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RESEARCH ARTICLE

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EXPLORING THE RELATIONSHIP BETWEEN DIETARY HABITS AND WELL-BEING AMONG ADOLESCENTS IN BORSAD TALUKA OF ANAND DISTRICT

Alpa S. Rathod and Viraj N. Roghelia*

P.G. Department of Home Science, Sardar Patel University, Vallabh Vidyanagar-388120, Gujarat

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*Corresponding author:

Viraj N. Roghelia

ABSTRACT

Adolescence is a crucial transitional period marked by rapid physical, emotional and social changes. Dietary habits, or routine food choices, play a key role in shaping both physical and overall well-being. General well-being reflects an individual's quality of life, including health, happiness and social functioning. The present study was planned to study the association between Dietary habits and general well-being of adolescents of Borsad taluka of Anand. A total of 320 students from grades 9 to 12 were selected, and data were collected using the standardised General Well-Being Scale (Kalia & Deswal, 2010) and a self-developed Dietary Habits Scale. The results revealed that the majority of the adolescents had a moderate level of Dietary habits and an average level of general well-being. Dietary habits were significantly associated with school type, whereas general well-being was significantly associated with gender and school type. Overall, Dietary habits level is significantly associated with general well-being. These findings conclude that healthier Dietary habits are closely linked to better general well-being among adolescents, particularly girls in urban and private school settings.

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INTRODUCTION

Adolescence is the stage between childhood and maturity, marked by rapid growth and development, including physical, mental, socio-emotional, and behavioural changes (Bhave *et al.*, 2002; Due *et al.*, 2005; Nath & Garg, 2008; Cutler *et al.*, 2011; Rengini, 2014). A person between 10 and 19 years is an adolescent as per the World Health Organisation (WHO, 2024). Dietary habits refer to the food consumption patterns and dietary behaviours exhibited by people. These patterns include either healthy eating habits, like consuming a balanced diet or nutrient-dense foods, or poor eating habits, like frequent consumption of fast food, a high intake of sugary beverages, and insufficient intake of fruits, vegetables, and dairy products (Li *et al.*, 2023). As it is the growth spurt period, adolescents must consume high-quality protein and other macronutrients, as well as micronutrients (Tornaritis *et al.*, 2014). For this, a diet including the five food groups comprising whole grains, milk, fruits and vegetables, meat and nuts, and oil that make up a well-balanced, nutrient-dense diet reduces the risk of disease and lengthens life expectancy. (Raza, 2021; Bruening *et al.*, 2012). A nutritious diet maintains mental and physical well-being. There is a correlation between an individual's environment, food habits, lifestyle, and level of physical and mental fitness. (WY *et al.*, 2011). However, most adolescents have poor food choices and irregular eating patterns, which impair their nutritional

status by causing micronutrient deficiencies on the one hand and obesity on the other. The children often develop unhealthy Dietary habits, including irregular or inadequate food intake, meal skipping, and a preference for energy-dense rather than nutrient-dense foods. These dietary patterns may be further influenced by academic stress, anxiety, depression, and food insecurity. In addition, many children consume little or no milk and have inadequate intake of fruits and vegetables, which may adversely affect their overall nutritional well-being (Crews *et al.*, 2015; Sogari *et al.*, 2018; Yun *et al.*, 2018). Unhealthy food consumption makes people more prone to liver problems, amenorrhea and irritable bowel syndrome. High intakes of fat and added sugar due to frequent fast food meal consumption are associated with poor school performance and metabolic diseases, such as insulin resistance and obesity among children (Pereira *et al.*, 2005; O'Donnell *et al.*, 2008; Purtell & Gershoff, 2015). General well-being, as a construct, denotes the harmonious functioning of both the physical and psychological dimensions of personality, offering personal and societal benefits (Siwach, 2000). The four components of teenagers' overall well-being are their physical, emotional, social, and academic well-being. Physical well-being refers to an individual's physical health, including eating, sleeping, and exercise habits. To improve the physical, mental, and social well-being of an individual, it is required to adopt a nutritious diet, be physically active, and get good-quality, adequate sleep (Mishra & Aggarwal, 2024). All these factors and more screen time, affect the physical health of an

individual (Khajuriya, 2025). Adolescents' emotional health, which includes their capacity to recognise, control, and effectively communicate their feelings, is a vital component of their overall development. Eating habits are directly linked to behaviour, mood fluctuations, attentiveness, and anxiety. Good Dietary habits, such as regular breakfast consumption, intake of fruits and vegetables are positively associated with better self-reported health, good sleep and higher happiness levels (Blanchflower *et al.*, 2013; Katagiri *et al.*, 2014). On the other hand, certain unhealthy dietary behaviours such as consuming soft drinks, fast food, sweets and snacks, skipping breakfast, and caffeine were also linked to depression, mental or psychological distress, unhappiness, and poorer sleep (Katagiri *et al.*, 2014; Kim *et al.*, 2015; Papier *et al.*, 2015; Khalid *et al.*, 2016; Hayward *et al.*, 2016). According to the WHO, social well-being is significant, along with physical and mental health. It has a significant impact on raising social performance, social efficacy, and quality of life. Social well-being has five domains: social integration, social acceptance, social contribution, social actualisation, and social coherence (Keyes, 1998). Nowadays, excessive screen time leads to social isolation and reduced personal interaction and activities, which affect social wellbeing and ultimately lead to anxiety and low social esteem (Danmaisoro & Mozayani, 2024).

Physical, emotional and social wellbeing play an important role in the wellbeing of adolescents in school. The overall growth and achievement of students can be greatly impacted by the school environment, and schools play a crucial role in supporting their holistic development. The school well-being of students can be enhanced by fostering a safe and supportive environment, establishing clear policies, providing effective guidance and counselling services, and creating opportunities for meaningful and positive social interactions. Furthermore, promoting physical health, engaging parents and the wider community, and encouraging student participation can contribute significantly to enhancing adolescents' overall well-being (Deswal & Madhu, 2015; Lata, 2017; Jain & Desai, 2020). The students who eat breakfast daily tend to be more focused and have better comprehension, memory, and problem-solving skills. Breakfast is the meal that is often skipped by adolescents (Adolphus *et al.*, 2016).

Dietary habits are an important determinant of adolescents' physical, psychological, and overall well-being. During adolescence, nutritional choices and eating patterns may be influenced by various demographic and social factors, including gender, type of school, and place of residence. In this context, the present study explores the relationship between Dietary habits and overall well-being among adolescents in Borsad Taluka of Anand District.

Methodology

A stratified random sampling method was used to collect data for the investigation.

Sample: The sample of the present study comprised 320 adolescents from various schools in the urban and rural areas of Borsad Taluka, Anand District. Out of 320 adolescents, 160 were selected from government schools in rural and urban areas, and the remaining 160 were selected from private schools in rural and urban areas. An equal number of male and female adolescents were also selected.

Tool: To collect information about adolescents' Dietary habits, a self-developed, standardised questionnaire was used. It included self-reported Dietary habits related to type of eating habit, no. of meals consumed in a day, frequency of major meals, skipping major meals, habit of snacking, frequency of consumption of various food groups, frequency of fast-food consumption, frequency of processed food consumption and out-of-home eating. The total Dietary Habits Score is categorised into poor (39 – 95), moderate (96- 152) and Good (153-209) Dietary habits.

To study the General Well-Being (GWBS) of the adolescent, a standardised GWB scale (Kalia & Anita, 2010) was used. The scale

consisted of 55 items: 30 positive and 25 negative. It is a five-point scale, and the respondents have to respond in terms of “Strongly Disagree” to “Strongly Agree”. For boys, a GWBS score below 167 indicates low GWBS, 168-230 and 231-275 indicate average and high GWBS, respectively. For girls, below 176 indicates low GWBS, whereas 177-225 and 226-275 indicate average and high GWBS, respectively, per the GWBS scale. Before data collection, the investigator visited schools, obtained permission, explained the study's purpose, and guided students on completing the scale in classroom settings. Students provided informed consent and completed the questionnaire independently. The collected data were analysed using SPSS (version 25.0).

RESULTS AND DISCUSSION

Figure 1 illustrates average Dietary habits scores and general well-being scores by gender, area and type of school. The mean scores for Dietary habits and general well-being were higher in girls than in boys; however, no significant gender difference was observed. The mean differences in Dietary habits and general well-being scores among adolescents studying in urban and rural areas of Borsad taluka. The results indicate that there was no significant difference between the mean scores for Dietary habits and general well-being among adolescents with respect to the area of school. However, adolescents attending urban schools showed slightly higher well-being scores than those attending rural schools, suggesting better access to health facilities, recreational activities, or support systems. The Dietary habits score was significantly higher ($P < 0.05$) for adolescents studying in private schools (134.22) than in government/GIA schools (128.93). Similarly, the average score for general well-being was found to be significantly ($P < 0.05$) higher for adolescents studying in private schools (203.59) than for those in government/GIA schools (188.68). The higher Dietary habits and general well-being score among private school students may be attributed to better access to diverse food commodities, physical resources, better home facilities and parental awareness.

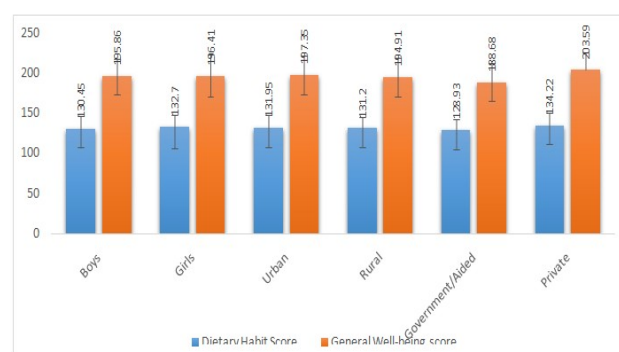


Figure 1. Average Dietary Habits Scores and General Well-being Scores as per Gender, Area and Types of school

Table 1 describes a significant ($P < 0.01$) association between the level of Dietary habits and general well-being among adolescents. The majority (60%) of adolescents reporting poor Dietary habits exhibited low general well-being, while the remaining 40% demonstrated average general well-being. Among adolescents with moderate Dietary habits, most (79.8%) reported average general well-being, whereas smaller proportions reported low (14.2%) or high (6.0%) general well-being. Similarly, adolescents with good Dietary habits predominantly reported average general well-being (78.8%), although a notable proportion reported high (15.2%) general well-being. Only 6.1% of this group demonstrated low general well-being. The association between Dietary habits and general well-being among adolescents, as per gender, area of school and type of school, is presented in Table 2. A significant ($p < 0.05$) association between Dietary habits and general well-being was found among girls in both urban and private schools. Among adolescent boys, most adolescents with moderate Dietary habits (87.2%) reported an average level of

Table 1. Association between Dietary habits and General Well-being among Adolescents

Level of Dietary habits	Level of General Well-being				Chi-Square
	Low N (%)	Average N (%)	High N (%)	Total N (%)	
Poor	3(60.0%)	2(40.0%)	0(0.0%)	5(100.0%)	13.559*
Moderate	40(14.2%)	225(79.8%)	17(6.0%)	282(100.0%)	
Good	2(6.1%)	26 (78.8%)	5(15.2%)	33(100.0%)	

* indicates a significant ($P < 0.05$) association between the variables

Table 2. Association between Dietary Habits and General Well-being among Adolescents as per Gender, Area of School and Type of School

Level of Dietary Habits	Level of General Well-being				Chi-Square
	Low N (%)	Average N (%)	High N (%)	Total N (%)	
Boys					
Poor	1(33.3%)	2(66.7%)	0(0.0%)	3(100.0%)	4.289 ^{NS}
Moderate	13(9.2%)	123(87.2%)	5(3.5%)	141(100.0%)	
Good	1(6.3%)	13(81.3%)	2(12.5%)	16(100.0%)	
Girls					
Poor	2(100.0%)	0(0.0%)	0(0.0%)	2(100.0%)	11.659*
Moderate	27(19.1%)	102(72.3%)	12(8.5%)	141(100.0%)	
Good	1(5.9%)	13(76.5%)	3(17.6%)	17(100.0%)	
Urban area					
Poor	1(100%)	0(0.0%)	0(0.0%)	1(100%)	9.979*
Moderate	16(11.7%)	111(81.0%)	10(7.3%)	137(100%)	
Good	2(9.1%)	16(72.7%)	4(18.2%)	22(100%)	
Rural Area					
Poor	2(50.0%)	2(50.0%)	0(0.0%)	4(100.0%)	5.77 ^{NS}
Moderate	24(16.6%)	114(78.6%)	7(4.8%)	145 (100.0%)	
Good	0(0.0%)	10(90.9%)	1(9.1%)	11(100.0%)	
Government/GIA Schools					
Poor	2(50.0%)	2(50.0%)	0(0.0%)	4(100.0%)	3.194 ^{NS}
Moderate	27(18.1%)	116(78.0%)	5(3.4%)	148(100.0%)	
Good	1(12.5%)	7(87.5%)	0(0.0%)	8(100.0%)	
Private Schools					
Poor	1(100.0%)	0(0.0%)	0(0.0%)	1(100.0%)	12.50*
Moderate	13(9.7%)	109(81.3%)	12(9.0%)	133(100.0%)	
Good	1(4.0%)	19(76.0%)	5(20.0%)	25(100.0%)	

*indicates a significant ($P < 0.05$) association between the variables; NS indicates no significant association between the variables

general well-being, while only 3.5% reported a high level. However, no significant association between Dietary habits and general well-being was observed among boys. Among girls, the level of Dietary habits is significantly ($P < 0.05$) associated with general well-being. All the girls with poor Dietary habits had low general well-being. Most adolescents with moderate Dietary habits (72.3%) had an average level of general well-being, followed by 19.1% with low well-being. A significant ($P < 0.05$) association was observed between Dietary habits and level of general well-being among students residing in urban areas, but not for those residing in rural areas. Similarly, a significant association was observed for students studying in private schools but not for students studying in government or government-aided schools.

Overall, it is noticed that among adolescents with good Dietary habits, a higher proportion reported a high level of general well-being, and adolescents with poor Dietary habits exhibited a low level of general well-being. Hong and Peltzer (2017) also reported a positive association between healthy dietary behaviours and higher psychological well-being. Similarly, Fismen *et al.* (2024) reported that mental health is strongly associated with meal habits such as breakfast consumption and family meals together. Few studies have reported that unhealthy Dietary habits, mainly junk food consumption, including foods with high sugar, salt and fat, were linked to anxiety, confusion, aggression, insomnia, and depression among adolescents (Zahedi *et al.*, 2014). Moreover, poor Dietary habits also lead to obesity, diabetes, other metabolic problems, stress, anxiety and poor school performance (Pereira *et al.*, 2005; O'Donnell *et al.*, 2008; Purtell & Gershoff, 2015; Sogari *et al.*, 2018; Yun *et al.*, 2018).

CONCLUSION

The study concludes that most adolescents exhibit moderate Dietary habits and average general well-being. A significant association was observed between Dietary habits and general well-being with respect to gender and type of school. These results underline the importance of promoting balanced diets and other lifestyle-related changes to improve overall well-being during adolescence.

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