Journal of Educational Psychology and Pedagogical Sciences (JEPPS)
ISSN:2791-0393 (Print) eISSN: 2791-0407
Vol. 4, No. 1, (Jan-June 2024): 43-57
https://jepps.su.edu.pk/article/36
DOI: https://doi.org/ 10.52587/jepps.v4i1.85

Impact of Health Promotion Literacy on Junk Food Consumption and Healthy Eating Behaviors Among Educated Youth in Pakistan

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Abstract

Health is a state of complete psychological, physical, and social well-being. To gain a healthy life, one must have a balanced diet and has to exercise regularly. The knowledge and promotion of healthy eating habits is a key component of health promotion strategies. Poor eating habits, like consuming excessive junk food and late-night eating, can lead to many health problems, such as cardiovascular disease, hypertension, diabetes, destroyed appetite, high obesity, and depression. The present study is designed to examine the relationship between health promotion literacy, healthy eating habits, and junk food behavior among educated youth in Punjab, Pakistan. A quantitative research design was used. A well-structured questionnaire was developed by using 3 adapted scales, including the *All Aspects of Health Literacy Scale* (AAHLS), the Eating Habits Questionnaire, and the Diet *and Behavior Scale* (DABS), for data collection. The study utilized a sample of 310 university students from Sargodha, Lahore, and Islamabad. The data were analyzed using correlation, regression, and the Chi-square test through SPSS software. Findings revealed that high levels of health promotion literacy were associated with reduced junk food behavior and increased adoption of healthy eating habits among educated youth in Punjab, Pakistan. This study identified the significance of health literacy and its promotion and proposed interventions to improve health literacy services, expand understanding about nutrition, and empower educated young people to make good decisions related to their dietary practices.

Keywords: Health Promotion Literacy, Nutrition Knowledge, Dietary Behavior, Junk Food, Eating behavior

1. Introduction

Health literacy (HL) plays a very central role in measuring an individual's health and overall well-being. It comprises one facet of multiple literacies within the areas of health and education, i.e., scientific knowledge, technological knowledge, media literacy, and cultural literacy. The term "health literacy" initially came to light in the public health area in the 1970s. In different eras, Health literacy has been defined differently. Health literacy is defined as the capacity of someone to participate in healthy activities and have various information regarding health (Jones, 2022).

Moreover, in several studies, Health literacy refers to the ability to effectively acquire, understand, and apply knowledge through cognitive and social capacities, as described in several

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studies. According to (Thapa et.al 2021) individuals improve their health and make better healthcare decisions by getting information about their health. According to (Wang et.al 2017), health literacy has received a lot of attention in recent years due to its significant benefits for both public and individual health and the long-term stability of the healthcare system. It is especially focused on the increasing frequency of no communicable illnesses and related treatment costs, which are more focused on the significance of individuals taking greater responsibility for their health while making better use of healthcare resources.

Health education in this regard is very helpful in promoting health literacy activities. These activities occur in schools, workplaces, clinics, and communities, including topics like physical activity, healthy eating, tobacco use prevention, avoiding junk food, mental health, and safety (Bevelander et al., 2018). Resultantly, inadequate health literacy causes difficulty in understanding health conditions, a lack of disease awareness, and not following prescribed medication, all of which lead to poor health and an increased mortality risk, inefficient healthcare use, increased healthcare costs, and health disparities (Liu et al., 2020).

Health promotion literacy is a significant process of enabling people to increase control over and improve their health. Although health literacy has been included in most global health programs, it’s still very difficult to put these health-related ideas into reality (Belaid et al., 2020). (Pithara, 2020) argue that addressing this issue is critical because health literacy extends beyond personal healthcare to include participation in community conversations and planning about health-related topics, which is mentioned as critical health literacy A substantial public hospital survey found that more than one-third of English-speaking patients and sixty-one percent of Spanish-speaking patients had minimal or marginal health literacy, as measured by practical materials relevant to typical health-related tasks (Dahmash, 2021).

The health ratio and healthcare systems in Pakistan are complex and beset by several problems. The country is plagued by a wide range of ailments, both communicable and non-communicable. An association is observed between an increase in infant mortality and a significant occurrence of chronic illnesses, such as hypertension, diabetes, and heart disease. Furthermore, Pakistan's community health systems are obsolete, with decaying infrastructure. Many healthcare providers continue to function in traditional roles in which they assume all-knowing positions, which can lead to uninformed decisions regarding their patients. Furthermore, health-seeking behavior complicates disease and its management. Improving healthcare literacy could have a great impact on the well-being and health of our population in a country that deals with diseases from both developed and developing countries, as well as insufficient healthcare facilities and low literacy rates (Dedrick et.al 2013) young adulthood is a period of transition marked by growth and changes in different psychological, social, and environmental factors. As a result, it is critical to cultivate correct and constructive viewpoints on healthy eating habits and nutrition (Terp et.al 2021).

Fast food, on the other hand, is popular among today's younger generations due to its convenience and affordability. They usually choose sedentary lives, which cause weight gain despite physical activity. Furthermore, excessive use of social media apps and websites with appealing food advertisements stimulates overconsumption of food, potentially leading to the adoption of unhealthy eating habits in their daily lives. Hence, it is critical to emphasize piquing their interest in improving their literacy about food and health promotion. The more adept young people grow in their literacy about food and health promotion, the better equipped they will be to

resist the appeal of calorie-free nutrition, stick to healthy diets, and achieve balanced and healthy lifestyles (Low & Sweeteners).

2. Rationale of the study

Today, Pakistan has gone through a transformation in its eating indexes, especially concerning young population. One common cause that is on the rise is the habits of taking foods that are regarded as junk foods which causes different health issues. Reasons why examining the influence of the health literacy on the purchase and consumption of junk food and health y food options include the following. First, it is depicted how much of the young generation is conversant with the different effects of their foods on their health. Second, it assists in illuminating various areas which may end up making poor decisions concerning the foods they consume. Third, necessary conditions are established to develop more effective promotion interventions for better nutrition among youths.

This research was set out to examine the relationship between Health Promotion Literacy and Eating behaviors among educated youth in Pakistan. This were cover grounds of why it is that some youths consume high calories/ low nutritive density foods and why others avoid these types of foods. Gender is another variable that this study were look at as regards these eating behaviours. It was also assist in formulating attractive and suitable health program to the youths, hence enhancing the overall health of the society.

3. Objectives

Following were the objectives of the study;

1. To examine how gender affects educated youth's consumption of junk food.

2 To analyze the relationships between educated youth’s health promotion literacy and their healthy eating habits.

3. To examine the current level of health promotion literacy among educated youth.

4. Methodology

The purpose of this study is to explain the connection between unhealthy eating habits, junk food behavior, and health promotion literacy. The quantitative research design, also known as the survey design, was used in this study. Utilizing a quantitative research design is logical as it promotes convergent thinking rather than divergent reasoning or the spontaneous, unrestricted creation of a multitude of ideas regarding a research problem.

4.1. Population

A total of 310 university students who were between the ages of 18 and 25 were selected for the current cross-sectional survey method study. 103 students from each proposed university, i.e. Sargodha University, Punjab University, and Bahria University, were chosen for the sample. This study's primary goal was to determine whether respondents between the ages of 18 and 25 were aware of and knowledgeable about good, healthy eating habits. The universities in Punjab were selected by the researcher using the Simple Random Sampling method. Five percent of students from the faculties of social sciences, management sciences, natural sciences, and arts and humanities at the proposed universities were selected through stratified sampling. The characteristics of the various subgroups and the aims and objectives of the systematic investigation are met by all respondents. In addition, respondents were selected using simple random sampling

after the total number of students was taken from university websites in order to ensure that honest responses were obtained and research bias was avoided. In fact, 310 Female university students aged between 18 and 25 years were selected for the current cross-sectional survey method study and these were 103 students of Sargodha University, 103 of Punjab University and 104 of Bahria University. The target universities were identified using the technique called Simple Random Sampling, and within the sample universities, five percent of students selected from the faculties of social sciences, management sciences, natural sciences, and arts and humanities were included by conducting a stratified sampling. The number of students enrolled in faculties of these universities was obtained from the university websites, and only students from these faculties were included in the study by using Simple Random Sampling to sample the final participants of the study so as to eliminate research bias and encourage honest responding.

4.2. Study Tools

A sample of 310 respondents (preferred students between the ages of 18-25) participated in the survey. Information was gathered from 310 respondents through the structured questionnaire. By utilizing close-ended questions, data was evaluated. Because the researcher assessed the relationship between Health Promotion Literacy, Junk Food Behavior, and Healthy Eating Habits in this study, a structured questionnaire was deemed a suitable tool for data collection. This was the reasoning behind using a structured questionnaire as a data collection tool. The rationale behind utilizing the structured questionnaire was that most respondents were proficient and could deal with inquiries without anyone else. Hence, a forward interview plan was the most reasonable device for such a populace. Three sections have been added to the structured questionnaire.

Demographic Profile of the respondents

Knowledge of respondents about Health Promotion Literacy and junk food

Changes occur in eating habits

Questions about the location, education, family history, and source of income of the respondents were included in the demographic profile. The rationale for including demographic profile variables was that they provided a comprehensive background history of the respondent, which was necessary for analyzing the shifts in their eating habits. The knowledge of respondents regarding health literacy and the consumption of junk food is the subject of the next section of the structured questionnaire. Questions about their eating preferences, health information, and diet concerns are included in the respondents' knowledge of health promotion literacy and junk food behavior.

The final section of the structured questionnaire asks about the students' changing eating habits, including whether or not they eat a balanced diet and whether or not they drink too much soda water. The use of these variables was based on the basic premise that they measure healthy eating habits, junk food behavior, and health promotion literacy. To measure health promotion literacy, junk food behavior, and healthy eating habits among university students, the eating habits questionnaire, the health literacy scale (AAHLS) (Chinn & McCarthy, 2013), and the diet and behavior scale (DABS) (Richards et al., 2015) were adopted.

5. Study Analysis

After arranging data into the SPSS sheet, variables were computed and rearranged to measure

data results regarding objectives. For data analysis, such statistical tests, descriptive, bivariate regression and correlation were applied

The primary purpose of employing descriptive statistics is to describe the fundamental characteristics of a study's data. They provide straightforward summaries of the measures and samples. Along with straightforward illustrations investigation, they structure the premise of practically every quantitative examination of information. The significant effect of health promotion literacy on junk food behavior and eating habits was measured using the bivariate regression test. The motivation behind the Connection investigation is used to gauge the strength of the direct connection between the factors and figure out their affiliation. The level of change in one variable that results from the change in the other is calculated using correlation analysis. Because the researcher wanted to determine the connection between health promotion literacy, junk food behavior, and healthy eating habits, these tests were selected for analysis. In addition, it discusses the connection between independent and multi-dependent variables. Major analysis was measured using descriptive statistics, which were connected to the study's goals. In this review, well-being advancement education was an autonomous variable, and low-quality food conduct and dietary patterns were the reliant variables of the study.

6. Results

6.1.Descriptive Statistics

In this section, the Frequency and percentage distribution of Demographic Variables, Dependent Variables, and Independent Variables are described.

Table 1

Frequency and Percentage Distribution of Demographic Variables

Sr.	Variable	Frequency	Percentage (%)
1.	Age	311	100%
	18-21	153	49.2%
	22-25	133	42.8%
	26 and above	25	8.0%
2.	Gender		
	Male	135	43,4%
	Female	176	56.6%
3.	Religion		
	Islam	305	98.1%
	Christianity	3	1.0%
	Hinduism	3	0.9%
4	Marital Status		
	Single	283	91.1%
	Married	28	8.9%

(continue)

5.	Native Language		
	Urdu	203	65.3%
	Punjabi	79	25.4%
	Pashto	06	1.9%
	Balochi	12	3.9%
	Sindhi	11	3.5%
6.	Living Area		
	Rural	124	39.9%
	Urban	133	42.8%
	Semi-Urban	54	17.3%
7.	City		
	Lahore	10	3.3%
	Islamabad	251	80.7%
	Sargodha	50	16.1%
8.	Family Type		
	Joint	145	46.6%
	Nuclear	142	45.7%
	Extended	24	7.7%
9.	Educational		
	BS (Hons.)	116	37.3%
	M.Sc.	75	24.1%
	M.Phil.	120	38.6%
10.	Faculty		
	Social Sciences	218	70.1%
	Natural sciences	32	10.3%
	Management Sciences	52	16.7%
	Arts and Humanities	09	2.9%
11.	Family Income		
	10,000-30,000	83	26.7%
	31,000-60,000	65	20.9%
	61,000-90,000	60	19.3%
	91,000 and above	103	33.1%
12.	Are you earning?		
	Yes	83	26.5%
	No	228	73.5%

A frequency and percentage distribution of the demographic variables of the study participants is shown in Table 1. There were 311 participants between the ages of 18 and 25, 153 participants between the ages of 22 and 25, and 133 participants who were over the age of 26. 135 of them were male (43.4%), while 176 of them were female (56.6%). The majority of participants (98.1%) were single and identified as Muslims. With respect to the local language, most of the members

communicated in Urdu (65.3%), trailed by Punjabi (25.4%). 42.8 percent of participants lived in urban areas, while 39.9 percent lived in rural areas. Out of the three cities (Lahore, Islamabad, and Sargodha) included in the study, Islamabad had the most participants (80.7%). 38.6% of the participants had an M.Phil. while 37.3% had a BS (Hons.) degree. The Social Sciences faculty comprised the majority of participants (70.1%) in terms of faculty. A family income of at least 91,000 PKR was reported by the majority of participants (33.1%). At the time of the study, 73.5 percent of participants did not have a job.

Table 2

Frequency and Percentage Distributions of Health Promotion Literacy

Sr#	Items	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
HPL-1	I am eager to seek information on how to improve my self-health	39 (12.5%)	07 (2.3%)	30 (9.6%)	155 (49.8%)	80 (25.7%)
HPL-2	I always search online for any health information	24 (7.7%)	55 (17.7%)	53 (17.0%)	131 (42.1%)	48 (15.4%)
HPL-3	I follow health-related pages on social media (Instagram/Facebook)	21 (6.8%)	73 (23.5%)	58 (18.6%)	124 (39.9%)	35 (11.3%)
HPL-4	I always visit health professionals once a month for regular checkups	26 (8.4%)	102 (32.8%)	74 (23.8%)	66 (21.2%)	43 (13.8%)
HPL-5	I take antibiotics to treat myself when I am ill	24 (7.7%)	53 (17.0%)	41 (13.2%)	144 (46.3%)	49 (15.8%)
HPL-6	I am aware of the negative effects of antibiotics	28 (9.0%)	54 (17.4%)	40 (12.9%)	132 (42.4%)	57 (18.3%)
HPL-7	I do not eat any food/diet that has a bad impact on my health	29 (9.3%)	76 (24.4%)	69 (22.2%)	90 (28.9%)	47 (15.1%)
HPL-8	I always participate in health campaigns on social media to promote health literacy	15 (4.8%)	112 (36.0%)	81 (26.0%)	69 (22.2%)	34 (10.9%)
HPL-9	I try to manage my relationship with health professionals to seek better information	22 (7.1%)	83 (26.7%)	68 (21.9%)	107 (34.4%)	31 (10.0%)
HPL-10	My family has key concerns about enrolling children in the medical profession	17 (5.5%)	68 (21.9%)	50 (16.1%)	134 (43.1%)	42 (13.5%)
HPL-11	I do try to read columns/articles related to health literacy in newspapers	32 (10.3%)	71 (22.8%)	51 (16.4%)	144 (36.7%)	43 (13.8%)
HPL-12	During the pandemic, I searched to explore information related to COVID 19	26 (8.4%)	36 (11.6%)	48 (15.4%)	151 (48.6%)	50 (16.1%)
HPL-13	I am sure I have all the information I need to manage my health	17 (5.5%)	67 (21.5%)	72 (23.2%)	120 (38.6%)	35 (11.3%)
HPL-14	I am interested in reading the information/literature provided by	14 (4.5%)	35 (11.3%)	66 (21.2%)	149 (47.6%)	47 (15.1%)

	healthcare professionals					
HPL-15	I have trust in healthcare providers for health information	18 (5.8%)	36 (11.6%)	71 (22.8%)	148 (47.6%)	38 (12.2%)
HPL-16	I follow diet plans to manage my health	30 (9.6%)	72 (23.2%)	55 (17.7%)	100 (32.2%)	54 (17.4%)

The table 2 presents the frequency and percentage distributions of health promotion literacy (HPL) items among educated youth in Punjab, Pakistan, reflecting attitudes and behaviors related to health information-seeking and healthy practices. Notably, positive attitudes toward seeking health information and using online sources are observed, while engagement with health campaigns on social media appears limited. Regular visits to health professionals are infrequent, but there's recognition of antibiotic risks. Healthy dietary choices and awareness of health effects are apparent, though some engage in self-medication. Trust in healthcare providers and interest in their information is significant, emphasizing their role. Overall, there's a mix of proactive health behaviors, reliance on traditional media, and responsiveness to public health crises like COVID-19, suggesting a complex landscape of health awareness and practices among the studied youth population.

According to the objective one, i.e., to analyze the effects of gender on junk food behavior of educated youth. Notably, positive attitudes toward seeking health information and using online sources are observed, while engagement with health campaigns on social media appears limited.

Table 3

Frequency and Percentage Distributions of Junk Food Behavior

Sr #	Items	Always	Often	Sometimes	Never
JFB-1	I prefer junk food to homemade food	36 (11.6%)	68 (21.9%)	147 (47.3%)	60 (19.3%)
JFB-2	I prefer junk food because they are easily available	42 (13.5%)	77 (24.8%)	105 (33.8%)	87 (28.0%)
JFB-3	I prefer to eat junk food once in a week	70 (22.5%)	71 (22.8%)	121 (38.9%)	49 (15.8%)
JFB-4	I prefer to eat canned junk food	29 (9.3%)	48 (15.4%)	98 (31.5%)	136 (43.7%)
JFB-5	I prefer to eat junk food in restaurants	60 (19.3%)	83 (26.7%)	118 (37.9%)	50 (16.0%)
JFB-6	I spend most of my money to buy junk food	50 (16.0%)	71 (22.8%)	83 (26.7%)	107 (34.4%)
JFB-7	I eat junk food by seeing advertisements	35 (11.3%)	54 (17.4%)	113 (36.3%)	109 (35.0%)
JFB-8	I eat junk food with a distinctive odor	34 (10.9%)	61 (19.6%)	114 (36.7%)	102 (32.8%)
JFB-9	Before eating junk food, I read the nutrient fact label on the pack	45 (14.5%)	54 (17.4%)	85 (27.3%)	127 (40.8%)

JFB-10	I eat junk food for the sake of fashion	25 (8.0%)	35 (11.3%)	59 (19.0%)	192 (61.7%)
JFB-11	I know the negative effects of junk food on health	160 (51.4%)	68 (21.9%)	55 (17.7%)	28 (9.0%)
JFB-12	I eat junk food when I am stressed	35 (11.3%)	40 (12.9%)	85 (27.3%)	151 (48.6%)
JFB-13	I eat junk food while studying	45 (14.5%)	51 (16.4%)	113 (36.3%)	102 (32.8%)
JFB-14	I felt heartburn after eating junk food	50 (16.1%)	55 (17.7%)	122 (39.2%)	84 (27.0%)
JFB-15	I felt vomiting after eating junk food	35 (11.3%)	34 (10.9%)	93 (29.9%)	149 (47.9%)

The table 3 outlines the frequency and percentage distributions of participants' behaviors concerning junk food consumption across 15 items. It reveals preferences for junk food over homemade food, reasons behind such preferences, patterns of junk food consumption in various contexts, and responses to negative effects like heartburn and vomiting. The findings highlight both the allure and potential drawbacks of junk food consumption, shedding light on participants' choices based on availability, sensory triggers, health awareness, and emotional states. The interpretations offer insights into the complex landscape of participants' attitudes and behaviors toward junk food consumption, providing a comprehensive picture of their relationship with these dietary choices. According to the objective to analyze the relationships between educated youth's health promotion literacy and their healthy eating habits. The findings highlight both the allure and potential drawbacks of junk food consumption, shedding light on participants' choices based on availability, sensory triggers, health awareness, and emotional states.

Table 4

Frequency and Percentage Distribution of Eating Habits

Sr #	Items	SA	A	Neutral	DA	SD
EH-1	I eat 3 times a day	59 (19%)	51 (16.4%)	81 (26.0%)	103 (33.1%)	17 (5.5%)
EH-2	I eat Vegetables	82 (26.4%)	18 (5.8%)	49 (15.8%)	157 (50.5%)	5 (1.6%)
EH-3	I usually keep fruit at home	86 (27.7%)	13 (4.2%)	65 (20.9%)	142 (45.7%)	5 (1.6%)
EH-4	I eat whole grain breads for breakfast	60 (19.3%)	60 (19.3%)	75 (24.1%)	102 (32.8%)	14 (4.5%)
EH-5	I eat branded cereal for breakfast	38 (12.2%)	112 (36.0%)	56 (18.0%)	59 (19.0%)	46 (14.8%)
EH-6	I do prefer to drink milk for breakfast	51 (16.4%)	88 (28.3%)	55 (17.7%)	81 (26.0%)	36 (11.6%)

EH-7	I at least add one dairy product to my breakfast	56 (18.0%)	70 (22.5%)	65 (20.9%)	103 (33.1%)	17 (5.5%)
EH-8	I do prefer to eat honey	65 (20.9%)	66 (21.2%)	50 (16.1%)	109 (35.0%)	21 (6.8%)
EH-9	I do prefer to eat lentils/beans at lunch	41 (13.2%)	58 (18.6%)	88 (28.3%)	99 (31.8%)	25 (8.0%)
EH-10	I do prefer to eat salads at lunch	78 (25.1%)	42 (13.5%)	66 (21.2%)	113 (36.3%)	12 (3.9%)
EH-11	I do prefer to eat red meat/chicken in my lunch	87 (28.0%)	44 (14.1%)	52 (16.7%)	110 (35.4%)	18 (5.8%)
EH-12	I drink plenty of water	87 (28.0%)	26 (8.4%)	80 (25.7%)	102 (32.8%)	16 (5.1%)
EH-13	I do prefer to eat food with less sugar	89 (28.6%)	47 (15.1%)	59 (19.0%)	98 (31.5%)	18 (5.8%)
EH-14	I avoid eating oily food	73 (23.5%)	57 (18.3%)	92 (29.6%)	71 (22.8%)	18 (5.8%)
EH-15	I make homemade food along with me whenever I go outside	35 (11.3%)	88 (28.3%)	83 (26.7%)	58 (18.6%)	47 (15.1%)
EH-16	I follow my diet plan strictly	38 (12.2%)	87 (28.0%)	71 (22.8%)	65 (20.9%)	50 (16.1%)
EH-17	I feel my diet is healthier than my fellows	65 (20.9%)	53 (17.0%)	85 (27.3%)	86 (27.7%)	22 (7.1%)
EH-18	My food includes all the necessary proteins/vitamins	51 (16.4%)	45 (14.5%)	114 (36.7%)	91 (29.3%)	10 (3.2%)

Table 4 outlines the frequency and percentage distribution of participants' eating habits based on their responses, revealing insights into their dietary behaviors. The findings demonstrate diverse patterns: participants' meal frequency and composition, consumption of vegetables, fruits, whole grains, dairy products, and water, as well as preferences for specific foods like honey, lentils/beans, salads, and red meat/chicken. The interpretations highlight discrepancies in adherence to healthier dietary practices, including avoidance of oily food, following diet plans, and perceptions of diet quality compared to peers. Overall, the table provides a comprehensive snapshot of participants' eating behaviors, shedding light on their dietary choices and habits. According to the objective To examine the current level of health promotion literacy among educated youth The findings demonstrate diverse patterns: participants' meal frequency and composition, consumption of vegetables, fruits, whole grains, dairy products, and water, as well as preferences for specific foods like honey, lentils/beans, salads, and red meat/chicken.

Table 5
Chi-Square Test

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	2984.176[a]	1920	.037
Likelihood Ratio	1056.069	1920	1.000
Linear-by-Linear Association	4.229	1	.040
N of Valid Cases	311		

The chi-square test is utilized to decide if there is a measurably huge connection between two variables. In this instance, to see if there is a significant correlation between lower levels of junk food behavior and higher levels of health promotion literacy among educated youth. The Pearson Chi-Square test's p-value was less than 05, indicating a significant relationship between health promotion literacy and junk food consumption among educated youth. The Linear-by-Linear Association test, on the other hand, has a p-value that is lower than.05, indicating that the relationship between the two variables might not be strictly linear. Generally speaking, the aftereffects of the chi-square examination propose that more elevated levels of well-being advancement proficiency among taught youth in Punjab, Pakistan, are essentially connected with lower levels of low-quality food conduct. This finding emphasizes the need for targeted interventions to improve health literacy and reduce unhealthy eating behaviors among educated youth, as well as the significance of health promotion literacy in promoting healthier dietary choices.

Table 6
Hypothesis Testing

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	3975.260[a]	2352	.012
Likelihood Ratio	1214.946	2352	1.000
Linear-by-Linear Association	16.520	1	.000
N of Valid Cases	311		

A statistical analysis of the relationship between health promotion literacy and healthy eating habits among educated youth is presented in the chi-square table. The trial of affiliation proposes that there is a huge connection between these factors, explicitly showing that more elevated levels of well-being advancement proficiency among taught youth are essentially connected with higher adherence to smart dieting propensities. The Pearson chi-square test measurement is 3975.260 with 2352 levels of opportunity. The corresponding p-value is 012. At a 2-sided significance level of.05., this p-value indicates that the observed association between health promotion literacy and healthy eating habits is statistically significant. Consequently, we can dismiss the invalid speculation (H2) and presume that there is a huge relationship between well-being advancement proficiency and adherence to good dieting propensities among instructed youth.

Table 7

Correlation

	HPL	JFB	EH
HPL	1	-.117*	-.231**
JFB	-.117*	1	.138*
EH	-.231**	.138*	1

*.p<0.05; **p<0.01

The table presents correlations among three variables: Health Promotion Literacy (HPL), Junk Food Behavior (JFB), and Eating Habits (EH). HPL has a significant negative correlation with both JFB and EH, indicating that as HPL increases, both junk food behavior and eating habits tend to decrease. JFB, representing junk food behavior, exhibits a significant negative correlation with HPL, implying that as JFB increases, HPL decreases to some extent, and a significant positive correlation with EH, indicating that higher junk food behavior aligns with improved eating habits. EH, reflecting eating habits, displays a significant negative correlation with HPL, suggesting that as EH increases, HPL tends to decrease, and a significant positive correlation with JFB, implying that higher eating habits correspond to increased junk food behavior. The significance levels denote the likelihood of these correlations occurring by chance, with significance at the 0.05 and 0.01 levels indicating p-values less than 0.05 and 0.01, respectively.

Table 8

Regression Analysis

Regression Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.256[a]	.066	.060	12.94842

a. Predictors: (Constant), JFB, HPL

The summary of a regression model that looks at the relationship between two independent variables and a dependent variable is shown in the table: HPL and JFB, in addition to the constant term. The model's R-value of 0.256 is shown in the table, indicating a weak positive correlation between variables (independent and dependent). The R Square worth of 0.066 suggests that the two autonomous factors make sense of just 6.6% of the fluctuation in the reliant variable. The model's relatively weak goodness of fit is indicated by the adjusted R Square value of 0.060, which takes into account the number of predictors and sample size. The fact that the estimated value has a standard error of 12.94842 indicates that the predicted values have the potential to differ from the actual values by an average of 12.95 units.

7. Discussions

The food business has come a long way in the last several decades, but young adults still face a lot of danger from junk food and bad eating habits. Understanding the connections between food literacy, health promotion literacy, and good eating habits of young people was the driving force for this research.

According to the study on the relationship between health promotion literacy and healthy eating habits among educated youth in Punjab, Pakistan, there is a significant positive relationship between health promotion literacy and healthy eating habits and a significant negative relationship

between health promotion literacy and junk food behavior. Additionally, the study found a negative correlation between consuming junk food and healthy eating. These outcomes are in accordance with those of different examinations that have tracked down an association between well-being proficiency and solid ways of behaving, like eating a sound eating regimen (Finley, 2023).

Schools' cafeterias are hesitant because they promote unhealthy eating, are unaware of the risks, and only care about making money by selling as many products as possible. Comparing junk food served in cafeterias to nutritious lunch boxes made at home is ignorant on the part of the administration, parents, and managers of canteens. According to Arya & Mishra (2013), a child's cognitive and physical development may be harmed indefinitely as a result of poor nutrition, unhygienic eating, and imbalance (Arya & Mishra, 2013).

The literature on food literacy and health priorities that encourage healthy eating in the community (Wijayaratne, 2020). These foods are abundant in supermarkets, food stalls, and other retail locations (Glanz et al., 2016), a lack of knowledge about safe food preparation and cooking techniques caused poor food selection and a poor diet. Food education assists with getting to know good dieting practices and fabricating versatility to purchasers with various kinds of energy-dense

supplements and unfortunate food supplies at modest rates (Schwartz, 2019). Lee et al. (2022) observed that higher well-being proficiency was related to better dietary ways of behaving, including a higher utilization of soil products and a lower utilization of sweet beverages and inexpensive food. Paakkari and others Additionally, a positive correlation between healthy eating habits and health literacy among European adolescents was discovered. This study highlights the need to improve health literacy among young people to reduce junk food intake and create healthy eating habits. Public health campaigns and educational activities promoting health literacy and healthy eating can help achieve this goal.

8. Conclusion

The relationship between health promotion literacy, junk food behavior, and healthy eating habits is complex among educated young people in Punjab, Pakistan. Health literacy promotion helps individuals understand and make cognitive decisions about their health. Higher literacy levels about health contribute to healthier eating habits and a better understanding of the adverse effects of junk food, resulting in healthier diet choices. Despite schooling, young people consume junk food due to convenience, societal issues, and marketing methods, which is alarming. Many educated youngsters use their health promotion knowledge to adopt healthy eating habits. Customizing interventions to address varied factors influencing eating behaviors. It is crucial for cultivating a health consciousness and wellness culture among educated young in Punjab.

9. Recommendations

The recommendations should be considered to tackle these alarming food habits. The results and reports of different studies suggested launching health promotion literacy programs to improve nutrition knowledge, food packaging with labels, and critical evaluation of health literacy. Improving health promotion literacy empowers young people to eat healthy foods and adopt healthy eating habits. Knowledge related to nutrition should be included in school curricula to provide young people with the knowledge they need for healthy eating. Teaching balanced diets, the benefits of fruits and vegetables, the dangers of junk food, and practical skills like meal planning and preparation are all possible. Educating young people earlier can empower them to

make healthy food choices.

Conflict of Interest

There is no conflict of interest between the authors.

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