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# **Inculcating Resilience through Physical Activity among Children**

Volume: 6	P.Sindhuja Manisha Kamini
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Issue: 4	PSG College of Arts & Science, Coimbatore, Tamil Nadu, India
Month: April	Abstract
	Background
Year: 2019	Resilience can be articulated as a bounce-back mechanism when encountered in adverse situations, which a well-formed mind and healthy body could develop. Physical activity is potent source for building a healthy body and promoting overall wellbeing including psychological activities like
ISSN: 2321-788X	resilience. Child's mind and body are the classics for mental and physical development. Inculcating resilience in the early days paves the way for better mental health Aim: To find out whether resilience can be inculcated through physical activity. Methods & Tools: 157 children between the
Received: 16.03.2019	age of 7 and 11 were selected included in the study by selecting through random sampling method. Tools used are Physical activity questionnaire (Kowalski, K., Crocker, P., & Donen, R.) and CYRM
Accepted: 30.03.2019	12 (Dr Michael Ungar). Results: The correlation value found as the relationship between physical activity and resilience are .974**which is significant at 0.01 level 2-tailed Conclusion: The study
Published: 02.04.2019	to less physically active children. In other words, physical activity and resilience is positively correlated among children.

Keywords: Physical activity, Resilience, Psychological Well-being, Inculcating Physical Activity, Emotional Well-being, Psychological Activities

#### Introduction

Child's mind and body are the classics for mental and physical development. As development deals more with qualitative changes that comprise of the prominent characteristics which is formed with the growth that is more of quantitative changes in the physical body. However, growth and development are the consecutive processes both have their own significance. Development is of four major forms Physical, cognitive, emotional and social forms. All the forms of development are required for a child in their earlier period of the stage the more that will be Significant for their overall Well-Being. Children are in the developmental stage where Well-Being is not just merely the absence physical and mental issues, health should not be quantified with appropriate height and weight, their cognition should not be determined only with their academic achievements.

Children are undergoing the experience of embodiment skills and qualities which are inevitable. A little of maturity, sentiment, empathy, are traced with a child if keenly absorbed. The hardships children undergo in their early period of life may become strong under lying experience that converts into a real power to face the adverse situation in the later period of their life. In this modern, complex society, it has become common to identify certain children as atrisk of failing to succeed because of the hardships in their young lives (Rak& Patterson, 1996).

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From birth, children express both needs and wants through crying, creating a range of sounds such as gurgling or babbling, laughing and communicating through gestures and body movement, from which researchers have found that right from the start children develop complex psychological lives. This appears to be confused or random behaviours, is organized (Murray and Andrews, 2000).

#### **Physical Activity**

Physical activity involves the bodily movements with the muscles and bones generally as part of fitness and strength. The term "physical activity" does not merely means "Exercise". Exercise, is a subcategory of physical activity. Physical activity is a structured, regular, repetitive, consecutive, and purposeful sense of significant contribution to Good health and fitness. Physical activity comprises of exercises and physical movements in any forms like working, playing, travelling, transporting, involving in household chores, and all other recreational activities. As per the definition of WHO Physical activity is defined as "A bodily movements produced by skeletal muscles that require energy expenditure,

#### **Physical Activity-Types and Forms**

Physical activity occurs in a variety of forms and types, starting from simpler forms of walking running to cycling dancing. Every form of physical activity has the contribution of any of the following categories that comprise Endurance, Strength, balance, and Flexibility.

# Endurance

Endurance is to do more with circulatory system of the body for good blood a circulatory, health hearts and lungs and in the improvement of the overall body fitness. Building the endurance helps to ease the daily activities and keeps active and brisk. Brisk Walks, jogs, yard working, dancing are the variants that help in endurance.

# Strength

Strengthening of muscles and resistance are the major resultant of the Strengthening physical activity or exercises. This helps to ease the body to work independently and irresistibly strongly. Workouts like weight lifting, push-ups come under the strengthening activities. This is also referred to as the Strengthening Training or Resistance Training. BALANCE: Falls, Slips becomes more common in the old age people to prevent the best form of physical activity is BALANCE. This can be achieved by practice of standing on one-foot certain postures and practice of regular TAI-CHI. Balance is the most important requirement for the joints and Knees.

# Flexibility

Flexibility helps in the promotion of freedom in the movements of the body parts easily and smoothly. It helps in stretching and keeping the body to stay limber. Yoga, Stretches help in flexibility.

#### Psychological Well-Being And Physical Activity

Physical activity has its supremacy with the effects of mental well-being if regularity is assured. The positive outcomes in the psychological states and a peaceful mind are guaranteed in children with daily engagement with physical activities. Physical activity plays an important role in the important mental as follows.

- 1 Treatment of mental illness and disorders;
- 2 Prevention of mental illness and disorders;
- 3 Improvement of mental and physical well-being of those with mental illness;
- 4 Improvement of mental well-being of the general

#### Depression

Depressions are characterized by frequent episodes of unhappiness. Physical activity is associated with decreased risk of developing clinical depression. Experimental studies show that aerobic and resistance exercise is effective in treating depression. The effect is of the same magnitude as psychotherapeutic interventions.

#### **Sleep Quality**

Insomnia is characterized with deprived sleep quantity and quality which has an adverse effect in the mental alertness and active level of mental state. Regular exercise becomes to offer a vehicle for providing undisturbed sleep hours for an individual. Subjective Well-Being and Mood: Each and every individual have periodical changes with their moods and feeling which further leads to effect the subjective wellbeing. Physical activities in the form of aerobics, Zumba dances helps to regulate the emotional moods and provides opportunities to frequently engage in happy and relaxed moods and feelings rather than low and sad moods.

#### Self-esteem and Self-perception

Self-esteem is important while studying about mental well-being because it forms as an indicator of emotional stability and also the ability to adjust well in the dynamic environment. Low self-esteem is associated with poor health-related behaviours and therefore it becomes as important indicator for both well-being and as a marker of recovery. Physical activities which helps an individual to build a strength and fit body muscles and bones spontaneously leads to increase to level of self-esteem and positive selfperception.

## Physical Activity and Children

Children and physical activity both inter-related with their effects on each other. Physical activity keeps a child active with another view on health point an active child always engage in physical activity. Many studies have conducted in order to know the significance of physical activity on children.

There is some evidence that exercise-induced increases in bone mass in children are maintained into adulthood, suggesting that physical activity habits during childhood may have long-lasting effects on bone health. Bone mass increases throughout adolescence and reaches a peak at the end of this period. The peak bone mass (PBM) also reflects the skeletal size, and is achieved in early adulthood, a few years after growth in height has ceased. Maximising PBM elevates the starting point from which bone mass declines with age.

# Resilience

Resilience in simple is the capability to bounce back quickly from the difficulties or toughness or hardships. It can also be referred to as the quality of quickly adjusting and adapting to the changes and returning back to the quite normal state. In the psychological context Resilience share a common and global meaning of positive and good outcomes followed by the significant life challenges. Resilience involves the psychological, physical, emotional, and social variants as it is the quality possessed by the individual to return to the normal situation.

# Definitions

Resilience as a psychological component, it is defined as "A class of phenomenon characterized by good outcomes in spite of serious threats to adaptation or development" (Ann Masten,2001). Resilience is defined as "maintenance, recovery, or improvement in the mental or physical healthy following challenge" (Ryff and Signer, 2003).

It can be a process consisting of positive adaptations when facing the significant hardships or adversity (Zausniewski, Bekht, Suresky, 2010). Resilience is also defined as "both the capacity of individuals to navigate their way to the psychological, social, cultural, and physical resources that sustain their wellbeing and the capacity individuality and collectively to negotiate for these resources to be provided in a culturally meaningful way" (Ungar, 2011). Resilience, as a psychological construct is defined as an individual's capacity to overcome the stressful situations and do well in spite of exposure to significant adversity (Cicchetti, Luthar,2006).

According to Masten and Coatsworth (1998), resilience is an inferential and contextual construct necessitating two key kinds of judgments. First, there must be a significant threat to an individual's Development. Secondly, there must be current or past dangers judged to have the potential to disrupt normal development. In other words, risk must be discernible.

#### Types of Resilience Physical Resilience

Physical resilience refers to the ability of the body to withstand with power, ability to adapt to the rising challenges, maintain, stamina and strength when encountered with hurdles and challenges.

# **Psychological Resilience**

Psychological resilience refers to the ability to successfully adapt to life tasks in the face of social disadvantage or other highly adverse conditions. Adversity and stress can come in the shape of family or relationships problems, health problems, or workplace and financial worries, among others.

#### **Social Resilience**

Social resilience is about the abilities of social entities to tolerate, absorb, cope with and adjust to threats. In other words, it can be referred to as the ability of a community to cope with and adapt to stresses such as social, political, environmental, or economic change.

#### **Emotional Resilience**

It refers to one's ability to adapt to stressful situations or crises. More resilient people are able to role with the punches and adapt to adversity without lasting difficulties, while less resilient people have a harder time with stressful situations and life change.

#### Methodology

#### Aim

- To analyse the relationship between physical activity and resilience among the children.
- To analyse the difference between physical activity and resilience between boys and girls.

#### Objectives

- To find out the level of physical activity among children.
- To find out the level of resilience among children.
- To find out the relationship between physical activity and resilience among children.
- To analyse the gender difference between physical activity and resilience among children.

#### Hypotheses

- There is no relationship between physical activity and resilience.
- There is no significant difference in gender between physical activity and resilience.

#### Sample

- The sample for this study included a population of 156 children between 7 and 11 years.
- The sample comprises of children from various schools of Dindigul and Coimbatore districts.

#### **Samling Method**

Random Sampling Method

#### **Inclusion** Criteria

- Children of both genders
- Children of age between 7 and 11
- Children who are comfortable with the English language.

#### **Exclusion Criteria**

- Children who are below the age of 7
- Children of age above 11.
- Children who have difficulty with the English language

#### Period of the Study

To practically emerge, analyse, interpret and to explore the findings, the study took a period of three months.

#### **Tools Used**

# Physical Activity Questionnaire for Children (PAQ-C)

The Physical Activity Questionnaire for children was developed by Kowalski, K., Crocker, P., & Donen, R. College of Kinesiology, University of Saskatchewan. The questionnaire is a self-report questionnaire consists of 10 items that assess the fitness and physical activity level of the children.

#### Reliability

The original reliability of the Physical Activity Questionnaire for children (PAQ-C) was found .91

## Child And Youth Resilience Measure (CYRM12) Child Version:

The Child and Youth Resilience Measure children version which condensed with 12items were developed by Dr Michael Ungar, of Dalhousie University in 2011. The measure consists of 12 items with three responses as follows Yes, Sometimes, and No.

#### Reliability

The original reliability of the Child and Youth Resilience measure is found to be .84

#### Procedure

To analysis the objective of the study, 157 children of age between 7 and 11 are selected. The samples is distributed with the Physical activity questionnaire and Resilience measure followed by the instructions, "The physical activity questionnaire is a self-reported questionnaire that consists of physical activities ranging from sports, a dance that you engaged in your last seven days. Read each question and answer honestly, do not omit any items and if you have doubts in between you can ask The Resilience measure consists of 12 items with three responses Yes, sometimes and No. Read each statement carefully and put a tick mark which really suits your choice. Your answers are confidential and there are no right or wrong answers and no time limit but try to complete as soon as possible". The responses are collected, results were tabulated, scoring is done and conclusions are drawn.

#### **Statistical Analysis**

The statistical techniques were selected based on the aim and objectives. Frequency is found for age and gender variables. Pearson correlation was used to find the relationship between the variables and t-test was used to find the gender difference.

#### Results

 Table 1 Shows the Frequency and Percentage

 of the Gender and Age Variables

Socio- demographic Data	Categories	Frequency	%
	Male	80	51.3
Gender	Female	77	48.7
	7	22	14.1
	8	30	19.2
Age	9	60	38.5
	10	40	25.6
	11	4	2.6

The table shows the frequency and percentage of socio-demographic data. Of the total samples, 80 are males contributing 51.3% and 77 females, contributing 48.7% of the total population. A numbers of samples with age 7 were 22 in number which contributes 14.1% to the total samples. The

numbers of samples with 8 were 30 in number which contributes 19.2% to the total sample. The number of samples with age 9were 60 in number which contributes 38.5%. Finally, numbers of samples with the age of 11 were 4 in number contributing 2.6% of the total population.

<b>Table 2 Shows the Level of Physical Activit</b>	ty
among Male and Female Children	

Variable	Level	Male	Female
Dl	High	37	46
Physical A stivity	Low	13	11
Activity	Moderate	15	24

The above table depicts the level of physical activity. Analysing the data, it is interpreted as 37 male and 46 female children have a high level of physical activity which reveals the most of the children have a high level of physical activity. It indicates a high level of activeness and are quite healthy and refreshed and this also reveals that these children have the capability to easily mingle with other children as well as the peer groups.

13 male and 11 female children have a low level of physical activity which is interpreted as least number of male and female children have the least level of physical activity. It reveals that these children be less active and a low level of refreshment. These children participate in the outdoor activities and games rarely and their mingling level with other children and peer groups also be in a minimal level. As a result, their relationship between among other children and peer groups be in the low level. 15 male and 24 female children have scored moderate level of physical activity which is interpreted as moderate level of activeness and refreshment. These children can partially participate in the outdoor games. They have partial fulfilment in their relationship with the peer groups and other children.

 Table 3 Shows the Level of Resilience among

 Male and Female Children

Variable	Level	Male	Female
Resilience	High	46	40
	Low	9	6
	Moderate	24	23

The above table depicts the level of resilience among the samples. By Analysing the data, it is interpreted as most of the male and female children in the sample have high resilience level. 46 male and 40 female children have a high level of resilience which shows that these children have the capability to overcome the difficulty and setback situations. They also have the abilities to easily bounce-back and significantly face the hardships.

Nine males and Six females have scored low level in resilience. This can be interpreted as these children have the very low capability to overcome the difficult and tough situations, which also means that they are incapable of dealing the difficult situations.

Twenty-four males and Twenty-three females have a moderate level of resilience. This can be interpreted as these children have the resilient capability in a moderate level. They are able to face the troublesome situations and difficult environment in certain situations.

 Table 4 Shows the relationship between Physical activity and Resilience.

Variables	Mean	Standard- Deviation	r - Value
Physical Activity	41.22	9.611	.974**
Resilience	31.23	5.711	

\*\*. Correlation is significant at the 0.01 level (2-tailed).

Table 4 shows the relationship between physical activity and resilience. The mean value for physical activity is 41.22 and the standard deviation is 9.611. The mean value for resilience is 31.23 and a standard deviation is 5.711. Physical activity and Resilience significant correlation value is .974\*\*. This reveals that there is a high level of positive correlation between physical activity and resilience.

Hence the hypothesis, there is no relationship between physical activity and resilience is not accepted

Null Hypothesis (H0) is rejected.

 Table 5 Shows the Comparison of Gender

 difference in Physical Activity

Variables	Gender	Mean	t – Test
Physical	Male	40.69	0.010NS
activity	Female	41.78	-0.910

NS - Not Significant at .05 level

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Table 5 depicts the t-values for the gender difference. The mean values for male and female gender for physical activity are 40.69 and 41.78 and the t value is -0.910, which shows there is no significant gender difference.

 Table 6 Shows the Comparison of Gender

 difference in Resilience

Variables	Gender	Mean	t – Test
Resilience	Male	30.83	-0.706 <sup>NS</sup>
	Female	31.66	

NS - Not Significant at .05 level

Table no 6 depicts the t-value for the gender difference in resilience the mean values for male and female gender for resilience are 30.83 and 31.66 and the t value is -0.706. Hence the hypotheses (Ho) there are no gender difference between physical activity and resilience is accepted. The null hypothesis H0 is accepted.

#### Discussion

The present study is on the physical activity and resilience among children. The main aim of the study is to determine the relationship between the variable's physical activity and resilience. The tools used are Physical activity questionnaire developed by Kowalski, K, Crocker, P. & Donen, R and children and youth resilience measure developed by Dr Michael Ungar. The sample size includes 157 children of which 80 are male and 76 female children.

The objectives of the current study are to find the correlation level between physical activity and resilience among children and to find whether there occurs gender difference between physical activity and resilience. By analysing the results, the correlation value is 0.974 which is significant at the 0.01 level. This indicates that there is a high level of positive correlation which can be interpreted as when the level of physical activity is a high the level of resilience also remains to be higher. When the level of resilience also remains to be low.

Among the 157 samples the level of physical activity was high in 38 males and 42 females. This shows that most of the male and female children of the sample have high level of physical activity.

Thirteen males and 11 females have a low level of physical activity, this means the level of physical activity is low only in the least number of children in the samples size.

Among the 157 samples 46 males and 40 females have scored high in resilience. This shows that most of the samples have high level of resilience. Nine males and six females have a low level of resilience which means that the level of resilience is low only among the least members of the sample.

The study conducted by (Kenneth R Fox, 2007) shows that Physical activity has the capability to promote resilience especially to handle the stressful situations of life. The study was a correlation study that was hypothesized physical activity has the impact on resilience and both physical activity and resilience have positive correlation. This study is also evidentfor stating physical activity and resilience have significant impact on improving the mental health.

The gender difference between physical activity and resilience is count with the analysis of t-values the t-values for the gender difference for physical activity is -0.910 and the t-value for the gender difference for resilience is -0.706 which indicates that there occurs no significant difference in gender in physical activity and resilience and no significant difference between physical activity and resilience.

Hence it is possible that physical activity be the component to inculcate resilience among children.

# Conclusion

- 1 Physical activity and resilience are highly positively correlated.
- 2 The level of happiness is high for most of the samples.
- 3 The level of resilience is high for most of the samples.
- 4 There is no gender difference between physical activity and resilience.
- 5 Resilience can be inculcated in children through physical activity.

# Summary

The main objective of this study is to examine the relationship between physical activity and resilience and to analyse the gender difference between physical activity and resilience. The sample size included was 157 numbers form Dindigul and Coimbatore district. Among which 70 samples belong to males and 88 comp0rised of female samples. The age category included was between 7 and 11. The statistical analyses were done by using Statistical Package for Social Science (SPSS). The Pearson correlation is used to find the correlation level and t-test is used to analyse the gender difference. The results and conclusion indicate the high level of positive correlation between the physical activity and resilience and no gender difference between physical activity and resilience.

# Limitations

The present study attempts to study on physical activity and Resilience among children. For any study along with the wide scope also have some limitations too. Most care has been given to the study to make it perfect, but the following limitations are accompanied and they are

- One major limitation is that children who have English knowledge were only considered for the study. Considering children of all categories will give a better understanding about physical activity and children.
- The data is collected only from the Dindigul district. Future research on this topic may be conducted using samples from different districts.

# Implications

- Further study can be done with the relationship between physical activity and resilience with other variables.
- Future study can be made with children of different population in different geographical areas.

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