

# Effect of Health Promotion Programme on Health Behaviour, Health Perception and Self-Efficacy Among Adolescents

Ninu George<sup>1</sup>, Silji Sebastian<sup>2</sup>

<sup>1</sup>Postgraduate student, Department of Community Health Nursing, Lourdes College of Nursing, Kerala University of Health Sciences, Kerala, India

<sup>2</sup>Associate Professor, Lourdes College of Nursing, Kerala University of Health Sciences, Kerala, India

Corresponding Author: Ninu George

DOI: <https://doi.org/10.52403/gijhsr.20260201>

## ABSTRACT

**Objective:** Adolescence is the adaptation period, that connects childhood and adulthood. It's the time for laying cornerstone for good health. In this growing stage, adolescents may experience physical, cognitive and psychosocial changes. This affects their thoughts, decision making and interaction with others. It is essential to have health promoting behaviors and good health perception to lead a healthy lifestyle. Therefore, it should be noted that health promotion programmes have to be conducted to promote health behaviour, health perception and self-efficacy among adolescents, and that eventually affect their sustained positive health. The present study aimed to know the effect of health promotion programme on health behaviour, health perception and self-efficacy among adolescents at selected Higher Secondary Schools, Ernakulam.

**Materials and Methods:** The study was carried out among 70 adolescents who were studying in 11<sup>th</sup> standard of Govt. HSS in Ernakulam district. A quantitative pre-experimental one group pretest - posttest research design was opted for this study and thirty five sample were selected using non-probability purposive sampling technique from each school.

**Results:** The mean difference in the pretest and posttest score was calculated using paired t-test. The findings showed that, the mean posttest score of health behaviour, health perception and self-efficacy was higher than mean pretest score with a p-value=0.00.

**Conclusion:** The present study concluded that health promotion programme was very effective for adolescents to improve health behaviour, health perception and self-efficacy.

**Keywords:** Health promotion programme, Health behaviour, Health perception, Self-efficacy, Adolescents.

## INTRODUCTION

Every individual in the universe has to go through the various life stages of growth and development. Out of all stages of life, the most exciting and challenging is the adolescent period. It is a distinct phase of human growth and a crucial period for establishing the basis of good health. Adolescent phase is a period in human development that is characterized by change and transitions.<sup>1</sup>

Adolescents undergo rapid physical, mental, and social development between the ages of 10 and 19. This influences their emotions, thoughts, decision-making, and the way

they engage with their surroundings. They are more prone to get into unhealthy behaviour, changes in health perception and chance to experience decline in self-esteem and self-efficacy. As their abilities in logical reasoning, critical thinking, and problem-solving grow, adolescents begin to form their social identity. This stage presents not only opportunities but also a heightened vulnerability to risky behaviors, which can have lasting impacts, particularly on their health. For healthy growth and development, adolescents require access to information- such as comprehensive, age-appropriate health education. They also need health services that are accessible, fair, suitable, and effective, as well as environments that are safe and supportive. Additionally, it's essential that they have meaningful opportunities to be involved in shaping and implementing initiatives aimed at enhancing and maintaining their health. Expanding these opportunities is crucial for addressing the unique needs and rights of adolescents.<sup>2</sup>

Health promotion programmes play a role in creating healthier individuals, families, communities, workplaces and organizations. In this rapidly changing world, a health promotion program has a consequential role in modify the health status in a positive manner that helps to build up a better career or lifestyle on adolescents.<sup>3</sup>

Engaging in health-promoting habits like getting enough exercise and sleep, eating breakfast, maintaining a healthy weight, and avoiding smoking and binge drinking-supports well-being during adolescence and is linked to healthier behaviors later in adulthood.<sup>4</sup> These habits help prevent or postpone the development of numerous serious illnesses and chronic conditions in middle age, such as heart disease, disability, type 2 diabetes, and obesity.<sup>5</sup>

In many developing countries, boys and girls begin adolescence while undernourished, which increases their susceptibility to illness and premature death. Worldwide in 2016, more than one in six adolescents between the ages of 10 and 19

was classified as overweight. Physical inactivity is widespread across all WHO regions, with female adolescents showing higher levels of inactivity compared to their male peers.<sup>2</sup>

There are multiple reasons to explore how and why healthy behaviour engagement shifts during key stages of life course. First, because healthy behaviour learned early in life are more likely to persist into adulthood<sup>5</sup> and because such habits are aid in preventing or delaying chronic or serious illnesses, examining how these behaviours are maintained or lost over time may offer researchers in understanding chronic disease onset. Second, this type of research can assess whether personal and social resources available during adolescence exert an enduring or cumulative impact on healthy behaviours in later life stages.<sup>6</sup>

## OBJECTIVES

1. To compare the score of health behaviour before and after the health promotion programme.
2. To compare the score of health perception before and after the health promotion programme.
3. To compare the score of self-efficacy before and after the health promotion programme.
4. To find the association between pretest score of health behaviour, health perception and self-efficacy among adolescents with selected socio demographic variables.

## MATERIALS & METHODS

- Research approach: Quantitative approach.
- Research design: Pre-experimental one group pretest -posttest design.
- Variables
  - Independent variable : Health promotion programme
  - Dependent variable : Health behaviour, Health perception and Self efficacy
  - Socio-demographic variable: Age, gender, educational status of father,

educational status of mother, monthly family income, habits, screen time, presence of chronic disease, residing with family, previous source of information about healthy behaviour.

- Setting: The study was conducted among adolescents studying in 11<sup>th</sup> standard of Govt. HSS, Vennala and MGM GHSS, Nayathode
- Study Population: The study involved adolescents between the age group of 15 to 18 years in selected Higher Secondary Schools Ernakulam.
- Sample size: A total of 70 adolescents were included.
- Sampling Method: Non-probability purposive sampling technique

#### Inclusion criteria

The sample included adolescents;

- studying in 11<sup>th</sup> standard of Govt. HSS, Vennala and MGM GHSS, Nayathode, Ernakulam.
- between the age group of 15 to 18 years.
- who were willing to participate in the study.

#### Exclusion criteria

The sample excluded adolescents who were absent on the day of data collection.

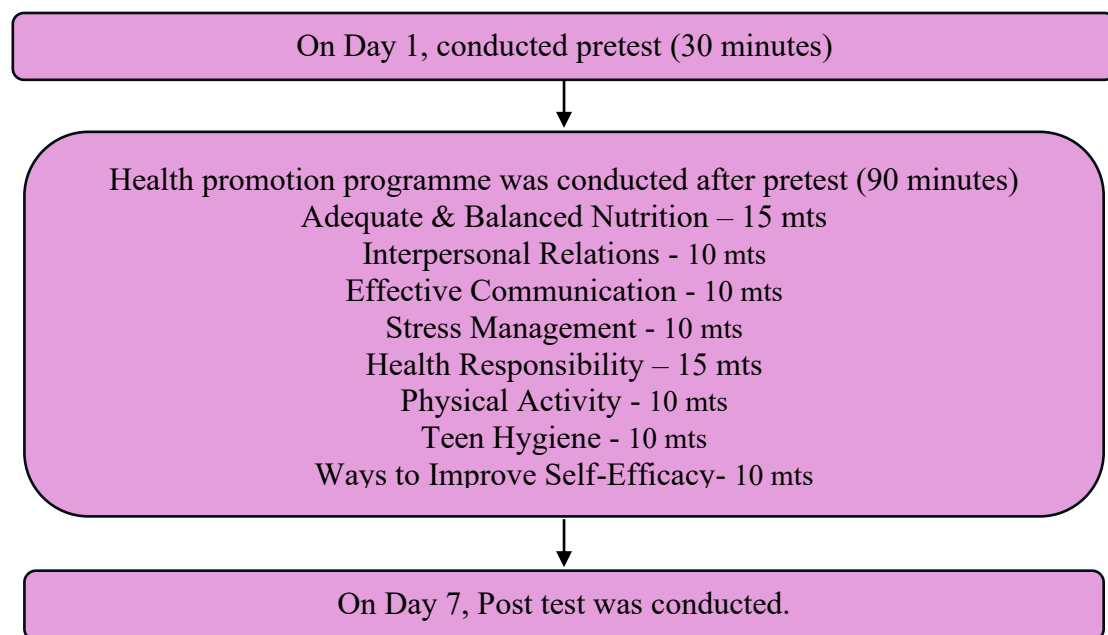
#### Outcome Measures

- Health-Promoting Lifestyle Profile II (HPLP II)
- The Perception of Health Scale
- Self-efficacy scale

#### Procedure

After obtaining permission from Scientific Review Committee and Institutional Ethics Committee, investigator obtained prior written permission from the Principal of the schools that were selected as per feasibility. The study was conducted in Government Higher Secondary Schools of Vennala and Nayathode. Participants for the study were selected as per inclusion and exclusion criteria and 35 adolescents studying in 11<sup>th</sup> standard of each school were selected using purposive sampling technique.

On the first day, the class teachers were informed prior to data collection process and investigator distributed parental permission form and assent form to the selected participants and further clarification were given to the sample regarding the data collection



### Statistical Analysis

The data were analysed and interpreted through the use of descriptive and inferential statistics by SPSS package version 20. The statistical significance was set at  $p < 0.05$ .

### Descriptive statistics

- Demographic variables would be analysed by frequency and percentage
- Mean and standard deviation would be used to assess the pretest and posttest scores

### Inferential statistics

- Paired 't' test would be used to compare pretest and post test scores
- Fisher's exact test would be used to find the association between pretest score of Health Promoting Lifestyle Profile – II, The perception of health scale and Self-efficacy scale with selected socio-demographic characteristics.

## RESULT

**Table 1: Description of sample characteristics**

Variables	Category	Frequency(f)	Percentage (%)
Age (Years)	15	4	5.7
	16	50	71.4
	17	16	22.9
Gender	Male	22	31.4
	Female	48	68.6
Education status of father	Professional degree	3	4.3
	Graduation	6	8.6
	Intermediate / Diploma	8	11.4
	High School	35	50
	Middle School	15	21.4
	Primary School	3	4.3
Education status of mother	Professional degree	6	8.6
	Graduation	12	17.1
	Intermediate / Diploma	18	25.7
	High School	28	40
	Middle School	5	7.1
	Primary School	1	1.4
Monthly family income (₹)	213814 and above	1	1.4
	106850 – 213813	1	1.4
	80110 – 106849	1	1.4
	53361 – 80109	9	12.9
	31978 – 53360	18	25.7
	10703 – 31977	29	41.5
	≤ 10702	11	15.7
	< 1 hour	17	24.3
Screen time	1-2 hours	25	35.7
	More than 2 hours	28	40
	Yes	1	1.4
Presence of chronic disease	No	69	98.6
	Yes	70	100
Residing with family	No	0	0
	Yes	0	0
Previous source of information	Mass media	18	25.7
	Magazine	5	7.2
	Peer group	1	1.4
	Family	31	44.3
	Health professionals	15	21.4

Among 70 participants, 71.4% were 16 years of aged adolescents. Females make up

the majority (68.6%), and males are 31.4%. with regard to parents' education, a higher

proportion of fathers (50%) and mothers (40%) have high school education. Monthly family income is mostly in the range of ₹10,703–31,977. For screen time, 40% use screens for more than 2 hours. Very few (1.4%) have a chronic disease; 98.6% do not. All participants (100%) live with

family. The main source of information for these participants is family (44.3%).

**Objective 1: To compare the score of health behaviour before and after the health promotion programme.**

**Table 2: Frequency and percentage distribution of pretest and posttest score on health behaviour**

Health behaviour	Pretest		posttest	
	Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
Poor	1	1.4	0	0
Moderate	33	47.1	1	1.4
Good	34	48.6	39	55.7
Excellent	2	2.9	30	42.9

The data show a significant improvement in health behaviour from pretest to posttest. Initially, nearly half of the participants demonstrated moderate (47.1%) and good (48.6%) levels of health behaviour, with only a small fraction exhibiting excellent (2.9%) or poor (1.4%) behaviour. Following the health promotion programme, a marked shift toward higher levels of health

behaviour is evident. More than half of the participants (55.7%) reached the good category, and a substantial proportion (42.9%) improved to the excellent level. Only 1.4% remained in the moderate category, and no participants were categorized as poor after the intervention (Table 2).

**Table 3: Mean and standard deviation of pretest and posttest score on health behaviour**

Subscales	Pretest		Posttest	
	Mean	SD	Mean	SD
Health responsibility	17.40	4.32	28.01	2.74
Physical activity	17.32	6.24	22.34	5.71
Nutrition	22.57	4.46	28.00	4.05
Spiritual growth	26.96	4.385	30.82	3.60
Interpersonal relations	27.14	4.47	31.08	2.78
Stress management	19.90	3.96	25.84	2.72
<b>Total</b>	<b>131.24</b>	<b>19.07</b>	<b>166.17</b>	<b>16.36</b>

The comparison of pretest and posttest scores across all subscales shows a marked improvement in health-promoting behaviours following the intervention. Mean scores increased in every domain, including health responsibility, physical activity, nutrition, spiritual growth, interpersonal relations, and stress management, indicating positive behavioural change across all areas. Notably, health responsibility and stress management showed substantial increases,

reflecting improved self-care and coping strategies among participants. In addition, the total mean score rose from 131.24 to 166.17, demonstrating a strong overall enhancement in health behaviour. The reduction in standard deviations across most subscales also suggests that post-test scores became more consistent, indicating that improvements were more uniformly experienced among participants (Table 2).

**Table 4: Effect of Health promotion programme on health behaviour among adolescents**

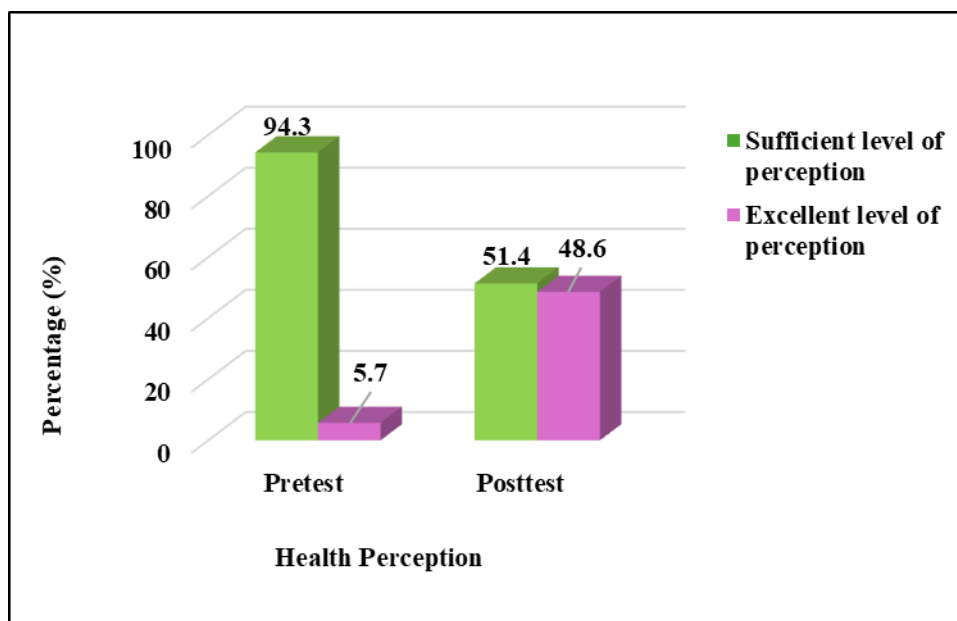
Variable	Score	Mean	SD	't'	Df	p value
Health behaviour	Pretest	131.24	19.07			
	Posttest	166.17	16.36	-11.03	69	0.00*

\* Significant at 0.01 level

The mean posttest of health behaviour score ( $166.17 \pm 16.36$ ) was higher than mean pretest health behaviour score ( $131.24 \pm 19.07$ ). The 't' value -11.03 ( $p=0.00$ ) was statistically significant at 0.05 level. It showed that health promotion programme

had significant effect on health behaviour among adolescents (Table 4).

**Objective 2: To compare the score of health perception before and after the health promotion programme.**



**Figure 1: Percentage distribution of pretest and posttest score on health perception.**

The bar chart shows a clear improvement in health perception after the intervention. In the pre-test, almost all participants (94.3%) had only a sufficient level of perception, while only 5.7% demonstrated an excellent level. However, after the intervention, the distribution shifted markedly. The proportion of participants with excellent perception rose sharply to 48.6%, while

those with sufficient perception dropped to 51.4%. This shift indicates that the intervention was effective in enhancing participants' health perception, moving nearly half of them from a basic to an excellent level of perception. Overall, the results show a positive and substantial improvement in health perception following the intervention (Figure 1).

**Table 5: Mean and standard deviation of pretest and posttest score on health perception**

Subscales	Pretest		Posttest	
	Mean	SD	Mean	SD
Center of control	12.47	2.67	14.98	3.11
Certainty	10.25	2.60	14.20	2.86
Importance of health	10.48	1.75	11.68	1.86
Self- awareness	12.01	1.68	12.34	1.75
<b>Total</b>	<b>45.22</b>	<b>4.89</b>	<b>53.21</b>	<b>5.42</b>

The comparison of pretest and posttest mean scores shows a clear improvement across all subscales of health perception following the intervention. Centre of control increased from 12.47 to 14.98, indicating better personal responsibility and confidence in managing one’s health. Certainty also showed a substantial rise from 10.25 to 14.20, reflecting increased clarity and confidence in health-related decisions. The importance of health improved moderately from 10.48 to 11.68, suggesting greater

prioritization of health among participants. Self-awareness increased slightly from 12.01 to 12.34, indicating a modest enhancement in understanding one’s own health needs and behaviours. The total score also rose from 45.22 to 53.21, demonstrating an overall improvement in health perception. Although standard deviations slightly increased in some areas, the consistent rise in mean values confirms that the intervention positively influenced participants’ health perceptions (Table 5).

**Table 6: Effect of health promotion programme on health perception among adolescents**

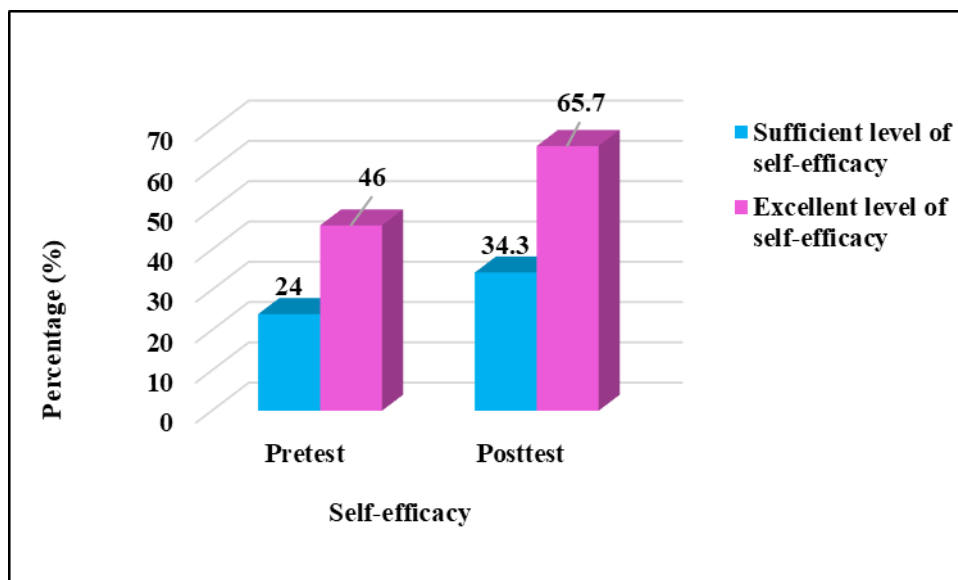
Variable	Score	Mean	SD	‘t’	df	p value
Health perception	Pretest	45.22	4.89	-8.55	69	0.00*
	Posttest	53.21	5.42			

\* Significant at 0.01 level

The mean posttest of health perception score (53.21 ±5.42) was higher than mean pretest health perception score (45.22 ±4.89). The ‘t’ value -8.55 (p=0.00) was statistically significant at 0.05 level. It showed that health promotion programme had significant

effect on health perception among adolescents (Table 6).

**Objective 3: To compare the score of self-efficacy before and after the health promotion programme.**



**Figure 2: Percentage distribution of pretest and posttest score on self-efficacy.**

The bar chart shows a clear improvement in self-efficacy levels after the intervention. In the pretest, only 24% of participants demonstrated a sufficient level of self-efficacy, while 46% had excellent self-efficacy. Following the intervention, the

proportion of participants with excellent self-efficacy increased markedly to 65.7%, while those with sufficient self-efficacy rose to 34.3%. This shift indicates that the intervention was effective in enhancing participants’ confidence and belief in their

ability to manage and perform health-related behaviours. Overall, the results reflect a significant positive improvement in self-efficacy from pretest to posttest (Figure 2).

**Table 7: Mean and standard deviation of pretest score on self-efficacy**

Subscales	Pretest		Posttest	
	Mean	SD	Mean	SD
General self-efficacy	56.48	5.96	64.52	7.06
Social self-efficacy	18.77	3.01	23.74	3.85
<b>Total</b>	<b>75.25</b>	<b>6.79</b>	<b>88.27</b>	<b>8.63</b>

The comparison of pretest and posttest scores shows a marked improvement in both components of self-efficacy following the intervention. General self-efficacy increased from a mean of 56.48 to 64.52, indicating greater confidence in one’s ability to handle personal challenges and tasks. Social self-efficacy also improved significantly, rising from 18.77 to 23.74, suggesting enhanced confidence in social interactions and the

ability to function effectively in social situations. This overall improvement is reflected in the total score, which increased from 75.25 to 88.27, demonstrating a substantial enhancement in overall self-efficacy. Although standard deviations increased slightly, the consistent rise in mean scores confirms that the intervention had a positive effect on strengthening participants’ self-efficacy (Table 7).

**Table 8: Effect of Health promotion programme on self-efficacy among adolescents**

Variable	Score	Mean	SD	‘t’	Df	p value
Self-efficacy	Pretest	75.25	6.79			
	Post test	88.27	8.63	-10.42	69	<b>0.00*</b>

The mean posttest of self-efficacy score ( $88.27 \pm 8.63$ ) was higher than mean pretest self-efficacy score ( $75.25 \pm 6.79$ ). The ‘t’ value -10.42 ( $p=0.00$ ) was statistically significant at 0.05 level. It showed that health promotion programme had significant

effect on self-efficacy among adolescents (Table 8).

**Objective 3: Association between pretest score of health behaviour, and self-efficacy among adolescents and selected socio demographic variables.**

**Table 9: Association of pretest score on health behaviour with screen time.**

Variable		Health behaviour				Fisher’s exact value	p value
		Poor	Moderate	Good	Excellent		
Screen time	Below 1 hour	0	4	12	1	6.43	0.05*
	Above 1 hour	1	29	22	1		

\* Significant at 0.05 level

The Fisher’s exact test shows a statistically significant association between screen time and health behaviour ( $p = 0.05$ ). Students who spend less than 1 hour on screen time per day show better health behaviour, with most falling in the good category and none in the poor category. In contrast, those with

more than 1 hour of screen time have lower levels of health behaviour, with a noticeable increase in moderate levels and the presence of poor behaviour. This indicates that reduced screen time is associated with more positive health behaviours among students (Table 9).

**Table 10: Association of pretest score on self-efficacy with gender.**

Variable		Self-efficacy		Fisher's exact value	p value
		Sufficient	Excellent		
Gender	Male	17	5	4.04	0.05*
	Female	45	3		

\* Significant at 0.05 level

The Fisher's exact test indicates a statistically significant association between gender and self-efficacy ( $p = 0.05$ ). Among males, a higher proportion exhibit excellent self-efficacy compared to females. While most females fall under the sufficient self-efficacy category, relatively fewer demonstrate excellent levels. This suggests that male students tend to show higher self-efficacy than female students in this sample (Table 10).

## DISCUSSION

The present study findings revealed that, after the implementation of the health promotion programme, there were significant increase in terms of all variables. Total mean score of health behaviour rose from  $(131.24 \pm 19.07)$  to  $(166.17 \pm 16.36)$  and the 't' value was -11.03. Total mean score of health perception changed from  $(45.22 \pm 4.89)$  to  $(53.21 \pm 5.42)$  and the 't' value was -8.55. Total mean score of self-efficacy increased from  $(75.25 \pm 6.79)$  to  $(88.27 \pm 8.63)$  and the 't' value was -10.42. The findings of the present study were well supported by a randomized controlled trial conducted by Erenoglu R et al. (2018) to determine the effect of the health promotion program for young people on health behaviors, health perception, and self-efficacy levels among 37 students. The data were collected from the two groups by using a personal information form, the Healthy Lifestyle Behavior Scale-II (HLBS-II), the Perception of Health Scale, and the Self-Efficacy Scale. Result showed that, after the implementation of the health promotion programme, there was significant increase in the experimental group compared to the control group in terms of all variables. Total mean score of health behavior rose from  $(137.89 \pm 20.27)$  to  $(146.89 \pm 22.07)$ , for health perception it changed from  $(49.63$

$\pm 5.94)$  to  $(54.36 \pm 5.57)$  and self-efficacy score increased from  $(81.57 \pm 10.56)$  to  $(92.73 \pm 12.45)$ .<sup>7</sup>

## CONCLUSION

Adolescent health care is challenging compared to that of children and adults, due to their rapidly evolving physical, intellectual and emotional development. The present scenario flashes light on many adult diseases affecting health of adolescents. This is due to lack of awareness regarding health promoting behaviours, decreased health perception and low self-efficacy. This present study clearly showed that health promotion programme as a routine intervention which provides the most effective framework to support and sustain early intervention activities that modify the healthy behaviour of adolescents.

### Declaration by Authors

**Ethical Approval:** Approved

**Acknowledgement:** None

**Source of Funding:** None

**Conflict of Interest:** The authors declare no conflict of interest.

## REFERENCES

1. Adolescent development. Available from: <https://my.clevelandclinic.org/health/articles/7060-adolescent-development>.
2. Adolescent and young adult health. Available from: <https://www.who.int/news-room/fact-sheets/detail/adolescents-health-risks-and-solutions>.
3. Lau RR, Quadrel MJ, Hartman KA. Development and change of young adults' preventive health beliefs and behavior: influence from parents and peers. *J Health Soc Behav.* 1990;31(3):240–259.
4. Resnick MD, Bearman PS, Blum RW, Bauman KE, Harris KM, Jones J, et al. Protecting adolescents from harm: findings from the National Longitudinal Study on

- Adolescent Health. JAMA. 1997;278(10):823–32.
5. Telama R, Yang X, Laakso L, Viikari J. Physical activity in childhood and adolescence as a predictor of physical activity in young adulthood. *Am J Prev Med.* 1997;13(4):317–23.
  6. Frech A. Healthy behavior trajectories between adolescence and young adulthood. *Adv Life Course Res.* 2012;17(2):59–68.
  7. Erenoglu R. The effect of the health promotion program for young people on health behaviors, health perception, and self-efficacy levels: a randomized controlled trial. *Int J Caring Sci [Internet].* 2019 12(2):1203. Available from: [www.internationaljournalofcaringsciences.org](http://www.internationaljournalofcaringsciences.org).
- How to cite this article: Ninu George, Silji Sebastian. Effect of health promotion programme on health behaviour, health perception and self-efficacy among adolescents. *Gal Int J Health Sci Res.* 2026; 11(2): 1-10. DOI: <https://doi.org/10.52403/gijhsr.20260201>

\*\*\*\*\*