



Participation in Physical Activities, Resilience and Vulnerability

KEYWORDS

Physical Activities, Resilience and Vulnerability

Bibin Chand. K. S

Ph.D. Doctoral Research Fellow, Department of Psychology, PSG College of Arts and Science, Coimbatore

Dr. C. Balakrishnamurthy

Assitant Professor & Project Director: ICSSR Project, PSG College of Arts and Science, Coimbatore, Tamil Nadu – 641041

ABSTRACT *In this study the influence of participation in physical activities on resilience and vulnerability among adolescents has been studied. The study targeted 179 adolescents (84 males and 95 females) from 14 to 18 years. The Resiliency Scale for Children and Adolescents developed by Prince-Embury and Physical Activity Questionnaire developed by Sigfusdottir. I.D were administered to them. The data were analyzed with F-test. The results indicate significant difference between adolescents participating highly in physical activities and adolescents participating less in physical activities with respect to their resilience and vulnerability. It is concluded that participation in physical activities contributes resilience and minimize the vulnerability among adolescence.*

Resilience 'the bounce back' (Luthar et al., 2000) is a two way aspect consisting of exposure of adversity and the positive adjustment outcomes of that adversity. Resilience and Vulnerability are considered in interaction with other and not necessarily opposite ends of the same dimension (Bankoff et al., 2004). (Garmezy, 1991) claimed that resiliency implies resistance to threat, not invulnerability. (Werner, 1982) distinguished three contexts for protective factors: Personal attributes, the family and the community.

Studies have been made to access the relation between the participation in physical activities and psychological resources. (Berger, 1984; Rothlisberg, 1994) studied that the degree of perceived well-being shows more among adolescence those who practices regularly than those who are not regularly. (Dishman, 1985) suggests the perception of personal efficacy and motivation are significantly and positively correlated with physical exercise. It is hypothesized that regardless to the practice hours, athletes show a better alteration to stressful situations (Rothlisberg, 1994). Physical activity and individuals' stress level was analyzed and observed that physical exercise protects individuals' emotional well-being from the effects of stress by Kobasa et al., (1982). Cognitive function of an individual can also be positively altered by physical activities. Brisswalter J, et al., (2002) through their different studies, support the effect of physical activity on cognitive function.

Objective:

The present study attempts to examine the difference among high group adolescents on participation in physical activities and low group adolescents on participation in physical activities with regard to their resilience and vulnerability.

METHOD

Sample:

As this study targeted adolescence, the purposive sampling technique is used. A sample of 179 adolescents (84 males and 95 females) were randomly selected from different schools at Kerala and Jammu & Kashmir between the age group of 14-18 years.

Tools:

Resiliency Scale for Children and Adolescents by Prince-Embury was used to measure the resilience and vulnerability of adolescents. This inventory consists of 64 items is a self-report scale presented individually in three page record forms. The Resiliency Scale measures three core theoretical

areas: Sense of Mastery, Sense of Relatedness, and Sense of Emotional Reactivity. The Sense of Mastery (MAS) scale, composed of 20 items, the Sense of Relatedness (REL) scale, composed of 24 items, and the Emotional Reactivity (REA) scale, composed of 20 items. Response options were frequency based, ordered on a 5-point Likert scale: 0 (never), 1 (Rarely), 2 (Sometimes), 3 (Often), 4 (Almost Always). Scoring have been done for three Tests differently (Sense of Mastery, Sense of Relatedness and Sense of Reactivity) and converted to t scores. The Cronbach Alpha for MAS Scale is 0.93, REL Scale is 0.94 and REA Scale is 0.92.

Activity Questionnaire by Sigfusdottir.I.D was used to measure the physical activity of adolescents. This is a 4 item 6 point Likert Scale 1 (almost never activity), 2 (less than once a week), 3 (once a week), 4 (2-3 times a week), 5 (4-5 times a week), and 6 (almost every day). The scale is reported to have adequate reliability with Cronbach's $\alpha=0.73$.

Criterion Group Formation:

Table 1. Shows the Mean and SD of the criterion groups on Participation in Physical Activities (Median score = 15)

Criterion Group	N	Mean	SD	Min. Score	Max. Score
Low Group on Participation in physical activities	90	11.03	3.23	4	15
High Group on Participation in physical activities	89	19.37	2.73	16	24
Total Group	179	15.18	5.14	4	24

Table 1 show the mean score of the low group on participation in physical activities is 11.03 and the SD of the scores is 3.23. The mean score of the high group on participation in physical activities is 19.37, and the SD of the scores is 2.73.

RESULTS AND DISCUSSION

The main objective of the present study is to analyze the difference between adolescents participating highly in physical activities and adolescents participating less in physical activities with respect to their resilience and vulnerability. Obtained results are presented in table.

Table 2. Shows the Mean and SD of the criterion groups on Participation in physical activities based on resilience and vulnerability Scores of the sample:

Variables	Criterion Groups					
	Low Group on Participation in physical activities (N= 90)		High Group on Participation in physical activities (N= 89)		Total Group (N= 179)	
	Mean	SD	Mean	SD	Mean	SD
Resilience	46.3167	6.61478	51.1517	5.85400	48.7207	6.68557
Vulnerability	54.5778	4.89778	52.5112	6.60620	53.5503	5.88588

Table 3. Shows the Summary of homogeneity of variance of the criterion groups on Resilience and Vulnerability.

	Sources of Variance	Sum of Squares	df	Mean Square	F	Sig.
Resilience	Between Groups	1046.106	1	1046.106	26.796	.000
	Within Groups	6909.927	177	39.039		
	Total	7956.034	178			
Vulnerability	Between Groups	191.103	1	191.103	5.661	.018
	Within Groups	5975.444	177	33.760		
	Total	6166.547	178			

Table 2 shows the mean score of the low group on participation in physical activities on Resilience is 46.32, and the SD of the scores is 6.61. The mean score of the high group on participation in physical activities on Resilience is 51.15, and the SD of the scores is 5.85. Table 2 also reveals the mean score of the low group on participation in physical activities on Vulnerability is 54.56, and the SD of the scores is 4.90. The mean score of the high group on participation in physical activities on Vulnerability is 52.51, and the SD of the scores is 6.61.

The data collected were analyzed with analysis of variance (ANOVA, F-test). Table 3 shows the F-ratio relating to homogeneity of variance of the criterion groups on Resilience is significant ($F=26.80$, $p<0.01$). The high group on participation in physical activities has a resilience score higher than the low group on participation in physical activities. This implies that participation in physical activities results in higher level of resilience. Table 3 also shows the F-ratio relating to

homogeneity of variance of the criterion groups on vulnerability is also significant ($F=5.67$, $p<0.05$). The high group on participation in physical activities has a vulnerability score lower than the low group on participation in physical activities. This implies that participation in physical activities results in lower level of vulnerability.

The study was focused on adolescents and has found significant difference between adolescents participating highly in physical activities and adolescents participating less in physical activities with respect to their resilience and vulnerability. It is studied that various resources like self-esteem, self efficacy, optimism, potential attributes like factors contributes resiliency of an individual (Werner, 1982). These factors can be boosted by physical activities. A quality physical activity can foster: positive attitudes, participation and problem-solving skills (Reston, 1992). If a sports man observes someone successfully performing a specific behavior that appears to be within his skill range, the athlete's self-efficacy regarding that behavior may increase (Monica A, 2001). This can be explained as a reason for the relation between participation in physical activities and self-efficacy. Also it is studied that active individuals are remarkably more optimistic and less pessimistic than inactive individuals Maria, et al., (1995). Young people with positive attitudes and high self-efficacy are more likely to form intentions to participate in physical activity Martin, et al., (2001). Participation in sports activity gives the individual different level of stressful situations (Prince-Embury, 2006), this will help the individuals to increase the tolerance level inside them. It is also studied that improvement in fitness can have a cross training effect, enabling individual more fit and react less and recover more quickly from stressors (Taylor, 2000). The findings of this study were also consistent with previous one. It can be summarize that a goal achievement or a success inside physical activities can contribute optimistic character to an individual and there by foster resilience and minimize vulnerability in an adolescent.

CONCLUSIONS

The following inferences are drawn from the present study findings, i.e., homogeneity of variance is being prevailed between low group adolescents and high group adolescents on participation in physical activities with respect to their resilience and vulnerability. Participation in physical activities contributes resilience and minimizes the vulnerability among adolescents. This fact can be stressed while developing school college activities and programs, insertion of sufficient physical activities in daily routine can contribute resilience and minimize vulnerability among adolescents.

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