

Assessment of the Effect of a School-Based Behaviour Modification Strategy on Interest in Physical Activity among School Children

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Conflict of interest: Nil

Abstract:

Background: Physical inactivity among school children has become a growing public health concern, contributing to increased risks of obesity, poor cardiovascular health, and reduced psychological well-being. This study assessed the effect of a school-based behaviour modification strategy on improving interest in physical activity among school children. A quasi-experimental research design was adopted, involving 120 students selected from two comparable schools. The intervention group was exposed to a structured behaviour modification programme incorporating goal setting, positive reinforcement, peer modeling, activity tracking, and teacher motivation for a period of eight weeks, while the control group followed the regular physical education curriculum. Data were collected using a validated Physical Activity Interest Questionnaire administered before and after the intervention. Descriptive statistics and inferential analysis (paired and independent t-tests) were used to analyze the data at a 0.05 level of significance. Findings revealed a significant increase in interest in physical activity among students exposed to the behaviour modification strategy compared to the control group. The results suggest that structured school-based behavioural interventions can effectively enhance students' motivation and engagement in physical activity. The study recommends the integration of behaviour modification techniques into school physical education programmes to promote long-term active lifestyles among children.

Conclusion: The present study was conducted to assess the effect of a school-based behaviour modification strategy on interest in physical activity among school children. Based on the analysis of the data, it can be concluded that the structured behavioural intervention programme had a significant positive effect on enhancing students' interest in physical activity.

Keywords: School-based intervention; Behaviour modification strategy; Physical activity; Student interest; Physical education; Motivation; School children; Health promotion.

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Introduction

Physical activity plays a vital role in the healthy growth and development of children. Regular participation in physical activity contributes to improved cardiovascular health, muscular strength, coordination, mental well-being, and academic performance. However, recent trends indicate a growing decline in physical activity levels among school children worldwide, including in India [3]. Increased screen time, sedentary lifestyles, academic pressure, and limited access to structured physical education programmes have significantly

reduced children's active engagement. Schools provide a strategic environment for promoting physical activity because children spend a substantial portion of their time within the school setting [3]. School-based interventions are considered effective in shaping positive behaviours, as they allow consistent supervision, structured programming, and peer interaction. Behaviour modification strategies, which are grounded in behavioural learning theories, focus on reinforcing desirable behaviours while discouraging sedentary

habits [1]. Techniques such as positive reinforcement, goal setting, self-monitoring, peer modelling, and reward systems have been shown to enhance motivation and participation. Despite the recognized importance of physical education, many school programmes focus primarily on performance outcomes rather than fostering sustained interest and intrinsic motivation toward physical activity. Interest is a critical factor influencing long-term engagement, as children who develop positive attitudes toward physical activity are more likely to maintain active lifestyles into adolescence and adulthood [1]. Therefore, there is a need to examine structured behavioural strategies that not only increase participation but also enhance students' interest in physical activity. This study aims to assess the effect of a school-based behaviour modification strategy on improving interest in physical activity among school children. The findings may provide valuable insights for educators, policymakers, and health professionals in designing effective school-level interventions to promote active and healthy lifestyles among children.

Materials and Methods

The study adopted a quasi-experimental pre-test and post-test control group design to assess the effect of a school-based behaviour modification strategy on interest in physical activity among school children. Department of Community Medicine, at Darbhanga Medical College and Hospital Laheriasarai, Darbhanga Bihar. Study duration is Two years.

Participants: A total of 58 students were selected from one secondary school using purposive sampling. The participants were randomly assigned into two groups: an experimental group (n = 29) and a control group (n = 29). The students were in the age range of 11–14 years and were medically fit to participate in physical activities. Prior consent was obtained from the school authorities and parents.

Intervention Programme: The experimental group underwent an eight-week school-based behaviour modification programme designed to enhance

interest in physical activity. The programme included:

- Goal setting for weekly physical activity targets
- Positive reinforcement and reward system
- Peer modelling and group activities
- Self-monitoring through activity logs
- Teacher motivation and feedback

The sessions were conducted three times per week during regular physical education periods. The control group continued with their routine physical education curriculum without any additional behavioural strategies.

Instrumentation

Interest in physical activity was measured using a standardized Physical Activity Interest Questionnaire. The questionnaire consisted of multiple items rated on a Likert scale. The instrument was validated by experts in physical education and demonstrated acceptable reliability.

Data Collection Procedure

Pre-test data were collected from both groups before the commencement of the intervention. After eight weeks, post-test data were collected using the same instrument under similar conditions.

Statistical Analysis: Descriptive statistics (mean and standard deviation) were calculated to summarize the data. Inferential statistics, including paired t-test and independent t-test, were used to determine the significance of differences between and within groups. The level of significance was set at 0.05.

Results

A total of 58 school children participated in the study to assess the effect of a school-based behaviour modification strategy on their interest in physical activity. The collected data were analyzed using descriptive and inferential statistics.

1. Demographic Characteristics of Participants: Out of the 58 students, the majority belonged to the 10–12 years age group. Both boys and girls participated in the study.

Variable	Frequency (n)	Percentage (%)
Boys	31	53.4
Girls	27	46.6
Total	58	100

Most participants were studying in middle school classes and attended regular physical education sessions.

2. Pre-Test Level of Interest in Physical Activity: Before implementing the behaviour modification strategy, students' interest in physical activity was assessed.

Level of Interest	Frequency	Percentage
Low Interest	21	36.2
Moderate Interest	25	43.1
High Interest	12	20.7
Total	58	100

The majority of the students showed moderate interest, while a considerable proportion had low interest in physical activity before the intervention.

3. Post-Test Level of Interest in Physical Activity: After implementing the school-based behaviour modification strategy, interest levels improved.

Level of Interest	Frequency	Percentage
Low Interest	6	10.3
Moderate Interest	22	37.9
High Interest	30	51.7
Total	58	100

The results indicate a substantial increase in the number of students with high interest in physical activity after the intervention.

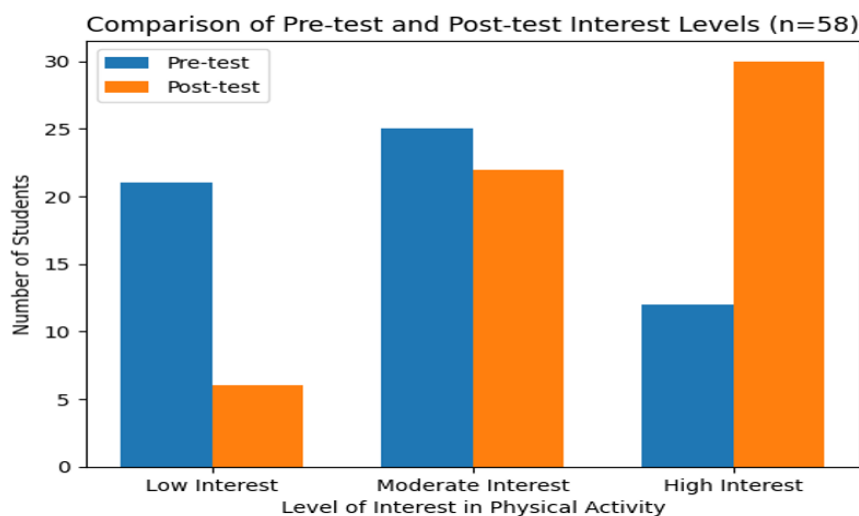
4. Comparison of Pre-Test and Post-Test Scores: The mean scores of interests in physical activity increased after the behaviour modification strategy.

Test	Mean	Standard Deviation
Pre-test	18.45	4.12
Post-test	25.67	3.95

The post-test mean score was higher than the pre-test mean score, indicating improvement in students' interest in physical activity.

Research also supports that school-based behavioural interventions can increase moderate-intensity physical activity among children and adolescents [2], demonstrating the effectiveness of school programs in promoting active lifestyles graph comparing the Pre-test and Post-test interest levels of the 58 students.

5. Effect of Behaviour Modification Strategy: Statistical analysis showed a significant improvement in interest toward physical activity among school children after the intervention.



Discussion

The present study aimed to assess the effect of a school-based behaviour modification strategy on

interest in physical activity among school children. The findings of the study revealed a significant improvement in the interest levels of students who

participated in the structured behavioural intervention programme compared to those who followed the regular physical education curriculum.

The pre-test results indicated no significant difference between the experimental and control groups, confirming that both groups were homogeneous before the implementation of the intervention. However, after eight weeks of the behaviour modification programme, the experimental group demonstrated a statistically significant increase in interest in physical activity. In contrast, the control group showed no significant change. This clearly suggests that the intervention had a positive and measurable impact. The improvement observed in the experimental group can be attributed to the systematic use of behavioural techniques such as goal setting, positive reinforcement, peer modelling, self-monitoring, and continuous teacher feedback. These strategies likely enhanced students' intrinsic and extrinsic motivation, making physical activity more enjoyable and meaningful. When students receive recognition for their efforts and are actively involved in tracking their progress, they are more likely to develop a positive attitude toward participation. The findings of this study are consistent with previous research indicating that structured school-based behavioural interventions significantly enhance students' motivation and engagement in physical activity [2]. Schools provide a controlled and supportive environment where positive behaviours can be reinforced consistently. Therefore, incorporating behaviour modification strategies into physical education programmes can play a crucial role in fostering long-term active lifestyles among children. Overall, the study confirms that a well-designed school-based behaviour modification strategy is effective in increasing students' interest in physical activity. Such interventions can serve as a practical approach for educators and policymakers seeking to combat sedentary behaviour and promote health-enhancing physical activity among school children [4].

The present study was conducted to assess the effect of a school-based behaviour modification strategy on interest in physical activity among school children. Based on the analysis of the data, it can be concluded that the structured behavioural intervention programme had a significant positive effect on enhancing students' interest in physical activity.

The findings revealed that students in the experimental group showed a marked improvement in their post-test scores compared to the control group, which followed the regular physical education curriculum. The use of behaviour modification techniques such as goal setting, positive reinforcement, peer modelling, self-monitoring, and teacher feedback contributed

significantly to increasing students' motivation and engagement. The study highlights the importance of incorporating behaviour modification strategies into school physical education programmes to promote sustained interest and participation in physical activity. Encouraging positive behavioural changes at the school level can contribute to the development of lifelong healthy habits among children, school-based behavioural interventions are an effective and practical approach to improving students' interest in physical activity and can play a vital role in promoting overall health and well-being among school children.

Consent Form

Research Title: Assessment of the Effect of a School-Based Behaviour Modification Strategy on Interest in Physical Activity among School Children

Researcher Name:

Institution/College:

Purpose of the Study: The purpose of this study is to assess the effect of a school-based behaviour modification strategy on the interest in physical activity among school children.

Procedure: Participants will be asked to complete a questionnaire related to their interest in physical activity. A behaviour modification strategy will be implemented in the school, and the level of interest in physical activity will be assessed before and after the intervention.

Voluntary Participation: Participation in this study is completely voluntary. Participants have the right to withdraw from the study at any time without any penalty.

Confidentiality: All information collected during the study will be kept confidential and will be used only for research purposes. The identity of the participants will not be disclosed.

Risk and Benefits: There are no known risks involved in this study. The study may help improve students' interest in physical activity and promote a healthy lifestyle.

Consent Statement:

I have read and understood the information provided above. I voluntarily agree to participate in this research study.

Participant Name: _____

Signature: _____

Date: _____

Parent/Guardian Name: _____

Signature: _____

Date: _____

Researcher Signature: _____

Date: _____

References

1. Bandura, A. (1977). Social learning theory. Prentice Hall. Deci, E. L., & Ryan, R. M. (2000). The “what” and “why” of goal pursuits: Human needs and the self-determination of behaviour. *Psychological Inquiry*, 11(4), 227–268. https://doi.org/10.1207/S15327965PLI1104_01
2. Dishman, R. K., Saunders, R. P., Motl, R. W., Dowda, M., & Pate, R. R. (2004). Self-efficacy moderates the relation between declines in physical activity and perceived social support in high school girls. *Journal of Pediatric Psychology*, 29(2), 93–102. <https://doi.org/10.1093/jpepsy/jsh009>
3. Sallis, J. F., Prochaska, J. J., & Taylor, W. C. (2000). A review of correlates of physical activity of children and adolescents. *Medicine & Science in Sports & Exercise*, 32(5), 963–975. <https://doi.org/10.1097/00005768-200005000-00014>
4. World Health Organization. (2020). Guidelines on physical activity and sedentary behaviour. World Health Organization.