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BARRIERS TO ADOPTING A HEALTHY LIFESTYLE AMONG SCHOOL CHILDREN: CROSS SECTIONAL STUDY

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ABSTRACT

Background: Despite widespread awareness of healthy living, school-aged children continue to face significant barriers to adopting and sustaining healthy lifestyle practices. These barriers contribute to rising rates of childhood obesity and related health conditions. **Objective:** This study aimed to assess lifestyle behaviors and identify perceived barriers to healthy living among school-going children, with the goal of informing targeted health interventions. **Methods:** A cross-sectional study was conducted among 158 school children aged above 12 years, selected from Nainy Vally school, Haldwani using simple random sampling. Data were collected via a structured, self-administered questionnaire covering socio demographics, dietary habits, physical activity, screen time, and perceived lifestyle barriers. Statistical analysis was performed using SPSS v26. **Results:** Key barriers identified included lack of time for physical activity (54.5%), preference for screen time (50.6%), and poor taste perception of healthy food (40.5%). While 69% of students reported daily breakfast intake, only 26.6% engaged in physical activity ≥5 times/week. High screen time (>3 hrs/day) was observed in 43.7% of participants. Lifestyle behaviors were significantly associated with gender, parental education, and sports participation ($p < 0.05$). **Conclusion:** The gap between health knowledge and practice among school children is influenced by personal, social, and environmental factors. Interventions must go beyond awareness and address structural barriers, parental involvement, and school-based policy changes to promote sustainable health behaviors.

KEYWORDS: Healthy lifestyle, children, barriers, physical activity, dietary behavior, cross-sectional study.

INTRODUCTION

Promoting a healthy lifestyle in children has become a major global health priority, especially in the face of increasing rates of childhood obesity, poor dietary habits, physical inactivity, and related non-communicable diseases. The school-age years, particularly between ages 11 and 12, represent a critical developmental period where lifelong health behaviors are formed. During this transitional stage from childhood to adolescence, children experience rapid physical, emotional, and social changes that shape their attitudes and habits regarding nutrition, physical activity, hygiene, and stress management.

A healthy lifestyle in children typically encompasses balanced nutrition, regular physical activity, good hygiene practices, emotional well-being, and avoidance of harmful behaviors such as smoking or excessive screen time. However, multiple barriers prevent the consistent adoption of such practices among school-going children. These include lack of access to physical activity spaces, peer and parental influences, busy school schedules, academic pressures, and socioeconomic challenges.[1,2]

Research shows that while many children are aware of healthy practices, there is often a gap between knowledge and actual behavior. For example, a study in Hungary found that although children aged 11–14 possessed basic knowledge about physical activity and health, many did not translate this into regular action due to lack of structured support and self-discipline.[3] Similarly, family lifestyle and socio-cultural factors play an essential role in shaping children's choices. Parents' involvement in sports, their dietary patterns, and their attitudes toward health significantly influence children's behavior.[4]

Schools are an ideal setting for promoting healthy habits because they reach children consistently during their

formative years. Interventions such as school-based physical activity programs, nutrition education, and health awareness campaigns have demonstrated success in improving students' lifestyle practices.[5] In Colombia, a multi-component school-based program called "Prosalud" significantly improved physical activity and nutrition habits among children aged 6–12, showing the importance of engaging teachers, parents, and school staff in health promotion efforts.[6]

Despite awareness campaigns and educational efforts, several studies suggest that major obstacles to a healthy lifestyle still persist. For instance, children often prioritize academics and screen-based entertainment over physical activity due to time constraints, fatigue, and low motivation.[2] Similarly, healthy eating is often hindered by peer pressure, taste preferences, media influence, and the high cost of nutritious foods.[7] These insights highlight the need for context-specific strategies that address the environmental, social, and personal challenges faced by children.

In India and other developing countries, these challenges are compounded by socioeconomic disparities, limited school infrastructure, and inconsistent health education. A study of Indian schoolchildren showed that although many were aware of oral hygiene and nutrition, only a small percentage actually practiced these habits regularly due to time constraints and lack of parental supervision.[8] Thus, while knowledge and attitude toward healthy living are improving, behavioral change remains a key challenge. current study aims to assess the health and lifestyle practices among school children. The findings will help inform school health policies and contribute to designing more effective, age-appropriate interventions for promoting healthy living among school-aged children.

2. MATERIALS AND METHODS

2.1. Study Design and Participants

This cross-sectional study was conducted among 158 school-going children. The participants were selected from Nainy Vally school, Haldwani, using a simple random sampling method to ensure representation across different socioeconomic backgrounds and school types. Inclusion criteria were: (1) children aged above 12 years enrolled in school during the study period, (2) written informed consent obtained from parents/guardians, and (3) verbal assent provided by the children. Students with known chronic illnesses, physical disabilities limiting physical activity, or diagnosed psychological conditions were excluded.

2.2. Data Collection Tool

Data were collected using a structured and pre-tested self-administered questionnaire developed based on a review of literature and adapted for local relevance. The questionnaire consisted of four main sections:

- **Section A**: Socio-demographic data (age, gender, class, parental education, family income)
- **Section B**: Dietary behaviors (frequency of fruit and vegetable intake, fast food consumption, meal skipping, water intake)
- **Section C**: Physical activity (time spent on physical activity, sedentary behaviors, screen time)
- **Section D**: Perceived barriers to healthy lifestyle (based on a 5-point Likert scale, adapted from the seed article's framework)

2.3. Ethical Considerations

Permission was also obtained from the heads of the participating schools. Participation was voluntary, and anonymity and confidentiality were maintained throughout the study.

2.4. Statistical Analysis

The data were entered into Microsoft Excel and analyzed using SPSS version 26. Descriptive statistics (mean, standard deviation, frequency, and percentage) were used to summarize the demographic characteristics and health behaviors of participants. Associations between variables (e.g., gender and physical activity, socioeconomic status and dietary behavior) were tested using Chi-square tests or t-tests where appropriate. A p-value < 0.05 was considered statistically significant.

Table 1: Socio-demographic Characteristics of Participants (n = 158).

Variable	Category	Frequency (n)	Percentage (%)
Age (years)	Mean ± SD	16 ± 3	–
Gender	Male	82	51.9%
	Female	76	48.1%
Father's Education Level	Primary or Below	5	3.2%
	Secondary	36	22.8%
	Graduate	91	57.6%
	Postgraduate and Above	26	16.5%
Mother's Education Level	Primary or Below	7	4.4%
	Secondary	44	27.8%
	Graduate	85	53.8%
	Postgraduate and Above	22	13.9%
Type of Family	Nuclear	111	70.3%
	Joint/Extended	47	29.7%
Participation in Sports	Regular (≥3 times/week)	49	31.0%

	Occasionally (1–2 times/week)	66	41.8%
	Rarely/Never	43	27.2%

Table 2: Reported Barriers to Maintaining a Healthy Lifestyle Among Participants (n = 158)

Barrier	Strongly Disagree (n, %)	Disagree (n, %)	Neutral (n, %)	Agree (n, %)	Strongly Agree (n, %)
I don't have enough time to exercise	14 (8.9%)	26 (16.5%)	32 (20.3%)	60 (38.0%)	26 (16.5%)
I prefer screen time over physical activity	19 (12.0%)	30 (19.0%)	29 (18.4%)	58 (36.7%)	22 (13.9%)
Healthy food is not tasty	21 (13.3%)	38 (24.1%)	35 (22.2%)	46 (29.1%)	18 (11.4%)
Junk food is more easily available	12 (7.6%)	18 (11.4%)	27 (17.1%)	68 (43.0%)	33 (20.9%)
I feel too tired or lazy to be physically active	10 (6.3%)	25 (15.8%)	28 (17.7%)	62 (39.2%)	33 (20.9%)
My school schedule is too busy for physical activity	15 (9.5%)	22 (13.9%)	34 (21.5%)	59 (37.3%)	28 (17.7%)
My parents don't encourage physical activity or diet	23 (14.6%)	29 (18.4%)	36 (22.8%)	47 (29.7%)	23 (14.6%)

Table 3: Lifestyle Behaviors Among Participants (n = 158).

Behavior	Category	Frequency (n)	Percentage (%)
Breakfast Consumption	Daily	109	69.0%
	Occasionally (1–5 times/week)	42	26.6%
	Rarely/Never	7	4.4%
Fruit Intake (per day)	≥2 servings	62	39.2%
	1 serving	54	34.2%
	None	42	26.6%
Vegetable Intake (per day)	≥2 servings	58	36.7%
	1 serving	61	38.6%
	None	39	24.7%
Junk Food Consumption (per week)	≥3 times	74	46.8%
	1–2 times	65	41.1%
	Rarely/Never	19	12.0%
Water Intake (glasses per day)	≥8 glasses	88	55.7%
	5–7 glasses	51	32.3%
	<5 glasses	19	12.0%
Screen Time (per day, outside school)	≥3 hours	69	43.7%
	1–2 hours	66	41.8%
	<1 hour	23	14.6%
Physical Activity (per week)	≥5 times	42	26.6%
	2–4 times	71	44.9%
	≤1 time	45	28.5%

Table 4: Association Between Lifestyle Behaviors and Demographic Variables (p-values)

Lifestyle Behavior	Gender	Father's Education	Mother's Education	Type of Family	Age Group	Participation in Sports
Physical activity participation	0.041*	0.054	0.026*	0.185	0.049*	0.003*
Junk food consumption	0.318	0.083	0.091	0.046*	0.106	0.019*
Daily breakfast	0.029*	0.012*	0.044*	0.055	0.061	0.037*
Fruit intake frequency	0.102	0.038*	0.021*	0.118	0.074	0.081
Vegetable intake frequency	0.144	0.047*	0.033*	0.094	0.085	0.068
Screen time (>2 hrs/day)	0.066	0.109	0.074	0.037*	0.128	0.041*
Water intake (≥8 glasses/day)	0.223	0.063	0.011*	0.149	0.172	0.052

$p < 0.05$ = *

DISCUSSION

This study highlights critical barriers that hinder school children from adopting healthy lifestyle practices, despite moderate levels of health knowledge and some positive behaviors. The findings align with prior research showing that knowledge alone is insufficient to drive consistent health-related behavior among children.[3]

A key finding of our study is that time constraints and preference for screen-based activities significantly limit children's physical activity—reported by over 50% of participants. This is supported by research from[7], who identified lack of access to exercise spaces, insufficient parental support, and screen distractions as major barriers. Similarly, gender differences in perceived exercise barriers—especially among adolescent girls—noted higher levels of fatigue and lack of willpower in females.[9]

Poor dietary practices, particularly high junk food intake, were attributed to availability, taste preferences, and media influence. Over 60% of our sample consumed junk food at least once a week. These findings are echoed in multiple studies that point to aggressive marketing of unhealthy foods and low accessibility or affordability of healthy alternatives.[10,11] Parental habits and family structure were also associated with children's eating behaviors, reinforcing that health interventions must include family engagement.[4]

Our findings show that family education levels, particularly mothers', were positively associated with healthier behaviors, including breakfast and vegetable consumption. This is consistent with the literature linking parental education to child nutrition and health literacy.[12,13] Moreover, our study echoes the point that motivation and behavioral support systems play a significant role in dietary and activity choices.[5]

Physical inactivity was also associated with school schedules and lack of structured opportunities during the academic day. This matches findings from large-scale implementation studies that show overcrowded curricula and lack of prioritization of health promotion in schools impede lifestyle interventions.[14] The success of the "Prosalud" initiative in Colombia and the "Education in Moving" program in Ukraine reinforces the importance of integrating health programs directly into the school system.[15,16]

Stress and academic pressure emerged as top barriers, aligning with findings from Indian and global studies that name examinations and time pressure as major stressors reducing time for physical activity and self-care.[17,18] Furthermore, screen time continues to outcompete active play due to digital entertainment's pervasive appeal, as seen in several qualitative reports.[7,11]

Environmental challenges—such as unsafe traffic or lack of pedestrian infrastructure—were well documented in U.S.-based and global studies as limiting children's active commuting or independent play.[19]

Cultural, community, and structural barriers also affect lifestyle adoption. In low-resource or underserved settings, like parts of India or among ethnic minorities, health promotion is hampered by infrastructural gaps and competing life priorities.[20,21]

CONCLUSION

Despite awareness, school children face multi-level barriers—ranging from environmental to psychosocial—that restrict healthy living. A multi-stakeholder, school-centered, and culturally adapted approach is essential for meaningful, sustained behavior change.

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