LIFESTYLE DISORDERS IN URBAN CHILDREN RAJASTHAN: A SURVEY STUDY

Omendra Pal Singh[1], Laxmi Singh[2], Abhimanyu Kumar[3]

[1]Department of Ayurvedic Pediatrics ,Major S.D.Singh Ayurvedic Medical College,Fatehgarh, Farrukhabad, Uttar Pradesh

[2]State Ayurvedic and Unani hospital, Fatehgarh, Farrukhabad, Uttar Pradesh

[3]Department of Ayurvedic Pediatrics, National Institute of Ayurveda Jaipur, Rajasthan

E-mail of Corresponding Author: omendrapalsingh@gmail.com

ABSTRACT

Over the last decade the pace of advancement in electronic technology has been breathtaking, resulting in quick development in all aspects of life. But dependency and excessive use of electronic technology forced people to adopt unhealthy life style. This unhealthy and inactive lifestyle in turn was adopted by children through their crucial method of learning. Therefore to find out the lifestyle disorders in Indian urban children a self selected survey was conducted by 'given questionnaires method' in year 2009-10. A random sample of 450 children was collected from different elementary and higher secondary schools of Jaipur, Rajasthan to find out the present lifestyle choices of the children and their involvement with various related disorders.

Keywords: Lifestyle disorders in children, lifestyle choices, urban children of Rajasthan.

INTRODUCTION

The numerous discussions and guidelines have been proposed for lifestyle disorders in adults but a little is thought about children in this context. But the fact is that the changed lifestyle choices of adults are in tern adopted by children because it is crucial that we set a positive example for them and they learn by what we do and not by what we say. [1]

The aim of present study is to find out the present lifestyle choices of urban children of Rajasthan and their involvement with various related disorders.

MATERIAL AND METHODS

A self selected survey on lifestyle disorders (LSD) in children of different socioeconomic status was conducted by 'given Questionnaires method'. A random sample of 450 children was collected from different elementary and higher secondary schools of Jaipur, India. The questionnaire was structured covering questions regarding areas like demographic, food habits, sleeping hours, physical activity, behavior, mental status etc.

The questionnaires were distributed to the children in school during child health check up camps and instructed to get it filled by their parents. On the basis of grading and scoring method the interpretations were made. The mean score of profile was calculated on basis of final score.

OBSERVATION:

The findings of the survey on lifestyle disorders in children are tabulated as below:

TABLE NO. 1: INCIDENCE OF AGE

S.No.	Age	No. of Children	%	Mean Age
1.	5-10yr	106	23.55	12.4
2.	10-15 yr	344	76.44	

Out of 450 school going children that were surveyed, 10-15 yr age group were 344(74.44 %) and that of 5-10 yr age group were 106(23.55%).The mean age of the children was 12.4 years.

TABLE NO. 2 : SEX WISE DISTRIBUTION

S.No.	Sex	No. of Children	%
1.	Male	215	47.70
2.	Female	235	52.30

In the survey population 235 children (52.3 %) were girls while rest 215(47.7 %) were boys.

TABLE NO. 3: INCIDENCE OF SOCIO ECONOMIC STATUS

S.No.	Socio-economic status	No. of Children	%
1.	Higher	90	20.00
2.	Middle	169	37.50
3.	Lower middle	146	32.50
4.	Lower	45	10.00

In the survey population 169 children (37.50%) were from middle class family followed by 146 kids (32.50%) of lower middle class. Higher Socio Economic Status children were 90 in number (20%) while rest only 45 (10%) belonged to Lower Socio Economic Status.

TABLE NO. 4: BMI PROFILE OF POPULATION

S.No.	BMI	No. of Children	%	Mean Score
1.	Underweight	182	52.00	
2.	Normal	119	34.10	18.03
3.	Overweight	37	10.50	
4.	Obese	12	3.40	

Out of total survey population, the height and weight were recorded of 350 children. Out of this populace 182 children (52%) were found underweight while 119 kids (34.10%) of normal BMI and 37 (10.5%) found to be overweight. The least number was of obese children i.e. 12(3.4%). The mean BMI of the children was 18.03.

TABLE NO. 5: MORNING RISE PROFILE OF SURVEY POPULATION

S.No.	Habit	No. of Children	%	Mean Score
1.	Healthy habit	30	6.60	
2.	Proper rise	221	46.80	2.46
3.	laziness	134	29.70	
4.	Unhealthy habit	85	18.80	

It is clear from the above table that out of total surveyed children, the maximum 221 (46.80%) were having the habit of proper rise. On the other hand 134 kids (29.7%) were lazy to rise in morning and 85 (18.80%) having unhealthy habit of getting up late in morning. Only 30 (6.6%) children had cultivated the healthy habit of early rise in morning. The mean score was 2.46.

Table No. 6: BOWEL HABIT PROFILE

S.No.	Bowel Habit	No. of Children	%	Mean Score
1.	Regular	30	6.60	
2.	Occasionally constipated	220	48.80	2.79
3.	Severely constipated	139	30.80	
4.	Malabsorption	61	13.50	

The bowel habit profile of survey population tells that occasionally constipated children were found maximum (220, 48.80%), followed by 139 severely constipated kids (30.80%).The urge of defecation just after taking meal was found in 61 children(13.5%).Regular bowel habit was found in the least 30 children(6.6%).The mean score the study profile was 2.79.

Table No. 7: DIETARY HABIT PROFILE

S.No.	Dietary Habit	No. of Children	%	Mean Score
1.	Properly nourished	67	14.80	
2.	Undernourished	230	51.10	2.72
3.	Malnourished	113	25.10	
4.	Obesity	40	8.80	

On the basis of the dietary habit (quantity and quality of the meal) it was observed that there is the probability of being undernourished in 230 children (51.1%), of getting malnourished in 113kids (25.1%).There were 67 children (14.8) whose dietary habits were healthy and so were properly nourished. Only 40 children (8.8%) were having the chance of getting obese on the basis of their dietetic pattern. The mean score of the profile was 2.72.

Table No. 8:   INDIDENCE OF FOOD PREFERENCE

S.No.	Type of Food	No. of Children	%
1.	Mixed	185	41.10
2.	Eggetarian	86	19.10
3.	Vegetarian	175	38.80
4.	Non Vegetarian	04	0.80

Mixed food (vegetarian and non vegetarian) was the preference of maximum 185(41.1%) children, followed by vegetarian 175(38.8%) and 86 kids (19.1%) eggetarians(take eggs with vegitarian). Only 4 children (0.8%) were exclusively non vegetarian.

Table No. 9: TEST PREFERENCE PROFILE

S.No.	Taste preference	No. of Children	%	Mean Score
1.	All tastes	51	11.30	
2.	*Sweet-sour*	123	27.30	2.76
3.	*Pungent-salty*	226	50.20	
4.	*Bitter-Astringent*	20	4.40	

Out of survey populace the majority of the children (226, 50.2 %) prefer pungent and salty taste dominant food articles. Sweet and sour eatables were the preference of 123kids (27.3%).The mean score of taste profile was 2.76.

Table No. 10: PERSONAL HYGIENE PROFILE

S.No.	Hygiene	No. of Children	%	Mean Score
1.	Good	129	28.60	
2.	Moderate	153	34.00	3.41
3.	Poor	124	27.50	
4.	Very poor	44	9.90	

It is clear from the above table that the personal hygiene was moderate in majority of children (153, 34 %) followed by good personal hygiene of 129 kids (28.6%) and those who were having poor personal hygiene were 124(27.5%).The children with very poor personal hygiene were 44 in number (9.9%). The mean score of profile was 3.41.

Table No. 11: STUDY PATTERN PROFILE OF SURVEY POPULATION

S.No.	Study pattern	No. of Children	%	Mean Score
1.	Normal /healthy pattern	133	29.50	
2.	Moderate Stress	140	31.10	1.56
3.	Academic stress	177	39.40	

Out of total survey populace 177 children (39.4%) were under academic stress. Normal study pattern was found in133 kids (29.5%) while 140 children (31.1%) were under moderate or towards academic stress. The mean score of the study profile was1.56.

Table No. 12 : INCIDENCE OF CONCENTRATION IN STUDY

S.No.	Concentration	No. of Children	%	Mean Score
1.	Good Concentration	112	24.90	
2.	Moderate Concentration	174	38.60	1.88
3.	Lack of Concentration	164	36.50	

In study it was found that majority of children i.e. 174(38.6%) were having moderate concentration in studies. The children who were lacking concentration during study were 164(36.5%) while number of children having good concentration through study was 112(24.9%).The mean score this profile was 1.88.

Table No. 13: PHYSICAL ACTIVITY PROFILE OF POPULATION

S.No.	Physical activity	No. of Children	%	Mean Score
1.	Good physical activity	101	22.40	
2.	Moderate physical activity	193	42.90	1.87
3.	Sedentary habits	120	26.70	

Majority of the children (193, 42.9%) were involved in Moderate physical activities. while 120 kids (26.7) were having sedentary habits. The children who indulge in good physical activity were 101(22.4%); mean score of the profile was 1.87.

Table No. 14: SLEEP PROFILE OF SURVEY POPULATION

S.No.	Sleep pattern	No. of Children	%	Mean Score
1.	Good/sound	97	21.50	
2.	Moderate	88	19.50	2.84
3.	Disturbed	203	45.20	
4.	Inadequate	112	24.80	

Out of total survey population the majority of children i.e. 203(45.2%) were having disturbed sleep followed by inadequate sleep of 112 children (24.8%). Survey report reveals that only 97 kids (21.5%) were having sound sleep. The minimum kids (88, 19.5 %) were having moderate sleep. The mean score was 2.84.

Table No. 15: OBEDIENCE PROFILE OF SURVEY POPULATION

S.No.	Obedience	No. of Children	%	Mean Score
1.	Well disciplined	198	44.00	
2.	Moderately disciplined (in father's presence)	125	27.70	3.6
3.	Moderately disciplined (in mother's presence)	78	17.30	
4.	Undisciplined	49	10.80	

Majority of the children (198, 44%) were well disciplined i.e. obey to their parents followed by moderately disciplined 125 children (27.7%) who are disciplined in presence of father. While moderately disciplined (those obey to their mother) were 78 children (17.3%). The least number 49(10.8%) was of those children who were totally undisciplined. The mean score of the obedience profile was 3.6.

Table No. 16: BEHAVIOR PROFILE

S.No.		No. of Children	%	Mean Score
1.	Jolly	50	11.10	
2.	Normal	104	23.20	2.12
3.	Aggressiveness	150	33.30	
4.	Violent	146	32.40	

Out of total survey populace the behavior of 150 children (33.3%) was aggressive with their siblings and peers while 146 children (32.4%) were violent in their behavior. The children with normal social behavior were 104 in number (23.1%).The least number was of the children (50, 11.1%) with jolly behavior. The mean score of profile was 2.12.

Table No. 17: MENTAL STATUS PROFILE

S.No.	Mental status	No. of Children	%	Mean Score
1.	Normal	140	31.10	
2.	Hyperactive (Attention Deficit)	65	14.40	2.68
3.	Anxiety	206	45.70	
4.	Towards depression	39	8.80	

Majority of the children (206, 45.7%) were having the feeling of anxiety on maximum occasions. Children with normal mental status were 140 in number (31.1%), while 65 kids (14.4 %) were hyperactive. The least number of the children (39, 8.8%) were having the depressive state of mind.

DISCUSSION

Age: Age range of the selected children for the study was 5-15 years. After 5 years of age only the child gets exposed to outer world and gets influenced by it, so lower limit of age range was kept 5 years. The upper limit of age range was 15 as after this the adolescent period starts. Majority of the children surveyed were of age group 10-15 years (76.44%), this was because the number of this age group children were more in schools. (Table no.1)

Sex: The numbers of boys and girls were almost equal in the survey study a little dominated by girls (52.3%). This is because all schools surveyed were of co-education but one was exclusively girl's school. (Table no.2)

Social economic status - The maximum children surveyed belong to middle class family (37.5%) that indicates Lifestyle disorders are becoming more prone in middle class families as now a days middle class is adopting unhealthier pattern because of being more fascinated towards junk food, spicy food and more use of T.V. and computer. The higher socioeconomic status parents are becoming more conscious about the healthy pattern of living. (Table no.3)

BMI - The maximum children (52 %) were found underweight that shows children's nourishment is being hampered by unhealthy food habits. (Table no.4)

Morning Rise - The study reveals that majority of the children rise in the morning at proper time (46.8%). This may be because they have to get up early to get ready for school. (Table no.5)

Bowel Habit - The study reveals that more children (48.8%) were suffering with occasional constipation. The mean score (2.79) also indicate that tendency of the profile was towards constipated bowel habit. Irregular food habits improper sleep may be the cause of their irregular bowel habit. (Table no.6)

Dietary Habit - The interpretation of dietary habit profile of children shows that maximum children were having the chance of undernourishment (51.1%) by their food preference. The mean score (2.72) of the profile also indicates that probability of getting undernourished is more in the children. This finding is supported by the BMI profile of the survey populace which shows that majority of the children were underweight. (Table no.7)

Food Preference - The survey report states that majority of the children (41.1%) were having mixed (vegetarian and non-vegetarian both) dietetic preference. This is because the whole of the Muslim children (43.4%) of the survey population were of preferable mixed dietetic pattern. (Table no.8)

Test Preference - The survey study reveals that maximum number of children (50.2%) like pungent and salty food items. The mean score also suggests the tendency of profile towards pungent and salty tastes. This result is supported by the fact that children in present scenario prefer more outside spicy fried food items those are deep fried, with extra spices and salt but lack the nourishing elements. These food choices of the children are responsible for ill health like constipation, poor appetite, failure to gain weight or obesity etc. (Table no.9)

Hygiene Profile - Majority of the children surveyed cultivated moderate personal hygiene habits (34%). The mean score (3.41) of the group profile shows the tendency of moderate to good personal hygienic conditions. This may be because of various personal hygiene awareness programmes organized by govt. of India. (Table no.10)

Study Pattern - By interpretation of study hours and study pattern of children the survey reveals that maximum kids (39.4%) were having the chance of coming under academic stress. The mean score of profile (1.56) also reveals the group tendency towards academic stress. This finding is supported by the study of Frankenhaeuser *et.al. (1971)*[2] which states that

work overload or under load in simulated work situations (increased schooling hours, tuition hours the frequency of examinations) has effective role in developing stress (academic) in children.(Table no.11)

Concentration Profile - The survey reveals that majority of the parents say that their child is not able to concentrate while studying for long time (38.6%). The reason behind this result may be the more expectation of parents to study continuously for more hours (like more than 2-3 hours) without a break. (Table no.12)

Physical Activity - The study tells that the number of children with moderate physical activity was the maximum (42.9%). The mean score indicates that the tendency of the profile was towards moderate physical activity to sedentary habits that is because of the past time preferences by the children. Earlier time children use to play out and sports that need more physical activity were their choices of interest. But now-a-days children spend more time in front of T.V. and computer rather than indulging in physical activity. (Table no.13)

Sleep - The sleep of the majority of the children (45.2%) surveyed was found disturbed. The mean score (2.84) of the profile shows the tendency in between disturbed and moderate sleep. There may be various reasons of disturbed sleep of school going children. Out of these the altered lifestyle is the main cause. To get up early in the morning is must to attend school at time, increasing academic stress, T.V. in bedroom make the child go late to sleep. Because of these reasons when the sleeping hours' demand is not fulfilled, sleeping disorders may occur in children. (Table no.14)

Obedience - Majority of the children were found well disciplined (44%). The mean score of the profile (3.6) shows the tendency between well disciplined and moderately disciplined in presence of father. This result is supported by another survey finding that population was dominated by girls (52.3%) over boys (47.7%). In India, girls obey more to their parents and hesitate to go against the instructions that may be the reason behind female dominant obedience profile of survey. (Table no.15)

Behavior Profile - In survey study aggressiveness was found in majority of the children (33.33%) and the mean score (2.12) of the group also shows that the tendency of profile was more towards aggressiveness. Now a days child is more fascinated by movies, film stars, their actions, stunt scenes etc., that is abundantly available on television. So when child indulge more in watching T.V., films etc it creates the feelings to fight and aggressive behavior. This may be the reason of present day unhealthy behavior of children. (Table no.16)

Mental Status - The survey tells that the anxious state of mind was found maximum among the children (45.7%). The mean score (2.68) of the profile shows the tendency between anxiety and hyper activeness. The anxiety (Generalized Anxiety Disorder) in children may have several etiological factors but on the basis of other findings of present survey study regarding the lifestyle choices of the children, the cause of anxiety may be the improper pattern of study leading to academic stress which intern cause anxiety in children.(Table no.17)

CONCLUSION

This survey study reveals that the affected areas of lifestyle choices of urban children of Rajasthan in present scenario are dietary habits, taste preferences, bowel habit, study pattern, concentration, physical activity, sleep pattern and mental status. The present lifestyle of these children includes spending several hours in front of screen (computer or T.V.), consuming junk food and beverages, sedentary habits, reduced much needed sleep time.

The study indicates that because of these unhealthy lifestyle choices ,Indian urban

children have started showing the symptoms of lifestyle related somatic and psychosomatic disorders viz. stress, anxiety, depression, sleeping disorders, obesity, and constipation and computer vision syndrome.

REFERENCES
1. Domenick J.Maglio In Hernando News,April 15,2010
2. Frankenhaeuser M., Nordheden, B., Myrsten A. L., & Post B. (1971). Psychophysiological reactions to Understimulation and Overstimulation. Acta Psychologica. 35, 298-308.