

**“Lifestyle survey of urban middle-class adolescents of Dehradun,
Uttarakhand, India”.**

**A Capstone Project submitted to
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by

**Dr Rachit Negi
MPH - Cohort III (2015-17)**

**Under the guidance of
Dr Monika Chaudhary**

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Abstract

The present study investigated the prevalence of lifestyle-related concerns among school adolescents in Dehradun. The information was collected, through a self-administered questionnaire, from 323 school students studying in grades VIII- XII drawn from four different schools of Dehradun. The schools are affiliated with Indian School Certificate Examination (ISCE), Central Board of Secondary Education (CBSE), Uttarakhand and Uttar Pradesh boards. To keep the study gender neutral, the respondents consisted of 168 boys and 155 girls. The adolescents completed the anonymous Adolescent Lifestyle Questionnaire containing 30 simple questions from six environments.

The study documents the various concerns of the adolescents related to unhealthy diet practices (fast food consumption, cold drinks, low fruit and vegetable intake), lop-sided sleeping habits, less religiosity, unhealthy daily routine and involvement in different forms of risk behaviours. The survey studied the association of lifestyle with several contextual variables (i.e., home environment, school environment, electronic environment, friend's environment, recreation environment, sports environment). Elaborative key findings are explained in the paper for each setting.

The survey highlighted prevalence of unhealthy dietary habits, unhealthy food consumption (i.e., bakery items, fast food, cold drink), irregular sleep habits, sedentary leisure time engagement (mobile, video game, TV, Internet) in many students. Average score in the Sports environment is found to be lowest (4.7) in the survey. It shows that most of our adolescents are not spending sufficient time outdoor playing some sport. They are also not getting sufficient physical exercise. The low average score in the Home environment suggests some alienation of youngsters from the families.

School curriculum needs to be revised to bring desirable corrections in the life style of adolescents. Education of the parents is also required so that they can also contribute in bringing up healthy youth. Life Skill education should be an integral part of school curriculum to develop social and emotional skills. Some recommendations have been suggested at the end of the paper to correct unhealthy life styles.

1. Introduction

In India, adolescents constitute more than one-fifth of the total population who are living in the new age and growing under the influence of family, school, market, and media. The lives of adolescents in an urban area are being shaped by influences of consumerism and market forces and ideology of individualism. In few decades the Indian society has been witnessing the rapid transformation in environmental social and economic grounds of life under the impact of globalization. With the globalization, there are a plethora of the choices offered by the persuasive media interference with the course of life and seize young minds. There are some of the micro changes such as mother's employment, rising parental aspirations and soaring availability of unhealthy items in the market which are leading to the inescapable alterations in diet, sleep and leisure time activities. More use of labor-saving devices, quicker transport, and various electronic gadgets are promoting a sedentary mode of living that drastically curtail the scope of physical activity and exercise. In the Indian scenario, it has been seen that the rural adolescents are more plagued by deficiency diseases and urban adolescents wellness is in peril owing to obesity, body image concerns, and hypertension.

Background

Non-communicable diseases, as a significant threat to public health, claim nearly 5.8 million lives every year in India. Most of the deaths happen from diseases like lung disease, cancer, stroke, and diabetes. About 90% of adolescents in India are at risk of dying from chronic lung diseases. According to the World Health Organization, one in every four Indians suffers the risk of dying from non-communicable diseases. Non-communicable diseases are a lethal outcome of less physical activities and unsanitary lifestyles.

WHO's Global Status Report on Non-Communicable Diseases (2014) points out almost 40% people died from NCD had premature deaths. Behaviour established during adolescence leave a lifelong effect on the age group that erect possibilities of the future feasibility of non-communicable diseases.

The changing lifestyle of urban adolescents eradicates them from real-life activities like singing and dancing. Nowadays, adolescence lifestyle revolves around the inappropriate activities like internet surfing, online games and TV shows that detach them from physical activities like outdoor sports.

2. Review of Literature:

Lifestyle of Adolescents in India:

In India, both female and male adolescents are indulged in unhealthy activities like smoking, alcohol consumption or uncalled for depression. According to Qidwai *et al.* (2010), female adolescents have sleeping problems that conclude them as more depressed than male adolescents. However, material abuses like smoking, alcohol consumption are more prominent in male adolescents. In India, roughly 62% of adolescents indulge in late-night activities like watching television and listening to music that lead them to less than eight hours of sleep. About 59 % of total adolescents in India suffer from insomnia due to inappropriate lifestyle (Qidwai *et al.* 2010).

In India, 20% to 40% of adolescents are overweight due to the diminishing participation in the outdoor sports and activities. According to Raj *et al.* (2013), increased obesity in adolescents is due to the activity transformation of Indian adolescents from real-life sports like cricket and football to virtual sports like online gaming. Thus, online gaming diminishes adolescents' physical activities and calls for non-communicable diseases.

Eating Habits of Adolescents in India:

Adolescents in urban India are growing up in the age of online advertisements. The visual digital marketing by food companies regulates food-habits of adolescents in India. Bakery items, fast foods, and cold drinks are amongst food habits of young urban Indians. In contrary to healthy food items like milk, green vegetables or fruits, fast foods and bakery items exceed the percentage of devouring among Indian adolescents. About 47 % adolescents consume bakery items, whereas, only 17.5% consume fruits. Moreover, 47.4% consume fast-foods in contrast to 10.9% consuming green vegetables. A striking difference is seen between milk and cold-drink devourers that stand at 25.2% in favor of milk and 44% in favor of cold-drink (Singh & Misra, 2012).

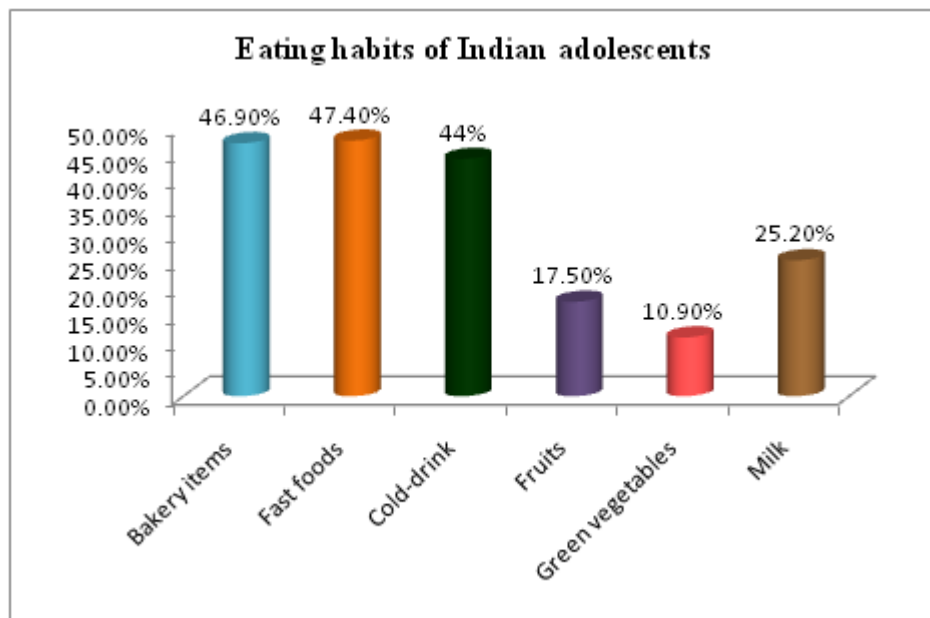


Figure 1: Eating habits of Indian adolescents

(Source: Singh & Misra, 2012, p.1050779)

In India, the urban adolescents consume food in a haphazard manner reflecting on non-maintenance of schedule for daily meals and snacks. This results in almost 74% of adolescents suffering from non-

communicable diseases through inappropriate hunger and 58.6% through the inappropriate manner of eating (Patton *et al.* 2016).

Leisure Time Activities Among Adolescents in India:

In India, religiosity leaves an unyielding mark on the leisure time activities among adolescents. The time used for listening to prayers and hymns make the adolescents involved in non-moving activities rather than more physical activities like swimming. The increase of non-communicable diseases is a result of Indian adolescents' indulgence towards static activities rather than walking. Almost 61% of adolescents in India visit religious places in leisure time whereas; only 55% prefer walking in leisure time. In the outdoor activities part, adolescents in India prefer riding bikes than playing tennis and badminton. The difference in ratio is a striking reflecting on 82% adolescents prefers riding bikes and only 28% prefer playing tennis or badminton (Singh & Misra, 2015). Adolescents in India are more involved in activities that require less physical involvement. This habit is precarious to adapt non-communicable diseases that negatively affect their health and lifestyle of adolescents in India.

3. Rationale

Students from different cultural backgrounds come to the Indian city of Dehradun for educational and other career aspects. As an education hub, the lifestyles of adolescents of Dehradun include urban aspects like internet usage, television watching, and fast-food consumption. Dehradun, comprising of various cultures requires a thorough investigation on the lifestyles of adolescents. Dehradun, as a capital of Uttarakhand, is a victim of neoliberal marketing that engages the adolescents to leave their corporal activities and to get involved in activities with less physical activities. The result of this is the increasing number of non-communicable disease patients. The teachers, parents and especially the students are required to understand the precautions against non-communicable diseases.

4. Aim and Objectives

The aim is to evaluate the lifestyle of urban middle-class adolescents in India.

Objectives-

- To understand the adolescent's indulgence in physical activities and the impact of virtual groups on the internet.
- To evaluate relationship between parents and adolescents, and teacher and adolescents.
- To analyze critically the impact of adolescent's changing behavior and their involvement in indoor and outdoor activities.

5. Methodology

Method outline

Data collection involved using primary and secondary sources. The study is executed by using appropriate methodologies that comprise of positivism philosophy, deductive approach, and descriptive design. Research onion was followed to bring rationality into the study. The six layers of research onion, philosophies, approaches, strategies, choices, time horizon and techniques and procedures were incorporated during this piece of work. It contributed in obtaining quality outcome through the logical pathway of doing the study.

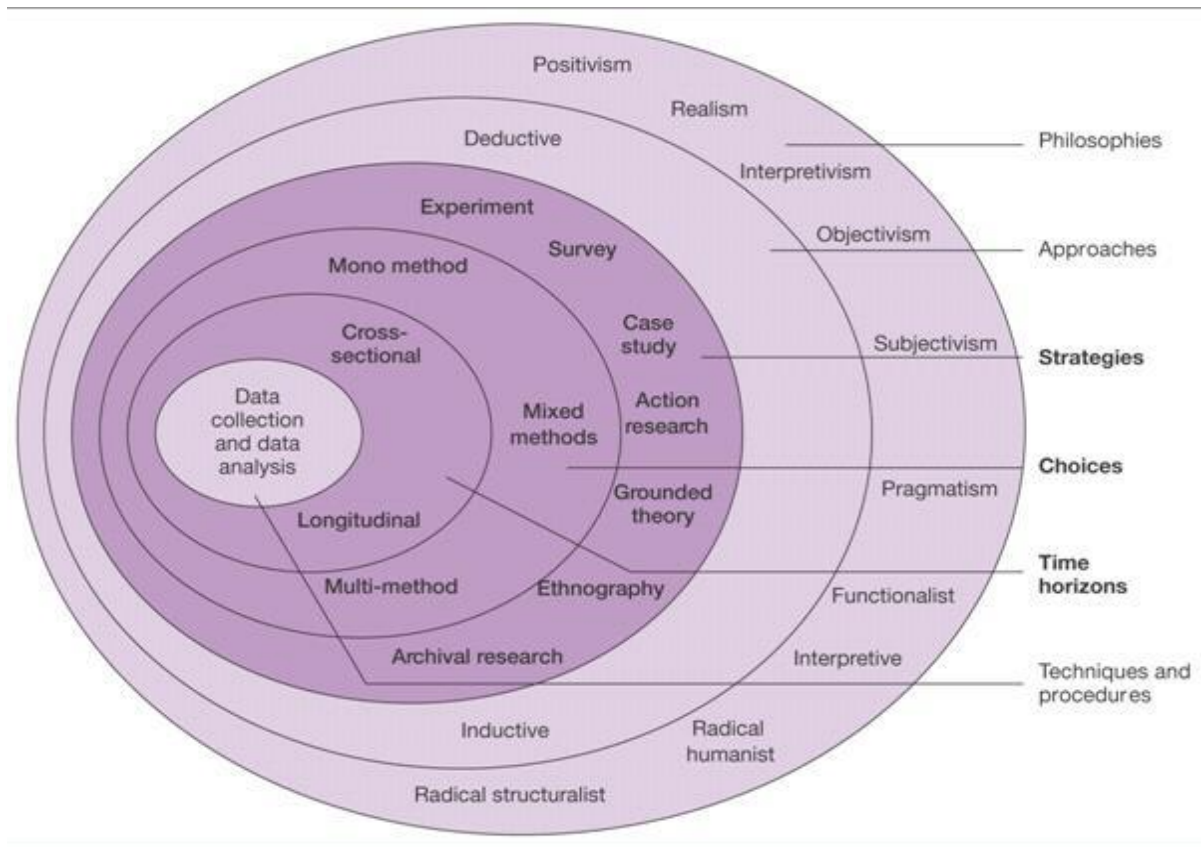


Figure 2: Research onion

(Source: Saunders *et al.* 2009, p.52)

a. Study Type:

The cross-sectional descriptive study is a Questionnaire Based Survey Type of study that involves data collection and evaluation from participants at a certain point in time.

b. Study Setting:

The study was conducted in two schools and one coaching center in Dehradun. The locations of the survey were Doon Cambridge School (ISC Board), Summer Valley School Dehradun (ISC Board), Lakshya Coaching Institute (CBSE, ISC Board, UK Board) and St. Annie School (CBSE Board).

c. Sample Size:

The survey was conducted on 323 urban adolescents. The number was almost equally divided between boys and girls. There were 168 boys and 155 girls.

d. Sample Selection:

The samples were selected by age, standard, gender and school affiliation. The survey included students from 8th to 12th standard. There was 323 sample including 168 boys and 155 girls from ISC, CBSE Boards and some from UK Board.

e. Data Collection Techniques:

The questionnaire was adapted from Richard L. Munger's book, "Changing Children's Behaviour". The survey is concluded in six steps that have five questions each, comprising of three responses, yes, no or sometimes. The sections include adolescent's sports and recreational environments, adolescent's home and school environments. Another section includes friends and electronic environment.

f. Plan for Data Collection:

For conducting a survey among 323 adolescents, consent was taken from the principals and directors of the two schools and one coaching center. The samples were taken from 8th, 9th, 10th, 11th and 12th standard students.

g. Ethical Considerations:

IRB approval was taken and the ethical review by the 'Ethical Principles Involving Human Subjects' was maintained. Participation of respondents was made voluntary, and their personal information was kept anonymous.

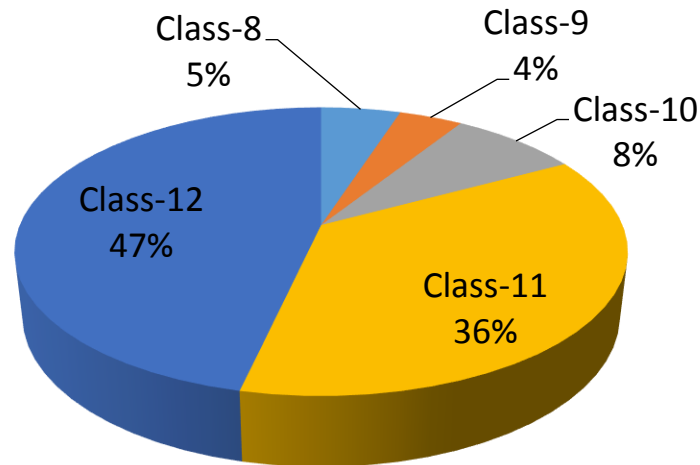
6. Analysis Plan and Expected Outcome:

Data analysis was done through count, percentages, and frequencies of data collected from primary sources. The six sections of the questionnaire are helpful in analyzing the relationship between adolescents' lifestyles and their health related issues. From the study, it is expected to develop knowledge on the importance of the school environment in increasing an adolescent's' physical activities and adolescent's utilization of leisure time to improve their health.

Sample distribution

Out of the total 323 adolescents surveyed, 168 were boys while 155 were girls. Of these around 47 percent were from 12th standard whereas 36 percent were from 11th standard. About 8 percent were studying in class 10 while rests of the respondents (around 9 %) were in standard 8 and 9.

Figure 3: Academic standard of the respondents



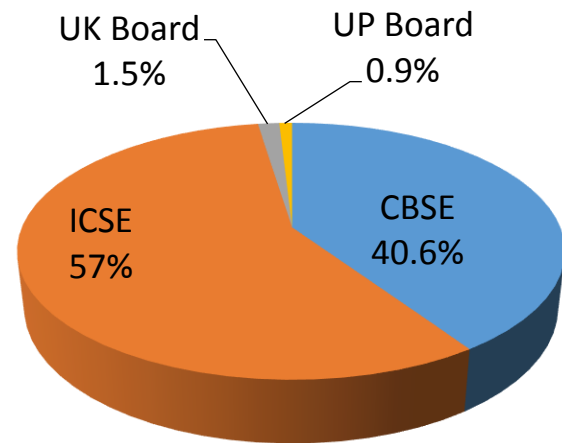
There was slight variation in the standard wise distribution of the male and female respondents as depicted in the table 1 given below.

Table1: Academic standard (Class) wise distribution of respondents

		Class					Total
		8	9	10	11	12	
Male	Count	11	12	13	60	72	168
	%	6.5%	7.1%	7.7%	35.7%	42.9%	100.0%
Female	Count	6	1	13	57	78	155
	%	3.9%	.6%	8.4%	36.8%	50.3%	100.0%
Total	Count	17	13	26	117	150	323
	%	5.3%	4.0%	8.0%	36.2%	46.4%	100.0%

A majority of the respondents (around 57 percent) belonged to the schools, which are affiliated from ICSE board while about 41 percent were studying in CBSE affiliated schools. A small proportion of the respondents (2.5 %) also belonged to the schools that were affiliated from Uttarakhand and UP Board.

Figure 4: Affiliation of the respondents' School



Proportion of female participants were higher from the ICSE board schools (67 percent) than their male counterparts who were almost equal (48 percent) in proportion from CBSE as well as ICSE board (Table 2).

Table 2: Respondents' School affiliation

		School affiliation board				Total
		CBSE	ICSE	UK	UP Board	
Male	Count	81	80	5	2	168
	%	48.2%	47.6%	3.0%	1.2%	100.0%
Female	Count	50	104	0	1	155
	%	32.3%	67.1%	.0%	.6%	100.0%
Total	Count	131	184	5	3	323
	%	40.6%	57.0%	1.5%	.9%	100.0%

Scores and Grades

The responses of the adolescents were collected through the self-administered questionnaires in six sections, each having five questions. Each question was comprised of three responses, i.e. Yes, No and

Sometimes. Scores for each section were calculated based on the responses given by the respondent, ranging from maximum 10 (if all responses are “Yes”) and minimum 0 score (if all responses are “No”).

Five point grading system was applied to determine the grades for each section as well as the all section cumulatively, on the basis of the obtained scores. A snap shot of the scores and grading system is given below.

Marks given to each option in the questions

Yes	2
Sometimes	1
No	0

Maximum scores for each section (for all 5 questions of each section) = 10

Grades as per five point scale for each Section

Grade	Scores
A	9 to 10
B	7 to 8
C	5 to 6
D	3 to 4
E	0 to 2

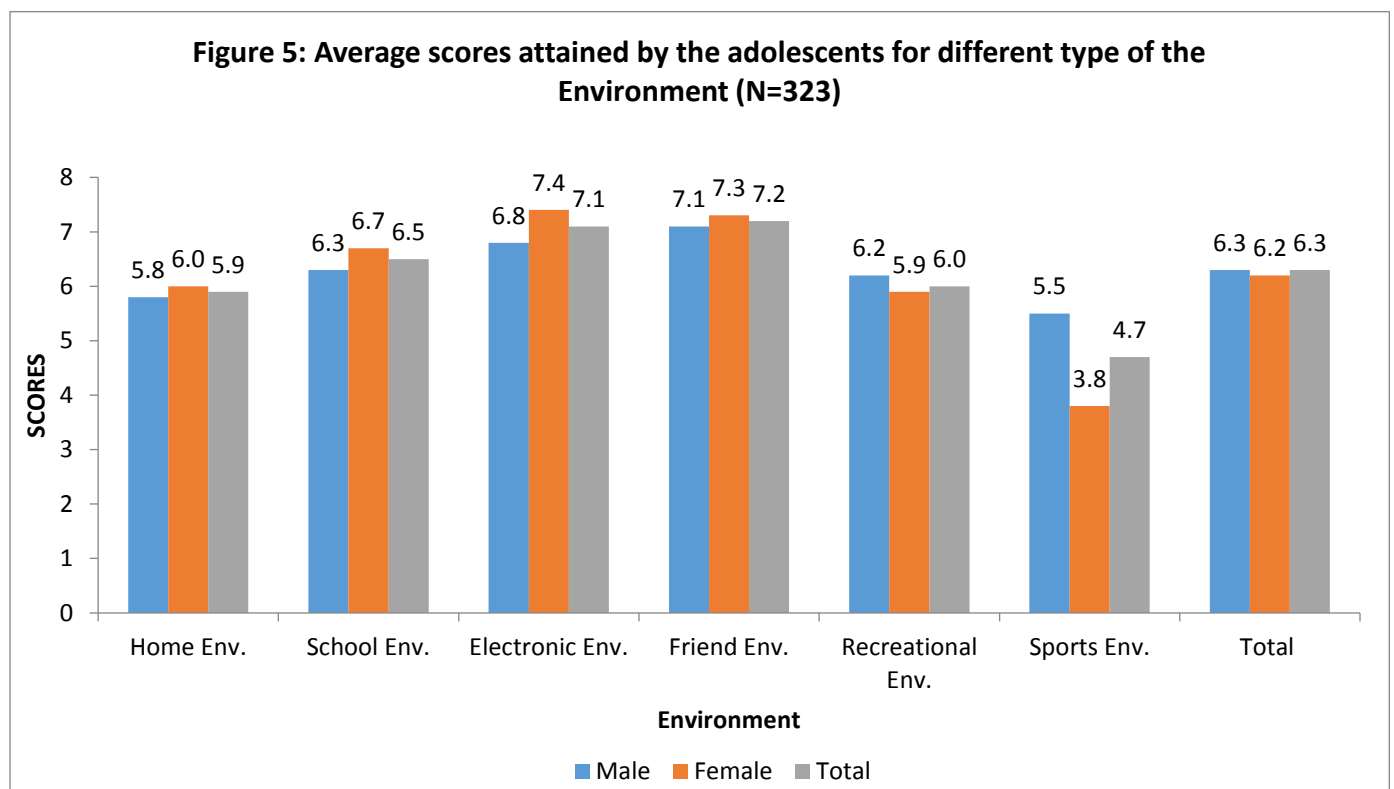
Cumulative Grades as per five point grade scale

Grade	Scores
A	8.1 to 10
B	6.1 to 8
C	4.1 to 6
D	2.1 to 4
E	0 to 2

7. Key Findings

Scores attained by the surveyed adolescents

Out of the 10 maximum scores, the respondents attained 6.3 scores, on an average, for all types of the environments cumulatively. Almost no variation was noted in the total scores for male and female respondents. Looking at each type of environment separately, it can be observed that sports section is the weakest part, merely with 4.7 of the average scores. Furthermore, female are less oriented towards the sports culture than their male counterparts by 1.7 points of the average



scores (Figure 5).

The “Electronic Environment” and “Friend Environment” have been noted as the strongest points of the adolescents with 7.1 and 7.2 scores respectively. However, male participants are less likely to be adhered to the electronic environment than the female participants. School

environment stood at the third position with an average scores of 6.5; here too females attained slightly more scores (6.7) than the males (6.3).

As far as recreation among adolescents is concerned, it was noted that females are less oriented toward the positive aspects of recreational activities (with 5.9 scores) than the males (6.2 scores). Females showed a little extra adherence towards home environment by attaining 6.0 scores than their male counterparts who achieved 5.8 scores.

Lifestyle grades

Based on the five-point grade scale, cumulative grades of all sections were calculated by analyzing the participants' responses. Highest proportion of the participants (nearly 48 %) accounted "B" grade while around 41 percent achieved grade "C". Grade "A" was attained by merely 7 percent of the respondents while only

Figure 4: Distribution of lifestyle grades attained by the all respondents

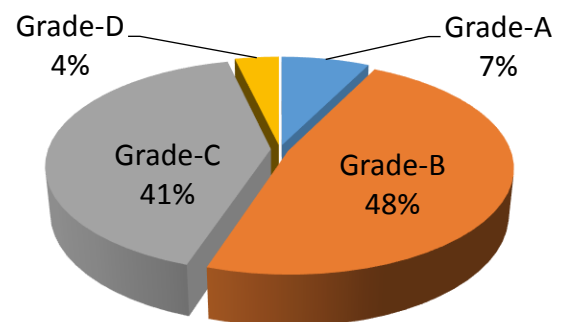


Figure 5: Distribution of lifestyle grades attained by the males respondents

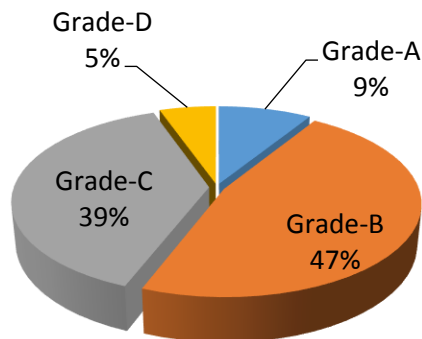
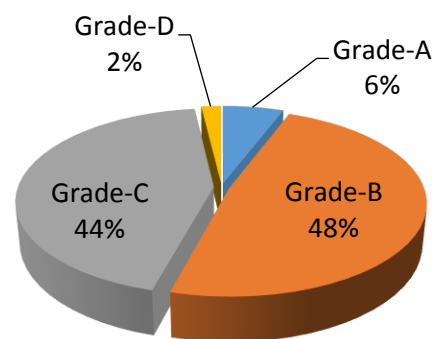


Figure 6: Distribution of lifestyle grades attained by the female respondents



4 percent's achieved grade "D". None of the participant obtained "E" grade for all types of the

environments cumulatively. Gender wise variations for the grades has been observed (figure 5 & 6). Male participants' proportion is higher in Grade "A" and "D" than the female participants. On other hand, the proportion of females is higher in Grade C (44 percent) compared to the male participants (39 percent).

Section wise findings

Home Environment

Adolescents' assessment for compliance with their home environment was done on the basis of five questions that captured their views on issues like closeness and time spending with family members, strictness and rules imposed by family and followed by the adolescents etc.

Around 37 percent of the participants attained C grade for home environment while nearly 33 percent's achieved B grade. Grade D and A were attained by around 10 percent and 8 percent of the participants respectively. A small proportion of the respondents (5.3%) also obtained E grade in this category. Females have been observed to be more adhered to their home and family rules than male respondents as illustrated in the table-3 given below.

		Table 3: Grades for Home Environment					Total
		A	B	C	D	E	
Male	Count	15	50	55	36	12	168
	%	8.9%	29.8%	32.7%	21.4%	7.1%	100.0%
Female	Count	10	55	60	25	5	155
	%	6.5%	35.5%	38.7%	16.1%	3.2%	100.0%
Total	Count	25	105	115	61	17	323
	%	7.7%	32.5%	35.6%	18.9%	5.3%	100.0%

- Nearly 46 percent participants asserted to be having at least two meals together as a family every week, without TV. Of those, females accounted around 49 percent while males' proportion was 44 percent. Only around 14 percent females completely disagreed

to fulfill this standard whereas proportion of males who said “No” was nearly 23 percent.

- Regular celebration of birthdays/festivals and holidays together with family is enjoyed by around 61 percent of the youth surveyed. Moreover, females are more accounted to this factor than the male respondents by 7 percentage points. Slightly more than one fourth participants reported to follow this condition sometimes.
- Roughly 37 percent participants have strict homework/ study rules in their households so that homework is completed orderly in time. It was observed that more males (40%) than females (around 34%) have to follow such rules.
- Almost one fourth of the adolescents have a fixed and regular bedtime at home which is consistently followed. For this regulation too, females are more adhered (around 27 percent) than the males (24 percent). More than half respondents are not at all abide by such rules in their households.
- Nearly half of the respondents help in the household chores (cleaning, cooking, fetching groceries from the market etc. Males are less likely to follow this criterion (48.5%) than the female respondents (52.3%). Only seven percent females strongly disagreed for helping in the household chores while proportion of such males was nearly double to them (13.2%).

School Environment

Adolescents' assessment for their school environment and culture was done on the basis of five questions that captured their views on issues like satisfaction level of study, study regularity, participation in co-curricular activities, social activeness, etc.

About one third of the participants secured B grade for school environment while nearly 23 percent's gained C grade. Grade A and D were attained by around 21 percent and 17 percent of the participants respectively. A small proportion of the respondents (5.6%) also obtained E grade in this category. For school environment too, females comply more than males with the rules and regulations as well as self-oriented measures (Table 4).

		Table 4: Grades for School Environment					Total
		A	B	C	D	E	
Male	Count	34	52	41	28	13	168
	%	20.2%	31.0%	24.4%	16.7%	7.7%	100.0%
Female	Count	34	56	32	28	5	155
	%	21.9%	36.1%	20.6%	18.1%	3.2%	100.0%
Total	Count	68	108	73	56	18	323
	%	21.1%	33.4%	22.6%	17.3%	5.6%	100.0%

- Almost two third adolescents are found to be totally satisfied with the education they are getting from their school; however, among them the proportion of males is higher (69.5%) than the females (62.5%). About 12 percent females are noted to be totally dissatisfied with the education they are getting from their school; while proportion of such males was about one tenth. .
- Regular study, even if there are no homework/exam/tests, is done by only 44 percent of the students surveyed. Proportion of females who strongly agreed as well as said to

follow this standard sometimes is higher (about 87%) than their male counterparts (81%).

- Females participate actively in school/ inter school co-curricular competitions (Dance/ Drama/ Art/Debate etc.) representing 61.3% proportion against males' participation rate of around 49 percent. Total average participation was noted to be about 55 percent. Moreover, females disagreed less (around 15%) than males (nearly 30%)
- Only 35 percent adolescents have participated in school organized social services camps/ programs. More males have taken parts in such activities than females by around 4 percentage point.
- Around 73 percent participants have been active being Monitor/Perfect/House Captain/School team member, at least once during their schooling. Proportion of such females has been noted to be slightly higher (nearly 76%) than the males (70.2%).

Electronic Environment

Adolescents' assessment for electronic environment was done on the basis of five questions that captured their views regarding time spent on watching TV, using telephone, playing videogames, using internet and if they have any other means of recreation or entertainment other than TV.

Regarding electronic environment, nearly 34 percent participants achieved Grade A, which is the top most proportion among all grades. Slightly more than one fourth adolescents secured Grade C while about 24 percent held Grade B. Grades D and E were achieved by nearly 13 percent and about 4 percent participants respectively for this indicator (Table 5).

		Table 5: Grades for Electronic Environment					Total
		A	B	C	D	E	
Male	Count	46	48	40	24	10	168
	%	27.4%	28.6%	23.8%	14.3%	6.0%	100.0%
Female	Count	65	29	42	17	2	155
	%	41.9%	18.7%	27.1%	11.0%	1.3%	100.0%
Total	Count	111	77	82	41	12	323
	%	34.4%	23.8%	25.4%	12.7%	3.7%	100.0%

- As big proportion as 89 percent of the participants asserted that they have other means of recreation/entertainment also other than TV. Proportions of males and females were more or less same for this criterion.
- About 58 percent participants admitted that they watch less than 2 hours of TV during their daily routine. Of such participants, proportion of females was higher (64.5%) than male respondents (52.4%). Those who totally disagreed for this principle were around 19 percent in proportion.
- Less than one hour per day is spent on telephone by nearly 58 percent of the participants interviewed. Amongst them, female are noted to be slightly higher in number (about 59 percent) than their male counterparts (56 percent). Nearly 28 percent respondents disagreed totally for this conformity.
- Videogames, nowadays, have been noted as less preferred means of electronic entertainment as more than two third participants have agreed that they spend less than 1 hour per day playing videogames. Of such respondents, proportion of females was higher (about 71 %) than males (around 58 %).

- About 48 percent stated that they spend less than 1 hour per day online. Females, here too, are higher in proportion (around 51%) than male participants (46 %). Amongst totally disagreeing participants, males were about one third in proportion while females were around one fifth.

Friends Environment

Adolescents' assessment for their friend environment was done on the basis of five questions that captured their views regarding transparency and reliability of friendship, willingness to make friends etc.

Around 38 percent of the participants got B grade for friend environment while nearly 28 percent's achieved grade A. Grades C and D were attained by around one fourth and 7 percent of the participants respectively. A small proportion of the respondents (2.5%) also obtained E grade in this category. Females have been noted to be more complying with friend environment than male respondents as illustrated in the table-6 given below.

		Table 6: Grades for Friends Environment					Total
		A	B	C	D	E	
Male	Count	44	60	47	13	4	168
	%	26.2%	35.7%	28.0%	7.7%	2.4%	100.0%
Female	Count	45	61	35	10	4	155
	%	29.0%	39.4%	22.6%	6.5%	2.6%	100.0%
Total	Count	89	121	82	23	8	323
		27.6%	37.5%	25.4%	7.1%	2.5%	100.0%

- More than two third (69.3%) respondents' parents know about all their friends. Amongst the adolescents, who stated that their parents are aware about their friends, females are as

high as 76 percent in proportion compared to the males who accounted around 63 percent for this condition.

- A majority of the adolescents possess many friends, as stated by 77 percent participants of the survey. By a difference of 8 percentage points, more males than females prefer to have many friends.
- More than half participants (52%) have stated that they definitely make efforts to make new friends; however, nearly one forth said that they sometime make such efforts. No big difference noted between the proportions of males and females for this indicator.
- A fraction of 45 percent adolescents' friends stay mostly out of trouble, as stated by the survey participants. Proportion of such males is slightly higher (around 47%) than the females (43.2%). Twenty three percent participants stated that their friends do not stay mostly out of trouble; gender wise variation was noted among such respondents.
- A good number of respondents (about 84 percent) possess at least one close friend with whom they can discuss everything. Females are higher in proportion (87.1%) than males (80.4%) fulfilling this criterion.

Recreation Environment

Adolescents' assessment for recreation environment was done on the basis of five questions that captured their views on issues like participation in supervised recreational activities, interest in skill improvement activities, right utilization of leisure time etc.

Grade-C has been noted to be the strongest grade with 38.7% achievers, for recreational environment. B grade stood at second position with around 31 percent proportion while grade-A was noted to be on third position with around 28 percent respondents. D and E grades were achieved by 7.1% and 2.5% respondents of the survey (Table 7)

		Table 7: Grades for Recreational Environment					Total
		A	B	C	D	E	
Male	Count	16	60	63	19	10	168
	%	9.5%	35.7%	37.5%	11.3%	6.0%	100.0%
Female	Count	15	41	62	28	9	155
	%	9.7%	26.5%	40.0%	18.1%	5.8%	100.0%
Total	Count	31	101	125	47	19	323
	%	9.6%	31.3%	38.7%	14.6%	5.9%	100.0%

- Approximately three out of ten participants take part in the supervised recreational/leisure activity; furthermore, proportion of females was noted to be slightly higher (31%) than the male respondents (29%). About 43 percent males and nearly 36 percent females honestly denied for this fact.
- As stated by nearly 57 percent adolescents, they take lessons in some hobby or interest. Amongst those who take such lessons, males are higher in number than females by around 12 p.p. Females seem to be less interested in taking lessons in any hobby as around 29 percent of them directly disagreed to this against 17.5% proportion of males.
- About 65 percent respondents take part in some recreational activity like picnic/pilgrimage etc. with their family members; proportion of such females was somewhat higher (66.2%) than males (64.7%).
- Nearly half adolescents admitted that they use leisure time to improve themselves in some way. Amongst those who utilize leisure time properly, males were nearly 54 percent while females were around 44 percent. A non-avoidable number of participants (14 percent) do not use their leisure time at all for improving themselves.
- Twenty eight percent surveyed youth affirmed that they rarely waste time doing nothing and gossiping with friends. Of those, 30 percent are males while 26 percent are females.

About one third participants strongly disagreed to this fact; this imply that they often waste time doing nothing and gossiping with friends.

Sports Environment

Adolescents' assessment for recreation environment was done on the basis of five questions that captured their views on issues like how actively they participate in outdoor sports, family's interest in the same, proper coaching, physical activeness etc.

Sports environment has been noted as the weakest among all environments of the adolescents since a majority of the surveyed youth achieved grades C to E. Grade E is observed to be attained by the highest number of participants; i.e. 26 percent. Grade C and D each was achieved by an equal proportion of 23.8 percent of the respondents. About 16 percent's gained B grade while A grade is noted to be the weakest point for sports environment with 10.2% portion of the respondents. Moreover, females comply lesser with the sports culture and environment as compared to their male counterparts, as shown in the table below.

		Table 8: Grades for Sports Environment					Total
		A	B	C	D	E	
Male	Count	28	33	40	39	28	168
	%	16.7%	19.6%	23.8%	23.2%	16.7%	100.0%
Female	Count	5	19	37	38	56	155
	%	3.2%	12.3%	23.9%	24.5%	36.1%	100.0%
Total	Count	33	52	77	77	84	323
	%	10.2%	16.1%	23.8%	23.8%	26.0%	100.0%

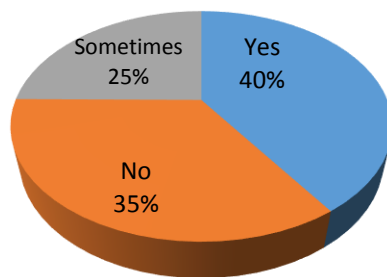
- Somewhat less than half (48.1%) youth affirmed that they have participated in outdoor sports during six months preceding the survey. Fewer females (40 percent) than males (56 percent) took participate in the outdoor sports during the reference period. About 46 percent participants denied directly to be following this adherence.
- Family members of nearly 43 percent respondents are active in sports, as stated by the adolescents surveyed.
- Only 37 % participants stated that they actively and regularly participate in sports. Females are more than half fold less active than males for regular participation in sports as they accounted for 22.1 % and 50.6 % proportions respectively. About 43 percent females stated to be not regular at all in participating in sports activities.
- A small proportion of youth (21.2 %) have reported to take lesson/coaching in sports from a coach. More than two third (67.6%) students stated that they do not take lesson/coaching in sports from any coach; of those, number of girls were higher (nearly 78 percent) than boys (about 58 percent).
- As observed in the survey, only 38 percent youth exercise vigorously, outside of school, at least 5 times in a week. Furthermore, boys who do exercise vigorously are nearly double in proportion than the girls, with proportions of around 50 percent and 25 percent respectively. One third respondents directly denied not to be following this condition.

Impact of internet and other electronic mediums on adolescents' family cohesion

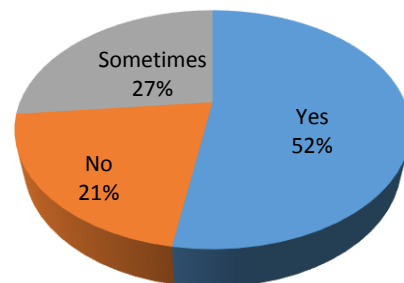
Around half of the adolescents surveyed were found not to be having at least two meals together as family every week, without TV. Further analysis of those respondents was done in order to find their dependence on other non-physical activities. It was found that around 60 percent of such candidates asserted not to spend less than 1 hour per day online (it implies that they remain stick to online activities hence spend less time with their family members). Furthermore, about 48 percent of such adolescents have been observed to be dependent on TV; I.e, they do watch TV more than 2 hours each day.

Exposure to internet and TV of those adolescents who do not have at least two meals together as a family every week, without TV (n=173)

Adolescents responses on spending less than 1 hour per day online. (n=173)



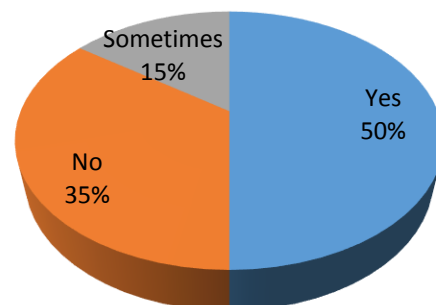
Adolescents responses about watching TV less than 2 hours per day. (n=173)



Around 40 percent of the adolescents surveyed were found not to be having regular celebrations of birthdays/ festivals and holidays together with their family. Further analysis of those respondents represented that around half of such youths remain online active as can be seen in the figure below.

Exposure to Internet, of those adolescents who do not have regular celebrations of birthdays/ festivals and holidays together with their family? (n=126)

Adolescents responses on spending less than 1 hour per day online. (n=126)



8. Conclusion:

There is growing concern over the deteriorating mental and physical health of our adolescents. Health is directly dependent on the life style of an individual. Therefore, a questionnaire based survey of 323 adolescents of Dehradun, Uttarakhand was done on six types of environments. These environments are the settings where most of the youngsters find themselves in during the daytime.

This survey gives a fairly good idea of the life style trend in an urban, cosmopolitan centre. Analysis of the data gives us some insight into the life style deficits of adolescents so that corrective measures can be taken.

It can be concluded, based on the findings of the survey, that adolescents, especially girls, are physically inactive and less opportunistic in participating outdoor sports or physical activities. Family cohesion among adolescents is deteriorating as they are pushed to spend less time with their family members due to electronic gadgets affinity, parents' busy schedule, lack of strict rules at home etc. Friend environment come forth with good scores revealing the fact the youth always need and prefer to have good and supportive friends. Electronic settings were also noted to be at satisfactory level, it could be due to the reason that the school going students have strict rules of using electronic gadgets. Adolescents are found to be less self-oriented towards studies and social reform activities, as observed in the assessment of school environment; however, the level of satisfaction regarding the education they are getting is quite satisfactory. Overall, females comply more than males with various lifestyle settings excepting in sports and recreation.

9. Recommendations:

Average score of all students for all the six environments (6.3) is quite satisfactory, if not good. There are, however, weak areas i.e. Home Environment (5.9) and Sports Environment (4.7). To bring improvements in the environments where the participation of many students is lacking, here are some recommendations: -

1. Parents should involve their children in as many families get together as possible.
2. Parents should ensure that the whole family has at least one meal together at home.
3. Parents should ensure that children avoid fast/junk food and have healthy home cooked balanced food.
4. Parents should ensure that the children take part in some outdoor sport and have sufficient physical exercise.
5. Teachers should do some talent/aptitude hunt and identify the game/sport of choice of all children.
6. School authorities should design curriculum in such a way that there are sufficient outdoor opportunities for all students.
7. School should have a credible “Life Skills” program to help the students in social and emotional learning.
8. School authorities should meet parents at least once in a quarter in order to discuss the students’ co-curricular issues and to mitigate the problems they are facing.

References:

- Patton, G. C., Sawyer, S. M., Santelli, J. S., Ross, D. A., Afifi, R., Allen, N. B., & Kakuma, R. (2016). Our future: a Lancet commission on adolescent health and wellbeing. *The Lancet*, 16, 1-49
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- Singh, A. P., & Misra, G. (2012). Adolescent lifestyle in India: prevalence of risk and promotive factors of health. *Psychology & Developing Societies*, 24(2), 145-160.
- Singh, A. P., & Misra, G. (2015). Pattern of leisure-lifestyles among Indian school adolescents: Contextual influences and implications for emerging health concerns. *Cogent Psychology*, 2(1), 1050779.

Annexure

Consent form to be filled by the responders

“Lifestyle Survey of urban middle class adolescents of Dehradun Uttarakhand, India”

Name of the Investigator Dr. Rachit Negi.....

Study for Johns Hopkins Bloomberg School of Public Health, USA and IIHMR University Jaipur

- 1) The language used in this questionnaire is completely understood by the respondent and is in the knowledge of the investigator.
- 2) There is no sponsor or any funder to support this study. This is done for capstone study for Johns Hopkins Bloomberg School of Public Health and IIHMR University Jaipur
- 3) The purpose and procedures of this study is kept in the best knowledge of the responders.
- 4) There will be no risk and discomforts for this study to the responders.
- 5) There will be no compensation provided for the participation of this study.
- 6) There is no risk of injury in this study / analysis
- 7) Responders are welcome to choose if they want to participate in the study.
- 8) The confidentiality of the records will be maintained and even the outcome of the study will be on confidential strict grounds.
- 9) Responders have right to withdraw from the study if they don't feel comfortable in responding to the questionnaire.
- 10) Privacy of this study shall be maintained throughout the study and information will be shared to the respective respondents only on request.

I assure that the given information gathered from the questionnaire for the study is to my best knowledge and I have duly signed after reading this consent form.

Date

Name of the student

Consent Form for the capstone study.

Namaste! I am Dr. Rachit Negi MPH candidate, IIHMR University, Jaipur and Johns Hopkins Bloomberg School of Public Health USA, undertaking this study as part of MPH course. I am conducting a study for my capstone project under the title of **“Lifestyle Survey of urban middle class adolescents of Dehradun, Uttarakhand, India”**

This study aims to find the relationship between the life style and health of the adolescents of urban middle class of Dehradun, Uttarakhand. It will help us the understand the association between the both and according to this we can plan some interventions.

You are being invited to take part in this questionnaire on life style survey. If you accept to take this survey, you will be asked about the life style in different type of questions and in different set ups. Participation in this survey is voluntary.

It is possible that you may feel uncomfortable sharing your opinion about this survey. You do not have to respond to a question if you are unsure about the nature of the information you are going to share. We would greatly appreciate your honest responses, because they will be useful in developing ways to plan the intervention.

You do not have to take part in this study if you do not wish to do so, and choosing not to participate will not affect your situation in any way. Your decision to participate is not binding, you can withdraw from filling the questionnaire at any time and you can also inform us later if you decide that your responses should not be included in this study.

We will not be sharing information about you or your responses with anyone. The information that we collect from this study will be kept private and securely protected. Your information will not serve any other purposes than study for capstone. Your identity will not be disclosed in the final report because all the data will be presented after compilation. It will be ensured that nothing recorded will allow the tracing of your identity. All information obtained from you will be confidential and only members of the study team will access it. Information will be compiled and results will be shared for the group as a whole. Therefore, nobody will ever come to know your identity.

If you have any questions, you can ask now or later. If you wish to ask questions later, you may contact

Dr. Rachit Negi
Candidate for Master of Public Health
Johns Hopkins Bloomberg School of Public Health USA &
IIHMR University Jaipur India
Cell no - +918791002122
Email id's - rachitmegi@hotmail.com , rnegi1@jhu.edu

May I speak to you

Yes

☐

No

☐

Date of filling of Questionnaire.....

Time of filling of questionnaire

Name of the respondent

This Questionnaire is part of a Life Style Survey on adolescents authorized by
Johns Hopkins Bloomberg School of Public Health, Baltimore USA and IIHMR University Jaipur

Name of the Researcher: Dr Rachit Negi

Personal Details

(We give assurance that the details provided here will be kept strictly confidential)

Name of the student: _____ Gender: (M/F)

Date of Birth (DD/MM/YYYY): __/__/____ Class _____

Address: _____

City _____, State _____

Parents' Mobile No. _____

School Name: _____

School Affiliated with: _____

Instructions for answering the Questionnaire:

- Questionnaire consists of 6 sections of 5 questions each- total 30 questions.
- All questions are compulsory.
- Answer truthfully without thinking much. Answer should represent your actual lifestyle, not what appears to be good/proper.
- There are only 3 options for the answer: 1. Yes/ Usually, 2. No/Never, 3. Sometimes
- Tick to a question, response should be either Yes/ Usually or No/Never or Sometimes
- Total Time available= 20 min.
- (5 min. for personal data entry and reading of instructions+ 15 minutes for questionnaire)

HOME ENVIRONMENT:

1. Do you have at least two meals together as a family every week, without TV?
Yes ☐ No ☐ Sometim ☐
2. Do you have regular celebrations of birthdays/ festivals and holidays together in your family?
Yes ☐ No ☐ Sometim ☐
3. Do you have strict homework/ study rules in your household so that homework is completed orderly in time?
Yes ☐ No ☐ Sometim ☐
4. Do you have a fixed and regular bedtime at home which is consistently followed?
Yes ☐ No ☐ Sometim ☐
5. Do you help in the household chores (cleaning, cooking, fetching groceries from the market etc.)?
Yes ☐ No ☐ Sometim ☐

SCHOOL ENVIRONMENT:

1. Are you satisfied with the education you get from your school?
Yes ☐ No ☐ Sometim ☐
2. Do you study regularly even if there is no homework/ exams/ tests?
Yes ☐ No ☐ Sometim ☐
3. Have you participated in school/ inter school co-curricular competitions (Dance/ Drama/ Art/Debate etc.)?
Yes ☐ No ☐ Sometime ☐
4. Have you participated in school organized social service camps/programs?
Yes ☐ No ☐ Sometim ☐
5. Have you ever been Monitor/Prefect/ House Captain/ School team member?
Yes ☐ No ☐

ELECTRONIC ENVIRONMENT:

1. Do you have other means of recreation/ entertainment also other than TV?

Yes ☐ No ☐ Sometim ☐

2. Do you watch less than 2 hours of TV per day?

Yes ☐ No ☐ Sometim ☐

3. Do you spend less than 1 hour per day on telephone?

Yes ☐ No ☐ Sometim ☐

4. Do you spend less than 1 hour per day playing videogames?

Yes ☐ No ☐ Sometim ☐

5. Do you spend less than 1 hour per day online?

Yes ☐ No ☐ Sometim ☐

FRIENDS ENVIRONMENT:

1. Do your parents know about all your friends?

Yes ☐ No ☐ Sometim ☐

2. Do you have many friends in the schools?

Yes ☐ No ☐ Sometim ☐

3. Do you take initiative and make efforts to make new friends?

Yes ☐ No ☐ Sometim ☐

4. Do your friends stay mostly out of trouble?

Yes ☐ No ☐ Sometim ☐

5. Do you have at least one very close friend with whom you discuss everything?

Yes ☐ No ☐ Sometim ☐

RECREATION ENVIRONMENT:

1. Do you take part in a supervised recreational/ leisure activity?
Yes ☐ No ☐ Sometim ☐
2. Do you take lessons in some hobby/ interest?
Yes ☐ No ☐ Sometim ☐
3. Do you take part in some recreational activity like picnic/ pilgrimage etc. with your family?
Yes ☐ No ☐ Sometim ☐
4. Do you use leisure time to improve yourself in some way?
Yes ☐ No ☐ Sometim ☐
5. You rarely waste time doing nothing and gossiping with friends?
Yes ☐ No ☐ Sometim ☐

SPORTS ENVIRONMENT:

1. Have you participated in outdoor sports in the last 6 months?
Yes ☐ No ☐ Sometime ☐
2. Are members of your family active in sports?
Yes ☐ No ☐ Sometime ☐
3. Do you actively and regularly participate in a sport?
Yes ☐ No ☐ Sometim ☐
4. Do you take lessons/ coaching in a sport from a coach?
Yes ☐ No ☐ Sometim ☐
5. Do you exercise vigorously, outside of school, at least 5 times in a week?
Yes ☐ No ☐ Sometim ☐

Name: _____
 Date: _____

Scores: -

- Home Environment =
- School Environment =
- Electronic Environment =
- Friends Environment =
- Recreational Environment =
- Sports Environment =
- Total Score =

Score obtained in the questionnaire of each section (out of 10) and total (out of 60), are to be entered in the data analysis tool.

SCORE SHEET OF LIFESTYLE SURVEY

S. No.	NAME of the Candidate	Home Environment (10)	School Environment (10)	Electronic Environment (10)	Friends Environment (10)	Recreation Environment (10)	Sports Environment (10)	TOTAL SCORE (MM:60)

Consent application for School Directors / Principals

The Director/Principal

Dehradun Uttarakhand

04/7/2016

Sub: Consent/request for capstone study at your institute/SCHOOL

Respected Sir/Mam

Namaste! I am Dr. Rachit Negi Master of Public Health (MPH) at IIHMR University, Jaipur and Johns Hopkins Bloomberg School of Public Health USA, and I am conducting a study for my capstone project under the title of **“Lifestyle Survey of urban middle class adolescents of Dehradun, Uttarakhand, India”** undertaking this study as part of my MPH program.

This study aims to find the relationship between the life style and health of the adolescents of urban middle class of Dehradun, Uttarakhand. It will help us the understand the association between the both and according to this we can plan some interventions.

I am planning to take this questionnaire survey in your institute/school for 9th10th11th and 12th class students. This survey will be done in 15-20 minutes by filing some of the questions by the students. My letter is for the consent which I require from you to conduct the survey in your institute. I will be glad if you can allow me to take up this survey.

Looking forward for the positive response from your side.

Thank you

Yours Faithfully

Dr. Rachit Negi

Candidate for Master of Public Health

Johns Hopkins Bloomberg School of Public Health USA &

IIHMR University Jaipur India

Cell no - +918791002122

Email id's - rachitmegi@hotmail.com , rnegi1@jhu.edu

The Principal / Director

Lakshya Institute
Dehradun Uttarakhand

04/7/2016

Sub: Consent/request for capstone study at your institute.

Respected Sir/Mam

Namaste! I am Dr. Rachit Negi Master of Public Health (MPH) at IIHMR University, Jaipur and Johns Hopkins Bloomberg School of Public Health USA, and I am conducting a study for my capstone project under the title of **"Lifestyle Survey of urban middle-class adolescents of Dehradun, Uttarakhand, India"** undertaking this study as part of my MPH program.

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I am planning to take this questionnaire survey in your school for 10th class and 11th class students. This survey will be done in 15-20 minutes by filling some of the questions by the students. My letter is the consent which I require from you to conduct the survey in your institute. I will be glad if you can allow me to take up this survey.

Looking forward to the positive response from your side.



Thank you
Yours Faithfully

Dr. Rachit Negi
Candidate for Master of Public Health
Johns Hopkins Bloomberg School of Public Health USA &
IIHMR University Jaipur India
Cell no - +918791002122
Email id's - rachitmegi@hotmail.com . rmegi1@jhu.edu



The Principal

Summer Valley School
Dehradun Uttarakhand

04/7/2016

Sub: Consent/request for capstone study at your school.

Respected Sir/Mam

Namaste! I am Dr. Rachit Negi Master of Public Health (MPH) at IIHMR University, Jaipur and Johns Hopkins Bloomberg School of Public Health USA, and I am conducting a study for my capstone project under the title of **"Lifestyle Survey of urban middle-class adolescents of Dehradun, Uttarakhand, India"** undertaking this study as part of my MPH program.

This study aims to find the relationship between the life style and health of the adolescents of the urban middle class of Dehradun, Uttarakhand. It will help us the understand the association between the both and according to this we can plan some interventions.

I am planning to take this questionnaire survey in your school for 10th class and 11th class students. This survey will be done in 15-20 minutes by filing some of the questions by the students. My letter is the consent which I require from you to conduct the survey in your institute. I will be glad if you can allow me to take up this survey.

Looking forward to the positive response from your side.

Thank you
Yours Faithfully



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Johns Hopkins Bloomberg School of Public Health USA &
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Cell no - +918791002122
Email id's - rachitmegi@hotmail.com - rnegi1@jhu.edu

Shawar
20/8/16



The Principal / Director

St Annie's School
Dehradun Uttarakhand

09/7/2016

Sub: Consent/request for capstone study at your school.

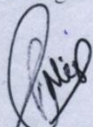
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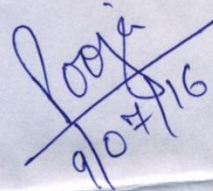
I am planning to take this questionnaire survey in your school for 8th class and 9th class students. This survey will be done in 15-20 minutes by filing some of the questions by the students. My letter is the consent which I require from you to conduct the survey in your institute. I will be glad if you can allow me to take up this survey.

Looking forward to the positive response from your side.



Thank you
Yours Faithfully

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9/07/16

Pooja Upadhyay
03.07.2016

PRINCIPAL
SAINT ANNE'S SCHOOL -
A-Block, Nehru Colony
Dehradun

The Principal / Director

Doon Cambridge School
Dehradun Uttarakhand

09/7/2016

Sub: Consent/request for capstone study at your school.

Respected Sir/Mam

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This study aims to find the relationship between the life style and health of the adolescents of the urban middle class of Dehradun, Uttarakhand. It will help us the understand the association between the both and according to this we can plan some interventions.

I am planning to take this questionnaire survey in your school for 9th class, 10th class and 11th class students. This survey will be done in 15-20 minutes by filing some of the questions by the students. My letter is the consent which I require from you to conduct the survey in your institute. I will be glad if you can allow me to take up this survey.

Looking forward to the positive response from your side.



Thank you
Yours Faithfully

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H. K. CHHABRA
PRINCIPAL
DOON CAMBRIDGE SCHOOL
(Affiliated to the Council for the Indian
School Certificate Examinations, New Delhi)
DEHRADUN

Institutional Review Board (IRB) under Federalwide Assurance (FWA) for the Protection of Human Subjects

FWA #: FWA00018806

OMB No. 0990-0279

June 30, 2014-April 25, 2017
Format for Approval

Dated: 29/6/2016

Institutional Review Board

Chairperson

Dr Shiv Dutt Gupta
Director

Indian Institute of Health
Management Research,
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Professor, IIHMR, Jaipur

Dr Barun Kanjilal
Professor, IIHMR, Jaipur

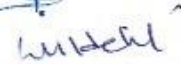
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Professor, IIHMR, Jaipur

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Professor, IIHMR, Jaipur

Mr M M Ranjan
Senior Advocate, Rajasthan
High Court, Jaipur

Alternative Members

Dr Rajeshwari Gupta
Retd Professor, SMS Medical
College and Hospital, Jaipur

Serial No. of Institutional Committee for Ethics and Review of Health Management Research office		MPH 2015-16	Capstone 1
1	Project Title	Lifestyle Survey of Urban Middle Class Adolescents of Uttarakhand, India	
2	Name of MPH Student	Rachit Negi	
3	Name of Faculty In-charge/ Project coordinator/	Monika Choudhury	
4	Date of Submission to the Committee	2	5 0 6 1 6
5	Review Category of the Proposal		
	Expedited Review		
	Full review	✓	
6	Date of Review	2	9 0 6 1 6
7	Reviewer's Name	Dr Barun Kanjilal  Dr Nutan P Jain  Dr Anoop Khanna  Dr D K Mangal (Dean Research, Special Invitee) 	

Comments:

- Assuming that the brief note is approved by the Capstone advisor, it is suggested that the proposed note is not able to meet the objective: to analyze the data to get a clear picture on urban adolescents lifestyle which affect their health. Health parameters need to be identified.
- Selection criteria of 300 students (150 girls and boys) need to be explicitly mentioned and followed so that every respondent get equal opportunity to get selected.
- The consent form for the school principal/ director need to be complete as for the students. It should be re-worded "MPH student, IIHMR University undertaking the study as a part of the MPH Course. The consent form should explicitly explain that the results will be used for academic purposes only.
- Signature of child not required as it will breach the ethics principal of confidentiality
- Tools need small changes e.g. telephone/ mobile; online/ internet; each item should be numbered; question and options should be on the same page.

