity during the adolescent period. This finding is not consistent with previous study done in Sri Lanka¹⁹. Further, it is noteworthy to report that none of the female adolescents who were involved in sexual activity used any temporary method of family planning. This could be one reason for higher teenage pregnancy rates observed in the Batticaloa district²⁰. Underreporting bias is very likely when investigating sensitive issues such as sexual behaviour so that the actual figure may be higher than reported in both males and females. Further, the reported use of internet facilities among adolescents was very minimal. This finding is supported by the latest census in 2017 shows that lowest percentage of computer literacy is reported from the Eastern province especially in Batticaloa district²¹. Minimal use of internet facilities may negatively affect adolescents because it may be an important way of obtaining general knowledge.

In the present study, majority of the adolescents stated that they were satisfied with health care services provided by health care professionals and the health care facilities available at hospital. Similar finding was observed in a Tanzanian study in which 89% adolescents were satisfied with adolescents' health service²². However, they did not have the experience of a more 'adolescent friendly' service to compare with. Since adolescents value privacy, health care providers should address not only informational but also psychological, social and physical privacy so as to attract, serve and retain the adolescent patients²³. Further, satisfaction on health services strongly

influences health seeking behaviours, compliance with treatment and ongoing relationships with healthcare providers. It is always advisable to plan effectively, implement or evaluate health care services of adolescents to assess the satisfaction level for the improvement of health services provided by the health institution.

Limitations

There is more variety of social behaviours among adolescents. The appropriate place to do this study might be in school. But, in order to assess the health related issues, the study was conducted in hospital. Under-reporting is highly possible and this would affect the assessment of social behaviours

Conclusions

Significantly lower percentage of female adolescents engaged in regular physical activity and a significantly higher percentage of female adolescents experienced suicidal thoughts due to stress/depression. Majority of adolescents were highly satisfied with existing ward facilities and other health facilities.

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