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Gender and area-wise differences in body image, sleeping pattern and other selected lifestyle parameters of school-going adolescents

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Abstract

Rapid growth and development during transition period of adolescence requires a stronger foundation of healthy eating habits. Apart from understanding the direct food intake patterns of adolescents, it is vital to be aware of other factors like body perception, sleeping pattern, aspirations, screen time, series watched, social and psychological environment contributing towards formation of food behaviors and consumption patterns. Thus, the present study was conducted to documents data on selected life-style parameters from physical, social and psychological aspects that influence adolescents' food habits. The data was collected by survey method using a pre-tested questionnaire from 300 respondents. It was observed from the present study that self-assessment of body image was significantly associated ($p < 0.05$) to area and not gender with more rural respondents perceiving themselves as underweight than peri-urban and urban adolescents. The influence of social media was observed on decisions regarding gaining and losing weight in adolescents. It was also observed that gender and area significantly influenced role model and aspirations with maximum respondents aspiring to become scientist, teacher, celebrity or pilot. Thus, the present research concluded that understanding all these factors can assist in developing tailored nutritional interventions to promote healthy eating habits amongst adolescents.

Keywords: Aspirations, body image, gender, sleeping pattern, screen time

Introduction

Adolescence is a vital period of rapid overall growth and development that is linked intricately to building foundation of lifelong health. Thus, it is essential to have proper nutrition during this transformative phase (Belachew *et al.*, 2013; Norris *et al.*, 2021) [1, 14]. The food choices and nutritional intake during adolescence can shape physical, cognitive, emotional well-being and also the risk of life-style disorders. Therefore, nurturing healthy eating habits at this stage is of pivotal importance for having a strong foundation for a balanced relationship with food (Patton *et al.*, 2016) [15]. As body perception, sleeping pattern, aspirations, screen time, series watched, social and psychological environment have a significant impact on their overall health, well-being and development of food habits in adolescents, it is important to understand connection between nutrition and these factors becomes essential for fostering healthy eating habits (Bibiloni *et al.*, 2013; Moitra *et al.*, 2020; Myszkowska-Ryciak *et al.*, 2020; Doan *et al.*, 2022; Rocka *et al.*, 2022; Sina *et al.*, 2022) [3, 11, 13, 7, 17, 19]. The body image or perception/ self-esteem of adolescents can influence their food behaviors. For instance, a negative body image can drive adolescents towards unhealthy eating habits, restrictive diets, dietary fads and even eating disorders trying to fit the societal beauty/fitness standards. While a positive body image can guide in developing balanced food choices (Bibiloni *et al.*, 2013) [3]. A proper eight-hour sleep is crucial for maintaining proper health especially during adolescence. They tend to have lack of sleep due to their busy schedules, and a poor sleeping pattern, irregular, or insufficient sleep schedules can negatively affect appetite regulation, metabolism, and metabolic hormones. Thus, there can be disruption of food timings, untimely food cravings, nibbling in between meals, skipping meals, increased intake of processed foods/ snacks and decreased intake of healthy foods (Doan *et al.*, 2022) [7].

Excessive screen time due to exposure to smartphones, television, laptop, other electronic mediums, influence of social media, and advertisements has made adolescents' lifestyle sedentary and promoted consumption processed snacks high in sugars, salt and fried foods (Ramos *et al.*, 2013; Myszkowska-Ryciak *et al.*, 2020) [16, 13]. It was reported by Rocka *et al.*, (2022) [17] that increased screen time was one of the leading risk factors for obesity in

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adolescents. Additionally, the content / series / shows / advertisements depicting processed food intake can divert adolescents towards unhealthy eating habits. Gupta *et al.*, (2017) ^[9] emphasised that advertisements on television are concerned with food lacking in nutrient density and only rich in calories derived from fats and sugars. However, social media platforms can be used to positively influence the nutrition literacy and knowledge enforcing and encouraging positive nutritional behaviours. Similarly, even the aspirations of the adolescents can impact their food habits and choices. For instance, family/societal pressure to be best in academics or sports can influence the eating patterns. Some adolescents can succumb to sedentary lifestyle and unhealthy eating while striving to be best in academics limiting their physical activities. While some can become extra conscious about diets, physique and fall prey to diet fads and fallacies.

Thereby in nutrition research, it is important to understand all these factors in relation to adolescents' nutrition and health. Recognizing the interlinkages of factors *viz.*, body perception, sleeping patterns, screen time, media influence, aspirations and so on with nutrition is a prerequisite for providing tailored nutritional assistance, advice and interventions for adolescents. Encompassing all these factors into nutrition interventions/programmes can make them effective, strategic and wholesome for encouraging healthy eating habits among adolescents. These factors have a complex and multifaceted relationship hence the present study aimed to document and analyze selected life-style patterns amongst the adolescents from the rural-urban gradient of North Bengaluru.

Materials and Methods

Study design and sample

The survey-based study was conducted on school going adolescents from rural, peri-urban and urban areas of North Bengaluru. Hundred respondents were selected from each area (50 girls and boys each) thus total sample size of the study was 300. The data regarding selected lifestyle parameters was collected using self-reported pre-tested questionnaire.

Assessment of life style characteristics

Selected life style characteristics of the respondents based on physical, social, psychological aspects were studied as perceived by the respondents using an interview questionnaire (Greene and Patton 2020) ^[8]. Physical aspects – body image and sleeping pattern; social aspects – exposure, access, involvement, attitude of tolerance and the psychological aspects – aspirations and motivation questions were recorded.

Statistical analysis

These parameters were analysed area- and gender- wise to understand the difference amongst the respondents' body-image, sleeping pattern, social interactions, screen time and aspirations using suitable statistical analysis for interpretation of data.

Research ethics: Institutional Ethics Committee (IEC), approval was obtained from University of Agricultural Sciences, GKVK, Bengaluru (No. DR/STA/Ethical Committee/2020-21) dated 05-04-2021) for collecting data from human subjects. Prior to data collection participants were asked to provide written consent. The teachers and parents' consent were also obtained prior to the study.

Results and Discussions

Assessment of the respondents based on physical aspects:

Self-assessment of respondents considering their body image, sleeping pattern, and reproductive health is indicated in Table 1. The perception of being normal, obese or underweight was not associated with gender, but changed significantly according to area, with more rural respondents perceiving themselves as underweight than peri-urban and urban adolescents. The chi-square results for body image with respect to weight revealed that perception by peers was significant with respect to area ($p < 0.05$); whereas the self- and parents-perceptions were not influenced by gender or area ($p > 0.05$). More of urban and peri-urban respondents felt they were unhealthy due to their peers' comments than rural respondents. Though not being statistically significant, higher number of girls than boys were dissatisfied with their body image and felt they were unhealthy (Table 1). In this line, Bibiloni *et al.*, (2013) ^[3] reported that body image was associated with meal and food consumption pattern of adolescents and gender showed significant influence with obese/overweight girls wished they had thinner body than the obese/overweight boys. Bhurtun and Jeewon (2013) ^[2] also indicated that weight-loss behaviours were more prevalent among girls. Bodega *et al.*, (2023) ^[5] also stated that adolescents dissatisfied with their body image tended towards developing dietary habits linked with losing weight and ones underestimating their body image had less healthy dietary habits.

Responses regarding their intention to lose or gain weight or to stay healthy, it was found that gender had no influence ($p > 0.05$), while area showed significant association ($p < 0.05$). Maximum respondents intended to be healthy (68%), but some also wanted to gain weight or lose weight. In urban areas, tendency of the respondents was to lose weight (15%), while in rural areas it was to gain weight (28%). This difference could be due presence of underweight children in rural than urban areas of the present study. Bhurtun and Jeewon, (2013) ^[2] reported that majority respondents (43.3%) were trying to lose weight, and only 6.7% were trying to gain weight.

The gaining or losing weight was more due to social media in rural areas; while parents influence was more in urban area. According to area, peer pressure, was significantly major element for urban adolescents than peri-urban and rural adolescents. Factors responsible for gaining/losing weight/being healthy as per gender were self interest (girls: 51%; boys: 33%), followed by parents' influence (girls: 25%; boys: 26%) and peer pressure (girls: 18%; boys: 28%). Having said that Blowers *et al.*, (2003) ^[4] reported stronger influence of media, than family and peer pressure on young girls intending to lose weight. Croll (2005) ^[6] indicated that social media with beauty ads, promoting girls with slim figures and body shape, had major influence on the attitude of adolescents especially to girls towards their body image.

Further, the measures used to maintain body image were also gender and area associated. Eleven per cent girls were dieting for maintaining their body image compared to boys (1%). Dieting was highest in peri-urban (8%) area, followed by urban (6%) and rural (3%) areas. Body image was maintained by majority boys and girls by engaging in sports (46%, 37%) and yoga (53%, 51%). Area wise, measures like sports were used maximum by rural (49%) followed by peri-urban (48%) and urban (28%) respondents. However, highest number of

urban adolescents preferred yoga (66%), than peri-urban (43%) and rural (48%) respondents (Table 1). This could be due to the availability of the yoga facilities and exposure in school and home of urban respondents.

Counselling for reproductive health was significantly dependent on gender and area. Gender wise chi-square results indicated that maximum girls' received counselling from mother (47%), followed by teachers (47%) and reading material (7%). The boys also received reproductive counselling but majorly from online sources, teachers and reading materials. The area-wise chi-square reports indicated that in rural area majority respondents received counselling

from teacher (62%) and mother (32%). However, in urban area, reproductive counselling was obtained from teachers (31%), online sources (28%), reading materials (25%) and mother (15%). With regard to sleeping habits, the bed timings, duration of sleep, and use of gadget before 30 min sleeping was significantly associated with area but not with gender. The use of gadgets was highest in urban (91%), followed by peri-urban (79%) and rural (75%) respondents. It was reported by previous study that insufficient sleep and lack of sleep can cause disruption of food timings and increase the intake of convenience foods (Doan *et al.*, 2022) [7].

Table 1: Self-assessment of the respondents based on physical aspects

Variables	Gender		Area			Total (N=300) %
	Girls (n=150) %	Boys (n=150) %	Rural (n=100) %	Peri-urban (n=100) %	Urban (n=100) %	
A. Self-assessment of body image						
Normal	65	70	68	66	68	67
Obese	11	9	2	12	17	10
Underweight	24	21	30	22	15	22
χ^2	0.980		χ^2	16.375		
p value	0.613		p value	0.003*		
B. Body Image with respect to body weight and health:						
• As perceived by the respondents						
Healthy	83	85	86	82	84	84
Unhealthy	17	15	14	18	16	16
χ^2	0.397		χ^2	0.595		
p value	0.529		p value	0.743		
• As perceived by mother						
Healthy	83	85	86	82	84	84
Unhealthy	17	15	14	18	16	16
χ^2	0.397		χ^2	0.595		
p value	0.529		p value	0.743		
• As perceived by father						
Healthy	83	85	86	82	84	84
Unhealthy	17	15	14	18	16	16
χ^2	0.397		χ^2	0.595		
p value	0.529		p value	0.743		
• As perceived by peers						
Healthy	87	88	97	82	84	88
Unhealthy	13	12	3	18	16	12
χ^2	0.031		χ^2	12.270		
p value	0.861		p value	0.002*		
C. Intention to lose or gain weight or be healthy						
Gain weight	25	20	28	22	17	22
Intend to be healthy	64	71	69	66	68	68
Lose weight	11	9	3	12	15	10
χ^2	1.861		χ^2	10.585		
p value	0.394		p value	0.032*		
D. Influence for gaining or losing weight or being healthy						
Parents	25	26	17	25	34	25
Peers	18	28	15	23	31	23
Role model	0	3	0	4	0	1
Self interest	51	33	63	37	26	42
Social media	5	9	3	9	8	7
Social pressure	1	1	2	0	1	1
Urbanization	1	1	0	2	0	1
χ^2	16.316		χ^2	47.677		
p value	0.022*		p value	0.000*		
E. Measures used for monitoring body weight/health						
Dieting	11	1	3	8	6	6
Gym	1	0	0	1	0	0
Sports	37	46	49	48	28	42
Yoga	51	53	48	43	66	52

χ^2	15.645		χ^2	16.564		
p value	0.001*		p value	0.011*		
F. Counselling care regarding reproductive health from: (A, B, C, D)						
• Friends	0	2	2	0	1	1
• Mother	47	3	32	27	15	25
• Online Source	0	43	0	36	28	21
• Reading materials	7	24	4	17	25	15
• Teachers	47	29	62	20	31	38
χ^2	147.012		χ^2	81.527		
p value	0.000*		p value	0.000*		
G. Sleeping habits/Pattern:						
• Bed timings:						
7.30 – 8.30 pm	5	1	2	8	0	3
8.30 – 9.30 pm	15	17	10	10	27	16
9.30 – 10.30 pm	60	61	79	54	48	60
10.30 – 11.30 pm	20	21	9	28	25	21
χ^2	3.862		χ^2	41.756		
p value	0.227		p value	0.000*		
• Waking up timings:						
4.30 am	1	1	2	2	0	1
5.30 am	6	12	8	8	11	9
6.30 am	86	73	81	79	79	80
7.30 am	7	13	9	11	10	10
χ^2	7.844		χ^2	2.900		
p value	0.049		p value	0.821		
• Sleeping duration (hours)						
7	13	11	0	22	15	12
8	76	81	100	66	69	78
9	11	8	0	12	16	9
χ^2	1.023		χ^2	44.390		
p value	0.600		p value	0.000*		
• Gadgets 30 min before bed						
Yes	82	81	75	79	91	82
No	18	19	25	21	9	18
χ^2	0.022		χ^2	9.262		
p value	0.881		p value	0.010*		

Assessment of the respondents based on social aspects

The social aspects included in the study were: A. Access to entertainment (Table 2; Fig. 1a, 1b; 2a, 2b), B. Involvement and participation in family chores (Table 3), and C. Opinion consideration and attitude of tolerance (Table 4).

It was evident from the results that majority of the respondents (82%) had access to internet (Table 2). The participation in sports at school and play at home was higher in boys than girls and was observed more in urban compared to other areas, indicating significant influence of area ($p < 0.05$). The participation in sports at school was higher in urban and peri-urban areas due to availability sports centre in the school even after school hours. Significantly ($p < 0.05$) higher involvement in games at home was observed in boys (75%). This could be due to girls being more engaged in household activities.

Given the eleven categories of the television or online shows, top five shows watched by the respondents were: Game/reality show (62%); Children/animated series (56%); Action/adventure series (53%); Science/education documentary (51%) and Sports (50%). It was noted from chi-square results that, watching of series differed significantly area-wise; where the per cent of subjects watching action/adventure, children/animated, religious/art, adult/late night, sports and game/reality shows were higher in urban

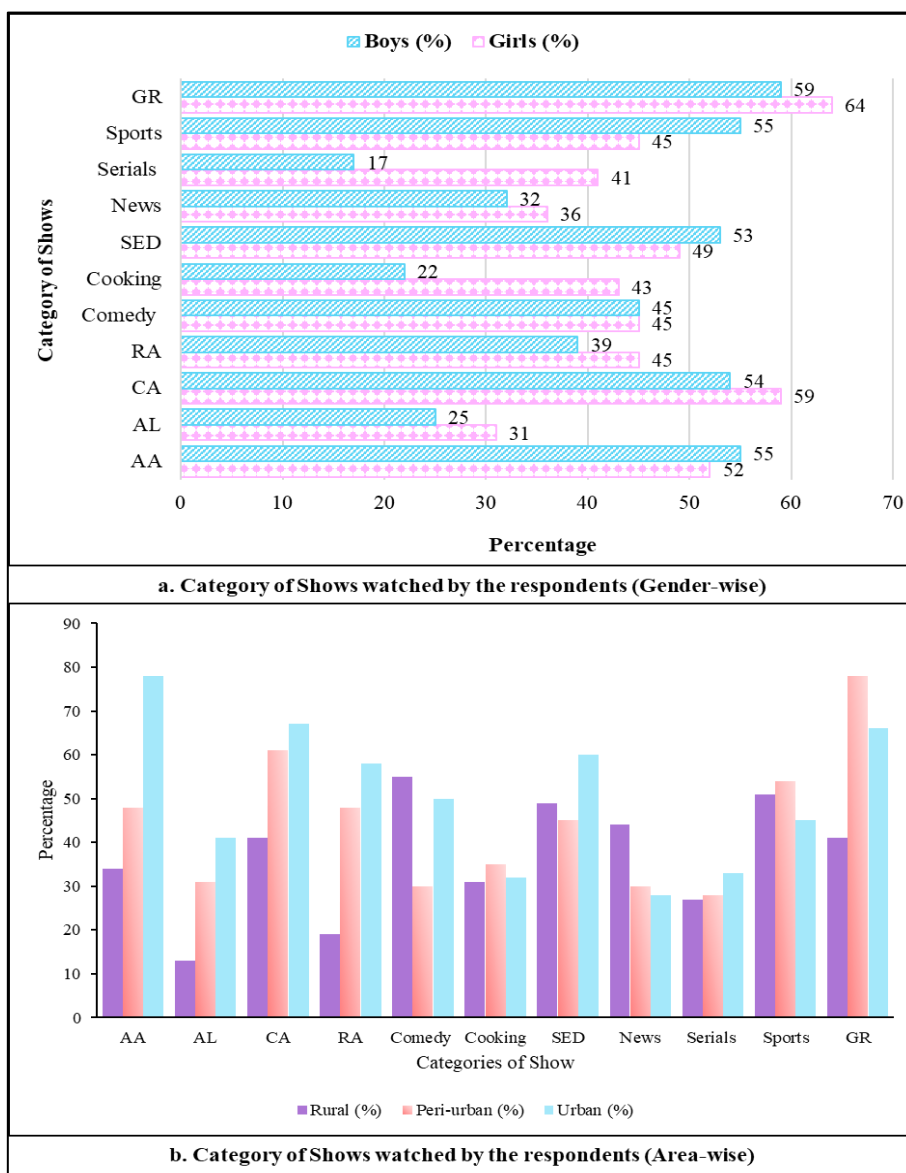
area followed by peri-urban and rural areas. Apart from the top five shows (based on frequency), news was preferred significantly by rural adolescents; while comedy shows were preferred both by rural and urban respondents. Highest number of girls watched serials and cooking shows, showing significant association of gender ($p < 0.05$) (Fig 1a, 1b).

The results showed that screen time for maximum respondents was 30-60 min (30%), followed by 60-120 min (28%), 15-30 min (16%), and 120-180 min (15%). Gender and area showed association for 60-120 and 120-180 min. Whereas area-wise significance was also observed for 30-60 min. Maximum screen time was in urban areas (Fig 2a, 2b). However, in a study by Mougharbel, *et al.*, (2023) [12] it was observed that 48 per cent adolescent from 7-12th grades had screen time 3 hours or more per day, while 43.7 per cent had moderate screen time of <3 hours, with higher prevalence amongst female than male respondents. Data on screen time and exposure to social media was considered because they affect the food habits like dietary diversity score. This was also highlighted by Worku *et al.*, (2022) [20] where adolescents spending more than 2 hours on social media had lower dietary diversity. La Marra *et al.* (2020) [10] indicated that eating while using smartphones/mobiles can result in increased consumption leading to mindless eating.

Table 2: Assessment of the respondents based on social aspects: Access to entertainment

Variables	Gender		Area			Total (%) (N=300)
	Girls (%)	Boys (%)	Rural (%)	Peri-urban (%)	Urban (%)	
A. Access to internet						
No	19	18	25	21	9	18
Yes	81	82	75	79	91	82
χ^2	0.022		χ^2	9.262		
p value	0.881		p value	0.010*		
B. Participation in sports at school						
No	2	0	3	0	0	1
Yes	98	100	97	100	100	99
χ^2	3.03		χ^2	6.061		
p value	0.082		p value	0.048*		
C. Participation in sports at home						
No	47	25	43	35	30	36
Yes	53	75	57	65	70	64
χ^2	16.725		χ^2	3.733		
p value	0.000*		p value	0.155		
Yes	1	3	3	3	0	2
χ^2	2.721		χ^2	3.061		
p value	0.099		p value	0.216		

Note: Data is represented as percentage and analysed using Chi-Square Test. *Indicates significant difference.



Note: AA: Action /Adventure; AL: Adult and Late-night; CA: Children’s/animated; RA: Religious and Art; SED: Science fiction/ educational/ documentary; GR: Game/reality.

Fig 1: Category of shows watched by the respondents: Access to entertainment

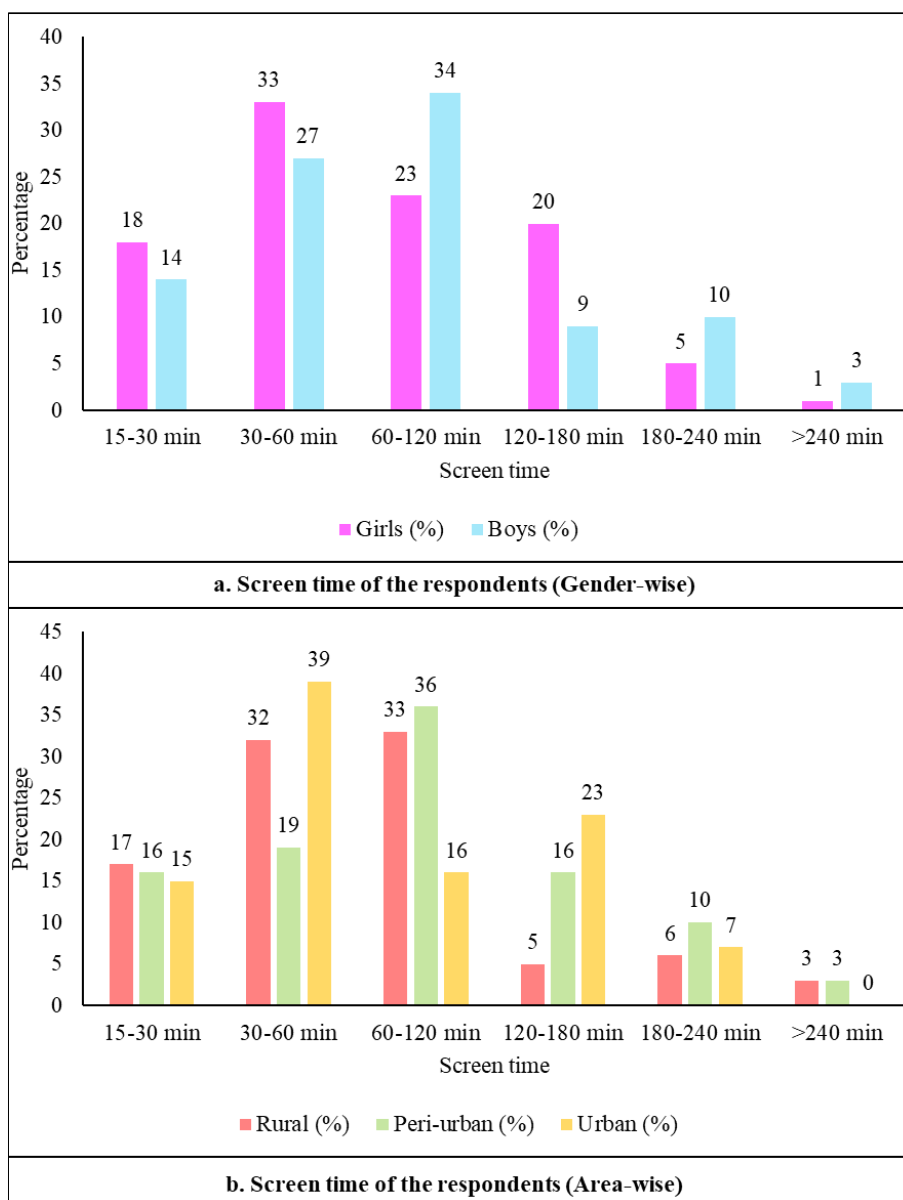


Fig 2: Screen time of the respondents: Access to entertainment

Table 3 depicts the participation of adolescents in assigned household works. It was seen that 99 per cent of the total respondents participated in assigned household chores, sixty per cent in outdoor chores, and 44 per cent in taking care of siblings. Taking care of sibling was associated with area ($p < 0.05$), where more respondents from rural area (63%) were involved, followed by urban (40%) and peri-urban areas (30%). This could be due to higher number of working parents from rural and urban areas, which led to the older children being assigned with taking care of sibling and household chores. Gender association ($p < 0.05$) was seen in outdoor works, where maximum boys (68%) did outdoor works than girls (53%). This was due to the involvement of boys in farm activities, procurement of essentials and bill payments.

Table 4 showed data related to attitude of tolerance expected to be exhibited regarding wake-up time, eating habits, timings for returning home and amount of pocket money received. This table also included data on opinion of the respondents regarding the choice of education, age of marriage, choice of

partner, family decisions, and force to leave school. Gender influence was clearly evident from chi-square results, where boys were privileged with late timings to return home and amount of pocket money received compared to girls. However, the parents expected girls to exhibit attitude of tolerance regarding these issues. Additionally, opinion for age of marriage was considered for 74 per cent boys, but only 17 per cent for girls indicating the influence of gender ($p < 0.05$). With regard to education, all the parents (98%) allowed them to pursue further education of their choice irrespective of gender; while only 2 per cent respondents reported that they were forced to leave school due to their financial background. Similarly, a study on 10-19 years girls from rural Jharkhand, eastern India by Rose-Clarke *et al.*, (2019) [18] revealed that girls dropped out from school to help in household/farm/family business. Area-wise significance was noted in decision making at family level where, rural respondents (56%) recorded more participation, followed by urban (13%) and peri-urban (11%).

Table 3: Assessment of the respondents based on social aspects: Participation in assigned works

Variables	Gender		Area			Total (N=300) %
	Girls	Boys	Rural	Peri-urban	Urban	
	%	%	%	%	%	
Participation in assigned work						
• Household chores						
No	1	1	2	2	0	1
Yes	99	99	98	98	100	99
χ^2	1.333		χ^2	4.027		
p value	0.513		p value	0.402		
• Outdoor chores						
No	47	32	44	41	34	40
Yes	53	68	56	59	66	60
χ^2	7.368		χ^2	2.201		
p value	0.007*		p value	0.333		
• Taking care of siblings						
No	55	56	37	70	60	56
Yes	45	44	63	30	40	44
χ^2	0.014		χ^2	23.205		
p value	0.907		p value	0.000*		

Note: Data is represented as percentage and analysed using Chi-Square Test. *Indicates significant difference.

Table 4: Assessment of the respondents based on social aspects: Attitude of tolerance and opinion consideration

Variables	Gender		Area			Total (N=300) %
	Girls	Boys	Rural	Peri-urban	Urban	
	%	%	%	%	%	
A. Attitude of tolerance towards						
• Wake up time						
No	23	16	24	18	17	20
Yes	77	84	76	82	83	80
χ^2	2.553		χ^2	1.814		
p value	0.11		p value	0.404		
• Eating habit/pattern						
No	62	53	66	56	51	58
Yes	38	47	34	44	49	42
χ^2	2.308		χ^2	4.779		
p value	0.129		p value	0.092		
• Time to reach home						
No	36	86	77	56	50	61
Yes	64	14	23	44	50	39
χ^2	78.815		χ^2	16.898		
p value	0.000*		p value	0.000*		
• Amount of pocket money						
No	55	81	72	68	65	68
Yes	45	19	28	32	35	32
χ^2	23.43		χ^2	1.14		
p value	0.000*		p value	0.566		
B. Opinion consideration regarding						
• Age of marriage						
No	83	26	62	53	48	54
Yes	17	74	38	47	52	46
χ^2	97.062		χ^2	4.057		
p value	0.000*		p value	0.132		
• Choice of partner						
No	87	86	88	88	83	86
Yes	13	14	12	12	17	14
χ^2	0.028		χ^2	1.413		
p value	0.867		p value	0.493		
• Pursuing your choice education						
No	3	1	4	2	0	2
Yes	97	99	96	98	100	98
χ^2	2.721		χ^2	4.082		
p value	0.099		p value	0.13		
• Decision making at home						
No	72	75	44	89	87	73

Yes	28	25	56	11	13	27
χ^2	0.273		χ^2	66.102		
p value	0.602		p value	0.000*		
• Forced to leave school						
No	98	97	95	98	100	98
Yes	2	3	5	2	0	2
χ^2	0.146		χ^2	5.558		
p value	0.702		p value	0.062		

Note: Data is represented as percentage and analysed using Chi-Square Test. *Indicates significant difference.

Assessment of the respondents based on psychological aspects

The psychological aspects, studied under this research work were motivation and aspiration of the respondents (Table 5). It was noted that, motivation by parents to pursue hobby was both area and gender associated; while peers' motivation was only associated with gender. Maximum boys (91%, 85%) were motivated by parents and peers than girls (61%, 75%). The motivation for pursuing hobby was more in urban areas (89%), than rural (81%) and peri-urban (42%) areas. The area influenced motivation by teachers, which was significantly highest in urban area (100%), followed by peri-urban (85%) and rural (83%) areas, indicating that exposure and environment is better in urban areas.

Rural and urban adolescents were more enthusiastic to try foods from different culture than peri-urban adolescents. Role model and aspiration was both influenced by gender and area. Generally, maximum respondents were aspiring to become

scientist, teacher, celebrity or pilot. Gender association indicated that highest number of girls aspired to become either celebrity (Girls: 27%; Boys: 15%), or teacher (Girls: 39%; Boys: 7%); while more boys aspired to be a pilot (Girls: 11%; Boys: 25%), or scientist (Girls: 9%; Boys: 37%). Maximum rural and peri-urban respondents wanted to be a celebrity (rural: 22%; peri-urban: 23%; urban: 17%) or pilot (rural: 23%; peri-urban: 24%; urban: 7%) than urban respondents who aspired to become a scientist (rural: 7%; peri-urban: 7%; urban: 55%). This may be due to the influence of social media.

Adolescents' explorations are triggered according to their interests and social interaction with family, teachers and peers. Additionally, all these factors indirectly influence their explorations with respect to dietary quality and developing nutrition behaviours. Hence these were emphasised in the present research.

Table 5: Assessment of the respondents based on psychological aspects

Variables	Gender		Area			Total (N=300)	
	Girls %	Boys %	Rural %	Peri-urban %	Urban %		
A. Motivation to pursue hobby by							
• Parents							
No	39	9	19	42	11	24	
Yes	61	91	81	58	89	76	
χ^2	35.38		χ^2	28.399			
p value	0.000*		p value	0.000*			
• Teachers							
No	9	12	17	15	0	11	
Yes	91	88	83	85	100	89	
χ^2	0.56		χ^2	18.12			
p value	0.454		p value	0.000*			
• Peers							
No	25	15	24	21	15	20	
Yes	75	85	76	79	85	80	
χ^2	4.083		χ^2	2.625			
p value	0.043*		p value	0.269			
B. Exploring different cultures and foods							
No	9	16	8	23	7	13	
Yes	91	84	92	77	93	87	
χ^2	3.013		χ^2	14.524			
p value	0.083		p value	0.001*			
C. Role model- aspire to become							
▪ Celebrity	27	15	22	23	17	21	
▪ Pilot	11	25	23	24	7	18	
▪ Police	0	1	1	1	0	1	
▪ Scientist	9	37	7	7	55	23	
▪ Sports	15	14	19	18	6	14	
▪ Teacher	39	7	28	27	15	23	
χ^2	75.923		χ^2	90.682			
p value	0.000*		p value	0.000*			

Note: Data is represented as percentage and analysed using Chi-Square Test. *Indicates significant difference.

Conclusion

A better understanding of body perception, sleeping pattern, use of mobile phones/television, screen time, aspirations, social, and psychological aspects, their interlink ages, gender- and area-wise associations, and knowledge regarding better management of these factors can be useful in tailoring customised nutrition interventions for adolescents. Further, it can help to develop informative media literacy programmes and nutritional/dietary consultancies for promoting balanced and health-conscious food habits/behaviours amongst adolescents.

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Conflict of Interest: The authors declare that there are no conflicts of interest.

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