Research Paper Management

# An Exploratory Study in Child Mental Health Amongst School Going Children


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**ABSTRACT**

Mental health is an essential part of children's overall health and has complex interactive relationship with their physical health and ability to succeed in school, at work and in society. Mental health problems when left untreated in children leads to failure in school, violence, drug abuse and even suicide which may be costly to the family, community and even the Health Care system. We conducted a study in 300 school going children of age groups 11-15 years going to 7th, 8th and 9th standards to assess their mental health, to identify factors (Physiological, Psychological, Social, Academic achievement and economic) affecting mental health of school going children and to study relationship between them and mental health. 8.66% of children had GHQ > 20 suggestive of high risk mental health. There was statistically significant relationship between these various factors and GHQ score. Thus our study emphasise the importance of recognizing mental health problems in children and that the school health personnel must take necessary steps in improving the mental health of the school children.


**KEYWORDS**

**Introduction**

Child mental health is the capacity to achieve and maintain optimal psychological and social functioning and wellbeing. Child Mental health includes sense of identity and self-worth, sound family and peer relationships, ability to be productive and learn, and a capacity to use developmental challenges and cultural resources to maximize development [1]. Mental health is an essential part of children's overall health and has complex interactive relationship with their physical health and ability to succeed in school, at work and in society. Mental health hurdles are as common as some physical health problems such as asthma [2]. Like adults children may have mental health problems that interfere with the way they think feel and act. According to the Centre for Disease Control and Prevention: the results of the III National Health and Nutritional examination survey done from 2000 to 2012, showed that approximately 15 percent children in the age group 8 to 15 years had a diagnosable mental disorder. Eight point six percent children had attention-deficit hyperactivity disorder which was the most common; it was followed by 3.7 percent for mood disorders, 2.1 percent for conduct disorder, 0.7 percent for panic disorder or generalized anxiety disorder, and 0.1 percent for eating disorders. Boys had 2.1 times greater prevalence of attention-deficit/hyperactivity disorder than girls, girls had twofold higher rates of mood disorders than boys, and there were no gender differences in the rates of anxiety disorders or conduct disorder. Only approximately one half of those with one of the disorders assessed had sought treatment with a mental health professional [3].

These Mental health problems manifest themselves in many domains and in different ways. When untreated in children, it leads to failure in school, violence, drug abuse and even suicide which may be costly to the family, community and even the Health Care system. There are limited child and adolescent mental health services in India. Mostly such services are restricted to urban areas. Access to mental health services for children with a mental, emotional or behavioural disorder is substandard, not provided early enough, has an insufficient supply and is accessible only to a fraction of children and adolescents [4].

Good Mental health in childhood is a prerequisite for optimal psychological development, productive social relationships, effective learning, good physical heath, and an ability to care for self. So we undertook this study with following objectives:

1. To assess the mental health of school going children.
2. To identify factors affecting mental health of school going children.
3. To study the relationship between the factors (Physiological, Psychological, Social, Academic achievement and economic) and the Mental health of school going children.

**Materials and Methods**

This was a cross-sectional, descriptive explorative study carried out in 4 different schools in city of Mumbai. All these schools were well renowned high schools that cater to students of all caste, creed, religion and socioeconomic backgrounds and where the medium of instruction was English. The concerned authorities from the selected schools were approached and permission to conduct the study was obtained. Since the children were minors the necessary permission from the parents was taken by the school authorities and a written blanket consent was taken from the Principal, after explaining the purpose of the study, the tool that was to be used and assuring that confidentiality will be maintained during the study and the findings would be used for the purpose of the study only.

The sample consisted of 300 school going children aged 11-15 years from 7$^{th}$ to 9$^{th}$ standards (100 in each standard).

**Tools used**

1. The semi-structured questionnaire: This collected the de-

mographic details of the child and following factors affecting the mental health of the school going children.

a) Physiological factors
b) Psychological factors
c) Social factors
d) Academic achievement
e) Economic factors

2. The General Health Questionnaire-12 (GHQ-12)
The General Health Questionnaire is a measure of current mental health, developed by David. P. Goldberg in 1978, with the objective of using it as a screening instrument to detect those likely to have or be at a risk of developing psychiatric disorders in community settings and non-psychiatric clinical settings, such as primary care or general practice. It is a measure of the current mental health of an individual. It is available in four different versions using 12, 28, 30 or 60 items. The GHQ-12 has 12 items and it asks if the respondent has experienced a particular symptom or behaviour recently. Each item is rated on a four-point scale. The scoring method used is a Likert scoring style (0-1-2-3). The total score is 36. Scores of less than 20 indicate normal mental health and scores of 21-36 indicate the high risk group that is those likely at a risk of developing mental health problems later [5].

All those children who obtained a score of 21-36 in the General health questionnaire were classified under the high risk group and those <20 were classified as having normal mental health. The factors affecting the mental health of the students were analysed by using frequency and percentage. The relationship between mental health of school going children and factors affecting mental health were determined using the't' test.

**Results**
Coming to the demographic characteristics of the sample population, it was observed that there were equal number of boys and girls, maximum were of 13years (33.66%) and stayed in joint family (56.33%). 62.66% had only father as working member. According to GHQ score, 26 (8.66%) children had score > 20 and thereby they were classified under high risk category while rest 274 (91.33%) were under normal mental health category. Among those 26 children, 50 percent were boys and 50 percent were girls, this clearly indicates both male and female children were at an equal risk of developing mental health problems. Tables 1a,b,c, show distribution based on various physiological factors. Tables 2a,b show distribution based on psychological factors affecting mental health. The psychological factors include child's acceptance of body as it is, feeling confident and respecting oneself and others, love and affection received at home, relationship with parents and sibling and safety and security at home. Tables 3a, b show distribution based on social factors. Tables 4a, b show distribution according to academic factors. Tables 5a, b show distribution according to economic factors. Table 6 shows that there is significant relationship of GHQ score with various physiological, psychological, social, academic and economic factors.

**Discussion**
In our study it was shown that 8.66% of children were in high risk category of developing mental illness based on GHQ and it was equal in both boys and girls. This finding corroborate with a systemic review done by Bhola & Kapur which found 55 epidemiological studies showing prevalence rate ranging from 3.23% to 36.50% [6]. 13% of our study population had disturbed sleep with study tension being the main reason for it. 55% of them were not involved in physical exercise regularly and studies, tuitions & homework were cited as main reasons for it. 20% of them were not regular with their eating habits and again main reason was tuitions and classes for this negligence. Interesting fact observed was only 12% of them were eating fast food as their main content of meal while majority were on homemade food. In a study on 10,645 participants, aged between 12 years and 16 years, it was seen that 2.9 percent of the samples reported never eating regularly while 17.2 percent reported daily consumption of junk food. Young people who reported eating irregularly and consuming junk food daily were at a significantly greater risk of poorer mental and physical health [7]. Brown et. al. in a study reported that having breakfast improved student's cognitive and mental abilities allowing them to be more alert, pay better attention and do well in tests. The children who had breakfast were also sick less often, had lesser problems associated with hunger like dizziness, lethargy and did better than their peers who skipped breakfast [8].

In our study 15% of them were not happy with their looks and main reason cited was either they were too fat or too thin or ugly looking or dark. About 10% of them had difficulting in meeting and talking to new people. A study on 413 Korean children had concluded that, childhood obesity may be linked to body dissatisfaction, leading to low self-esteem and high levels of depressive symptoms [9]. 16% of them were uncomfortable approaching their teachers as majority cited the reason being scared of them. Also 11% of them did not talked with their classmates as they perceived them rude and proud. Good fact was that 90% of them had good relationships with their neighbours and about 84% of them went for outings with family regularly. Those who did not go for regular outings cited lack of time with themselves or with their parents as main reason. A study by Pillai et. al. concluded that having one's family as the primary source of social support was associated with lower prevalence of mental disorders [10]. The study by Nesdale & Pelyhe showed that peer group rejection caused a decrease in self-esteem and an increase in anxiety [11]. About 26%of them and 24% of their parents were not satisfied with the academic performance of children and getting fewer marks than expected was the main factor. Around 86% of them took part in activities other than studies like sports, talents and other academic activities. Thus, it can be inferred that today, children participate in various activities and competitions and there is a high competition spirit among them. One can say that this could affect the mental health of the child as they may not be able to accept failure as seen in our study 50% of them felt need to win always. Majority of them paid their fees on time and their financial need s were met properly by parents. Reiss in his study had emphasised the need for individual-level early childhood interventions as well as a reduction in socioeconomic inequalities at a societal level to improve mental health in childhood and adolescence [12]. The GHQ score showed statistically significant relationship with the various physiological, psychological, social, academic and economic factors scores. Thus proving that the mental health of children is affected by these factors.

**Conclusions**
To conclude, it was found that the mental health of children was affected and 8.66 percent of children fell into the high risk group. As far as factors affecting mental health were concerned, the various factors, (Physiological, Psychological, Social, Academic achievement and Economic) affected the mental health of the school going child and showed a significant relationship with the GHQ scores, which was statistically proven. Thus our study emphasise the importance of recognizing mental health problems in children and that the school health personnel must take necessary steps in improving the mental health of the school children. Our study had limitations that only few factors were explored and results cannot be generalised. Also teachers' and parents' perceptions were not taken into consideration.

**Table 1a: Distribution of children according to the physiological factor (sleep pattern)**

| Variables | Frequency (f) | Percentage (%) |
|---|---|---|
| A] Slept well at night | N= 300 | |
| Yes | 261 | 87 |
| No | 039 | 13 |
| B] If Yes, hours spent sleeping | N=261 | |
| 8-10 hours | 148 | 56.70 |
| > 10 hours | 003 | 01.15 |
| <8 hours | 110 | 42.14 |
| C1] If No, number of times woken up | N=39 | |
| 1-2 | 010 | 25.64 |
| 2-3 | 021 | 53.84 |
| 3-4 | 004 | 10.25 |
| 4-5 | 004 | 10.25 |
| C2] Reasons for waking up at night | N=39 | |
| Study tension | 022 | 56.42 |
| Nightmares and bad dreams | 009 | 23.04 |
| Bedwetting | 006 | 15.40 |
| Masturbation | 002 | 05.13 |

**Table 1b: Distribution of children according to the physiological factor (performing exercise)**

| Variables | Frequency (f) | Percentage (%) |
|---|---|---|
| A] Performed physical exercises | N=300 | |
| Yes | 135 | 45 |
| No | 165 | 55 |
| C1] If Yes, type of exercises performed | N=135 | |
| Indoor | 50 | 37.03 |
| Outdoor | 85 | 62.96 |
| C2] Time spent in exercising per day | N=135 | |
| Fifteen minutes | 29 | 21.50 |
| Thirty minutes | 47 | 34.81 |
| Forty five minutes | 09 | 06.66 |
| One hour | 41 | 30.37 |
| Two hours | 09 | 06.66 |
| C3] How often exercises were performed? | N=135 | |
| Daily | 60 | 44.45 |
| Once a week | 20 | 14.81 |
| Twice a week | 23 | 17.03 |
| Every alternate day | 32 | 23.70 |
| D] If No, reasons for not performing exercises | N=165 | |
| Study, tuitions and homework | 77 | 46.66 |
| No time | 52 | 31.52 |
| Others (felt lazy, boring, tired, did not like to) | 36 | 21.81 |

**Table 1c: Distribution of children according to the physiological factor (nutrition pattern)**

| Variables | Frequency (f) | Percentage (%) |
|---|---|---|
| A] Type of food often eaten | N=300 | |
| Homemade | 171 | 57 |
| Fast food | 036 | 12 |
| Both | 093 | 31 |
| B] Had breakfast lunch and dinner everyday | N=300 | |
| Yes | 240 | 80 |
| No | 060 | 20 |
| B1] If No, which meal was Skipped | N=60 | |
| Breakfast | 34 | 56.66 |
| Lunch | 09 | 15.00 |
| Dinner | 17 | 28.33 |
| B2] Reasons for skipping meals | N=60 | |
| Got late to school | 13 | 21.66 |
| Got tired to eat | 08 | 13.33 |
| Got up late | 08 | 13.33 |
| Don't like to eat food | 10 | 16.66 |
| Others (ate out, remedial classes, had to study, felt like vomiting, had no mood to eat, parents not at home) | 21 | 35.00 |

**Table 2a: Distribution of children according to psychological factors (child's acceptance of body, feeling confident and respecting oneself).**

| Variables | Frequency (f) | Percentage (%) |
|---|---|---|
| A] Happy about looks | N=300 | |
| Yes | 255 | 85 |
| No | 045 | 15 |
| B] If No, reason for not being happy | N=45 | |
| Too fat, ugly, too thin or dark | 22 | 48.88 |
| Friends made fun of child | 05 | 11.11 |
| Others (did not like teeth, had artificial teeth, friends looked better, had braces, had pimples) | 18 | 40.00 |
| C] Meeting new people and talking to them | N=300 | |
| Yes | 271 | 90.33 |
| No | 029 | 09.66 |
| D] If No, reason for not wanting to meet new people | N=29 | |
| Shy, nervous or scared | 16 | 55.17 |
| Did not like to talk to people | 04 | 13.79 |
| Others (did not trust people, others would laugh at them) | 09 | 31.03 |
| E] Taking up responsibility for task at school | N=300 | |
| Yes | 236 | 78.66 |
| No | 064 | 21.33 |
| F] If No, reasons for not taking up responsibility | N=64 | |
| Did not like to take up responsibilities | 10 | 15.62 |
| Shy, scared or nervous | 18 | 28.12 |
| Not capable and did not have confidence | 25 | 39.06 |
| Teachers shouted and were partial | 06 | 09.37 |
| Not interested | 05 | 07.81 |

**Table 2b: Distribution of children according to psychological factors (love and affection received at home, relationship with parents and siblings and safety and security at home).**

| Variables | Frequency (f) | Percentage (%) |
|---|---|---|
| A] Were the children comfortable to go to parents in trouble | N=300 | |
| Yes | 235 | 78.33 |
| No | 065 | 21.66 |
| B1] If No, reasons for being uncomfortable | N=65 | |
| Scared of parents | 23 | 35.38 |
| Parents beat and shout | 28 | 43.07 |
| Parents don't understand | 10 | 15.38 |
| Child felt parents were bad | 03 | 04.61 |
| unspecified | 01 | 01.54 |
| B2] Whom would they prefer going to | N=65 | |
| Friends | 21 | 32.30 |
| Self | 25 | 38.46 |
| Grandparents | 09 | 13.84 |
| Others (boyfriends, girlfriends) | 10 | 15.38 |
| D] Felt safe at home | N=300 | |
| Yes | 297 | 99 |
| No | 003 | 01 |
| E] If No, reasons for not being safe | N=3 | |
| Parents do not love the child | 003 | 100 |
| F] Were Differences made by parents between child and siblings | N=255 | |
| Yes | 038 | 15 |
| No | 217 | 85 |
| G] If Yes, what differences were made | N=38 | |
| Siblings loved more and given more importance | 17 | 44.73 |
| Siblings given more freedom | 02 | 05.26 |
| Given better things and whatever sibling demands | 05 | 13.15 |
| Siblings given more attention | 09 | 23.69 |
| Child constantly and criticized and blamed for siblings fault | 05 | 13.15 |
| H] Effect of differences made on child | N=38 | |
| Felt hurt, unhappy or depressed | 20 | 52.63 |
| Got angry and felt like running away | 07 | 18.42 |
| Got suicidal thoughts | 04 | 10.52 |
| Did not affect the child | 05 | 13.15 |
| Affected studies | 02 | 05.26 |

**Table 3a: Distribution of children according to social fac-**

**tors (child's perception of support received from teachers and mingling with classmates at school).**

| Variables | Frequency (f) | Percentage (%) |
|---|---|---|
| A] Comfortable to approach teachers | N=300 | |
| Yes | 250 | 83.33 |
| No | 050 | 16.66 |
| B] If No, reasons for being uncomfortable | N=50 | |
| Scared of teachers | 20 | 40 |
| Teachers shout and blame children | 09 | 18 |
| Teachers were strict | 07 | 14 |
| Teachers did not understand | 05 | 10 |
| Teachers were partial | 09 | 18 |
| C] Talked to all classmates | N=300 | |
| Yes | 268 | 89.33 |
| No | 032 | 10.66 |
| D] If No, reasons for not talking to all classmates | | |
| No one talked to the child | N=32 | |
| The other children were a bad company | 04 | 12.50 |
| The other children teased and did not like the child | 06 | 18.75 |
| The other children were rude and proud | 06 | 18.75 |
| Child did not like talking to them | 13 | 40.62 |
| | 03 | 09.37 |

**Table 3b:Distribution of children according to social factors (support received from neighbours and relatives and going out with friends and family).**

| Variables | Frequency (f) | Percentage (%) |
|---|---|---|
| A] Maintained cordial relationship with neighbours | N=300 | |
| Yes | 272 | 90.66 |
| No | 028 | 09.33 |
| B] If No, reasons for not maintaining a cordial relationship | N=28 | |
| They fought with us | 08 | 28.57 |
| Parents said do not talk to the neighbours | 03 | 10.71 |
| Neighbours do not talk | 09 | 32.14 |
| Child did not like to talk to neighbours | 05 | 17.85 |
| Neighbours were rude, jealous and not helpful | 03 | 10.71 |
| C] Went for outings | N=300 | |
| Yes | 251 | 83.66 |
| No | 049 | 16.33 |
| D1] If Yes, whom did they go out with | N=251 | |
| Friends | 033 | 13.15 |
| Family | 166 | 66.13 |
| Both a and b | 052 | 20.72 |
| D2] How often they went out? | N=251 | |
| On Weekends | 126 | 50.20 |
| Monthly | 069 | 27.49 |
| On Holidays | 056 | 22.31 |
| E] If No, reasons child did not go for outings | N=49 | |
| Parents did not have time | 14 | 28.57 |
| Child did not have time | 15 | 30.60 |
| Homework and studies | 09 | 18.36 |
| Parents did not allow | 05 | 10.20 |
| Child did not like to go out | 06 | 12.24 |

**Table 4a: Distribution of children according to academic factors (satisfaction of parents and children with academic performance and reaction of parents when child does badly).**

| Variables | Frequency (f) | Percentage (%) |
|---|---|---|
| A] Happy with marks obtained | N=300 | |
| Yes | 220 | 73.33 |
| No | 080 | 26.66 |
| B] If No, reasons for not being happy | N=80 | |
| Failure in exams | 06 | 07.50 |
| Got less marks and wanted more marks | 57 | 71.25 |
| Wanted full marks | 06 | 07.50 |
| Did not secure first rank | 04 | 05.00 |
| Weak in studies and had to do better | 07 | 08.75 |
| C] Parents were happy with marks obtained | N=300 | |
| Yes | 228 | 76 |
| No | 072 | 24 |
| D] If No, reasons for not being happy | N=72 | |
| Child got less marks and parents wanted better marks | 43 | 59.72 |
| Wanted child to get a rank or full marks | 12 | 16.66 |
| Failure of child | 05 | 06.94 |
| Others (could do better, did not study) | 12 | 16.66 |
| E] Parents reaction when child fared badly | N=300 | |
| Encouragement | 161 | 53.66 |
| Verbal abuse(shouting) | 102 | 34.00 |
| Physical punishment | 021 | 07.00 |
| Ignore child | 016 | 05.33 |
| F] Comparison done by parents with other children or siblings | N=300 | |
| Yes | 181 | 60.33 |
| No | 119 | 39.66 |

**Table 4b:Distribution of children according to academic factors (participation in activities at school and in competitions).**

| Variables | Frequency (f) | Percentage (%) |
|---|---|---|
| A] Took part in activities at school | N=300 | |
| Yes | 258 | 86 |
| No | 042 | 14 |
| B] If Yes, type of activities child took part in | N=258 | |
| Academic | 27 | 10.46 |
| Sports | 83 | 32.17 |
| Talent | 53 | 20.54 |
| Academics and talent | 20 | 07.75 |
| Sports and talent | 34 | 13.17 |
| Academic and sports | 10 | 03.88 |
| Academic, sports and talent | 31 | 12.01 |
| C] If No, reason for not taking part | | |
| Felt shy and nervous | N=42 | |
| Not capable and did not have confidence | 04 | 09.52 |
| Not interested and waste of time | 06 | 14.28 |
| Did not like to take part | 16 | 38.09 |
| Others (did not get a chance, parents did not allow, boring, had to miss class) | 09 | 21.42 |
| | 07 | 16.66 |
| D] Took part in competitions | N=300 | |
| Yes | 245 | 81.66 |
| No | 055 | 18.33 |
| F] If Yes, was there a need to win always | N=245 | |
| Yes | 122 | 49.79 |
| No | 123 | 50.20 |
| G] If No, reasons for not taking part in competitions | N=55 | |
| Scared, nervous, shy, or stage fear | 14 | 25.45 |
| Not interested or waste of time | 17 | 30.90 |
| Did not like to | 15 | 27.27 |
| Fear of loosing | 02 | 03.64 |
| Others (did not get a chance, had no time) | 07 | 12.73 |

**Table 5a: Distribution of children according to economic factors (paying school fees on time, paying for other expenses).**

| Variables | Frequency (f) | Percentage (%) |
|---|---|---|
| A] Paid school fees on time | N=300 | |
| Yes | 295 | 98.33 |
| No | 005 | 01.66 |
| B] If No, how did it bother the child? | N=2 | |
| Made child feel embarrassed | 01 | 50 |
| Got angry | 01 | 50 |
| C] Were Parents able to pay for other expenses of child | N=300 | |
| Yes | 267 | 89 |
| No | 033 | 11 |

| | | |
|---|---|---|
| D] If No, how those expenses were managed by the child? | | |
| Child went only if necessary or compulsory | N=33<br>10 | <br>30.30 |
| Did not go at all | 05 | 15.15 |
| Collected pocket money | 10 | 30.30 |
| Borrowed money from friends or relatives | 03<br>05 | 09.09<br>15.15 |
| Others( sat quietly, cried till parents agreed) | | |

**Table 5b: Distribution of children according to economic factor (pocket money received from parents).**

| Variable | Frequency (f) | Percentage (%) |
|---|---|---|
| A] The child received pocket money | N=300 | |
| Yes | 174 | 58 |
| No | 126 | 42 |
| B1] If Yes, the amount received by the child | N=174 | |
| Rs.10 - 50 daily | 41 | 23.57 |
| Rs. 100 - 500 daily | 03 | 01.73 |
| Rs. 10 - 50 weekly | 36 | 20.68 |
| Rs. 100 - 300 weekly | 11 | 06.32 |
| Rs. 10 – 50 monthly | 17 | 09.78 |
| Rs. 50 – 100 monthly | 02 | 01.14 |
| Rs. 100 -500 monthly | 53 | 30.45 |
| Rs. 1000 monthly | 11 | 06.32 |
| B2] Was the amount received adequate to meet the needs of the child | N=174 | |
| Yes | 159 | 91.38 |
| No | 015 | 08.62 |
| C] If No, did the child think it was necessary to get pocket money | N=126 | |
| Yes | 014 | 11.11 |
| No | 112 | 88.89 |

**Table 6: Relationship between GHQ Score and scores of various factors.**

| Mean of GHQ score | Mean of Physio-logical Factors | Mean of Psycho-logical Factors | Mean of Social Factors | Mean of Academ-ic Factors | Mean of Economic Factors |
|---|---|---|---|---|---|
| 8.96 ± 5.84 | 4.42 ± 1.27 | 4.18 ± 0.91 | 4.20 ± 0.99 | 3.57 ± 1.36 | 3.29 ± 0.59 |
| 't' value compar-ing with mean GHQ | 13.35 | 14.05 | 13.99 | 15.38 | 16.69 |

## REFERENCES

1. WHO. Child and Adolescent Mental health Policies and Plans. Mental Health Policy and Service Guidance Package. Geneva: 2005. 2. World Health Organization, University of Melbourne. Summary report: Promoting Mental Health. France: WHO; 2004. Available at: http://www.who.int. 3. Centre for Disease Control and prevention. National health and nutritional examination survey. 2013 May. 4. Shastri PC. Promotion and Prevention in child mental health. Indian Journal of Psychiatry.2009 April; 51(2): 88-95 5. Goldberg D. Manual of the General Health Questionnaire. Windsor: NFER- Nelson, 1978. 6. Bhola P, Kapur M. Child and adolescent psychiatric epidemiology in India. Indian J Psychiatry. 2003 Oct; 45(4):208-17. 7. Zahra J, Ford T, Jodrell D. Cross- sectional survey of daily junk food consumption, irregular eating, mental and physical health andparenting style of British secondary school children. Child Care Health Dev. 2014 Jul; 40(4):481-91. 8. Brown L, Beardslee HW, Smith D. Impact of Breakfast on Children Health and learning. Frontiers in Human Neuro Science. 2013 Aug; 8(7): 23-25 9. Shin NY, Shin MS. Body dissatisfaction, self-esteem, and depression in obese Korean children. J Pediatr. 2008 Apr; 152(4):502-6. 10. Pillai A, Patel V, Cardozo P, Goodman R, Weiss HA, Andrew G. Non-traditional lifestyles and prevalence of mental disorders in adolescents in Goa, India. Br J Psychiatry. 2008 Jan; 192(1):45-51. 11. Nesdale. D, Pelyhe. H. Effects of experimentally-induced peer group rejection and out group ethnicity on children's anxiety, self-esteem, and in-group and out-group attitudes. School of Psychology: Griffith University; 2009. Available from: http://www98.griffith.edu.au/dspace/bitstream/handle/10072/29768/59738_1.pdf?sequence=1 12. Reiss F. Socioeconomic inequalities and mental health problems in children and adolescents: a systematic review. Soc Sci Med. 2013 Aug; 90:24-31.