



## Influence of Intervention Program to Foster Physical Resilience Among Adolescents

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### ABSTRACT

Physical resilience refers to the body's capacity to adapt to arising challenges, maintain stamina and strength in the face of demands, (Gill Mathias 2 017).

During adolescent period there is a sudden internal and external change in the body where most of the adolescents are unaware of these changes leading them towards a state of consciousness which in turn lead to stress and rebellious behaviours.

Physical resilience is the ability of an adolescent to maintain a good body image by understanding the importance of nutrition and physical activity to overcome their bodily changes in a positive way.

Kriemleretal (2016) States that Physical inactiveness, low fitness and lack of awareness on nutrition in adolescents are raising health burdens worldwide. Physical inactivity in adults has been established as one of the leading established risk factors for mortality and burden of disease. Moreover, a high fitness has been shown to prolong life and even seems to be able to counterbalance mortality.

Therefore, the present study was taken up to assess the influence of an intervention program to nurture physical resilience skills of selected adolescents.

A total of 100 adolescents in the age group of 13-16 years were identified for the study. A Self developed Physical Resilience – Subset of Adolescent Resilience scale was administered to assess the physical resilience skills. The adolescents were further divided into experimental and control groups having 50

participants in each group. The experimental group was exposed to an intervention programme for a period of six months to nurture Physical Resilience skills. The study concluded that, intervention programme was very effective in enhancing the Physical Resilience skills among adolescents.

**Keywords:** *adolescents, physical resilience, nutrition, physical activity.*

### INTRODUCTION

Physical resilience refers to the body's capacity to adapt to arising challenges, maintain stamina and strength in the face of demands, (Gill Mathias 2 017).

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Kriemleretal (2016) States that Physical inactiveness, low fitness and lack of awareness on nutrition in adolescents are raising health burdens worldwide. Physical inactivity in adults has been established as one of the leading established risk factors for mortality and burden of disease. Moreover, a high fitness has been shown to prolong life and even seems to be able to counterbalance mortality. Both the

physical fitness and mental fitness when work together improves individual performance. Hence maintains of physical health becomes very important.

During this period most of the adolescents are unaware of these changes due to Lack of accurate information, absence of proper guidance, parent's ignorance, lack of skills and insufficient Access of health care services are the major barriers which lead adolescents towards a state of consciousness which in turn lead to stress and rebellious behaviours among the adolescents.

Hence adolescents need to be given proper awareness about the importance of the bodily changes, the nutritional care and maintaining of good physical health to become physically strong. Equipping them with self-disciplined skills for the practice of Healthy Diet, Exercise, good Hobbies/Activities, and proper Sleep Routine etc helps them to have an endured physical health which in turn helps them to adapt to arising challenges, maintain stamina and strength in the face of demands.

As Adolescents are the futures of the nation and forming a major demographic and economic force it's highly important to nurture physical resilience traits among the adolescents.

In view of the above discussion, the present study has made an attempt to find out the influence of an intervention program to nurture physical resilience skills among adolescents in Bangalore city.

## METHODOLOGY

- **Aim:** To foster Physical Resilience skills among adolescents through intervention with suitable modules
- **Objectives:**
  - To assess Physical Resilience among adolescents
  - To develop modules to impart Physical Resilience skills through intervention

- To assess the intervention influences on physical resilience
- **Hypotheses:**
  - There is no significant difference between the pre and post intervention responses of the following sub-dimension of physical resilience among the respondents
- A. Physical health
- B. nutritional health
- C. overall Physical Resilience

## RESEARCH DESIGN

### 1. IDENTIFICATION OF TOOL

- A thorough review of literature was carried out to identify the most suitable scale to assess physical resilience among the adolescents. The review of literature and the market survey of scale reveal non-availability of physical resilience scale for the adolescents. Hence the researcher developed physical resilience scale. The reliability of the scale with Cronbach's alpha of 0.9430 and 0.9390 indicate excellent reliability of the scale.
- A simple socio demographic questionnaire was developed to obtain socio demographic details of the respondents.

### 2. IDENTIFICATION OF SCHOOL

A thorough Survey of schools in Bangalore city was carried out. The schools which showed keen interest in the intervention program were listed. Ramana shree Udaya School was selected as experimental group and Shashedari Puram high School was selected as the control group.

### 3. DEVELOPMENT OF MODULES

A thorough review of literature was carried out to develop suitable modules to impart physical resilience skills. The modules were developed on Physical health and nutritional health. Intervention was given on the developed modules.

### 4. STATISTICAL ANALYSIS

The data obtained was compiled and was subjected to suitable statistical analysis.

## Findings of the Study

**Table 1 Socio Demographic Variables of the Respondents**

Characteristics	Category	Experimental group		Control group	
		No	%	No	%
Age group (years)	13 years	9	18	11	22
	14 years	15	30	17	34
	15 years	15	30	17	34
	16 years	11	22	5	10
	Total	50	100	50	100

Gender	Boys	25	50	25	50
	Girls	25	50	25	50
	Total	50	100	50	100
Ordinal position	First born	25	50	24	48
	Second born	14	28	15	30
	Third born	6	12	9	18
	Later born	5	10	2	4
	Total	50	100	50	100
Number of siblings	Nil	6	12	6	12
	One	15	30	20	40
	Two	16	32	16	32
	Three	6	12	6	12
	More the three	7	14	2	4
	Total	50	100	50	100

**Table - 1** depicts the socio demographic variables of the respondents. The analysis of the data clearly shows that majority and equal percentage of both experimental (30% each) and control group (34% each) of the respondents were either 14 or 15 years. The next highest percentages of experimental group respondents (22%) were 16 years old, whereas control group respondents (22%) were in the age group of 13 years old.

When the gender as a factor was considered both the experimental and control group respondents had equal distribution of Boys and Girls (50.0% each).

When the ordinal position of the respondents was considered, majority of both the experimental and control group respondents (50% & 48% respectively) were first born.

The statistical analysis of number of respondent's data shows that majority of both the experimental and control group respondents (30% & 40% respectively) had one sibling; the next highest percentage (32%) of them had two siblings.

**Table –2 Comparisons of Pre and Post Test Physical Health Scores among the Experimental group**

Physical Resilience	Response	Mean	SD	Significance of F value
Physical Health	Pre	6.40	1.51	88.9038**
	Post 1	11.86	2.62	
	Post 2	10.84	2.25	

**\*\* Significant at 1% level**

**Table 2** – depicts the pre and post test physical health scores among the experimental group.

When the above data was subjected to statistical analysis, the results revealed that the mean score of the post test 1 (11.86) was higher than the pre-test (6.40) mean score indicating the intervention program was effective in bring changes in the responses of the adolescents.

Further the table reveals that mean score of post test 2 (10.84) was slightly lower than post-test 1 (11.86) however, its higher than the pre-test scores indicating the retention effect of intervention program. The statistical analysis of F value showed a strongly significance difference (88.9038\*\*) at 1 percent level.

Ram Bilas Jainetal (2013) study on Assessment of self-awareness among rural adolescents is in line with the present study. The study concluded that Adolescents greatly lack correct information related to their bodies' physiological and sexual changes. There is an urgent need for regular adolescent friendly information, education and communication activities covering different aspects of adolescent knowledge needs/problem.

**The probable reason could be:** During this period most of the adolescents are unaware of the puberty changes due to Lack of accurate information, absence of proper guidance from parents and other adults, lack of skills etc. This unawareness of the changes in the body may lead adolescents to adopt unhealthy strategies to manage these changes

#### **Validation:**

Hence the hypothesis (1a) stating that there is no significant difference between the pre and post intervention responses on Physical health of the experimental group respondents was rejected.



**Table –3 Comparisons of Pre and Post Test nutritional care Scores among the Experimental group**

Physical Resilience	Response	Mean	SD	Significance of F value
Nutritional health	Pre	7.56	1.55	91.5593**
	Post 1	13.42	2.73	
	Post 2	11.12	2.11	

**Table 3** –depicts the pre and post-test Nutritional care scores among the experimental group. When the above data was subjected to statistical analysis, the results revealed that the mean score of the post-test 1 (13.42) was higher than the pre-test (7.56) mean score indicating the intervention program was effective in bring changes in the responses of the adolescents. Further the table reveals that mean score of post-test2 (11.12) was slightly lower than post-test 1 (13.42) however, its higher than the pre-test scores indicating the retention effect of intervention program. The statistical analysis of F value showed a strongly significance difference (91.5593\*\*) at 1 percent level.

**Validation:**

Hence the hypothesis (1b) stating that there is no significant difference between the pre and post intervention responses on Nutritional care of the experimental group respondents was rejected.

**Table – 4 Comparisons of Pre and Post Test total physical resilience Scores among the Experimental group**

Physical Resilience	Response	Mean	SD	Significance of F value
	Pre	13.96	2.42	154.0571**
	Post 1	25.28	4.07	
	Post 2	21.98	3.25	

The activities given as a part of the intervention program and discussed in table 2 and 3 helps the adolescents understand that to be physically fit and mentally stable, one should follow daily routine such as daily physical activity and balanced nutritional plan which helps them to handed their pubertal changes in a positive manner

Table 5 – examines the pre and post-test of overall Physical Resilience scores among the experimental group respondents. When the above data was subjected to statistical analysis, the results revealed that the mean score of the post-test 1 (25.28) was higher than the pre-test (7.56) mean score indicating the intervention program was effective in bring changes in the responses of the adolescents. Further the table reveals that mean score of post-test2 (11.12)

was slightly lower than post-test1 (13.96) however, its higher than the pre-test scores indicating the retention effect of intervention program. The statistical analysis of F value showed a strongly significance difference (154.0571\*\*) at 1 percent level.

**Validation:**

- Hence the hypothesis (1c) stating that There is no significant difference between the pre and post intervention results of total Physical Resilience was rejected

**CONCLUSION**

Results show that the pre-test and post-test results of the sub-dimensions and total physical resilience revealed that the intervention program was very effective in nurturing the physical resilience skills among the respondents.

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