Effectivenss of Intervention Programme To Improve Adversity Quotient Of Higher Secondary School Students

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ABSTRACT: *The aim of the present study was to determine the effectiveness of a researcher developed intervention programme to enhance adversity quotient among higher secondary school students. A comprehensive intervention programme was developed which aimed to improve the dimensions of adversity quotient i.e. control, ownership, reach and endurance. The intervention programme was tested among 11th standard school students in a school in Ahmedabad. Purposive sampling technique was used to select the sample. True experimental design post-test only was employed to conduct the experiment. A self-constructed Adversity Quotient Scale was administered to the students to collect data after the treatment. The experiment was replicated to confirm the results. The study revealed that the intervention programme developed to enhance adversity quotient was effective.*
KEYWORDS: *Adversity Quotient, Higher Secondary School Students, Intervention Programme*

I. INTRODUCTION

Confrontation solving and fighting against the adversity are very important for human being's life because human will have a happy life or not depends on how well he can solve and fight against the problems which they are facing (Pangma et. al, 2009). Adolescents are a positive and important resource for the country at the same time it is a critical period for the development of self identity. During the period of adolescence, they face physical, social, emotional and intellectual problems (Jain, 2013). During adolescence, their emotion is quick-tempered, stressful, at the same time, they are ready to develop their ego identity which is a basic personality development. If the adolescents cannot adjust themselves with the adversities they face, they try to escape by doing inappropriate things like drug addiction, become rebel, suicide etc (Pangma, et.al, 2009). All these are due to they lack adversity quotient. Adversity quotient begins its first by cognitive development. Teenagers will learn how to response to the questions and solve problems or even learn to have no response to some problems. These experiences of children have been developed with them since they were born which can be improved or developed; therefore, the parents propose a good a good care so that they will grow up with efficiency. Therefore, the researcher believed that schools should play an important role to manage and provide students' activities that can help them enhance the adversity quotient. Youths, the College or University students are the hope of society's tomorrow, and its future. Hence, it is an alarming situation to address the problems of the students and important to note that students are under various stresses and they are facing through lot of adverse situations at school, home and with peer group (Hema and Gupta, 2015).

Intelligent Quotient measures a person's knowledge. But it is not the only criteria to be successful. Emotional Quotient is capacity to manage ones emotions. Thus a high intelligence quotient and a high emotional quotient strengthens the chance of success. Then comes adversity quotient which measures the person's ability to overcome the hardships of life and move ahead. Thus only intelligence quotient and emotional quotient can also sometimes not be responsible for success, as adversity quotient is needed to keep striving hard in tough situations. Adversity quotient is assumed to be one of the core fibres of what constitutes the foundation of the teaching-learning process (Stoltz, 1997). Therefore, Dr. Paul Stoltz said that each child must develop the ability to turn the obstacles of life into opportunities for which Adversity Quotient is important. The researcher feels the need to make the higher secondary school students to be aware of coping with the adversities they are facing or going to face in latter period of life. The researcher also feels that as in the coming years the students will pass out and move to higher classes which will bring parental pressure in academics and also the other physical changes that they are going to cope with, require high adversity quotient.

It has been found that adversity quotient can be learned and programme for development of the adversity quotient was effective in previous studies. Jain (2013) conducted a study on 8th standard school students on adversity quotient. The programme developed for enhancing adversity quotient was found to be

effective. In another study, the adversity quotient of students was improved for most of the students and found to be effective (Enriquez, 2009). Deesom (2011) conducted a study of the result of a positive thinking program to the adversity quotient of 6th standard students which revealed that the thinking program was effective; Sachdev (2009) conducted a study on the effectiveness of an intervention programme to develop adversity quotient of potential leaders which was also proved to be effective.

According to Stoltz (1997), Adversity Quotient comprises of four dimensions: ***CORE***
The CORE (Control, Ownership, Reach and Endurance) model, which is the major dimension of adversity quotient, can measure adversity quotient level (Phoolka & Kaur, 2012). CORE plays the central role in remaining resilient and optimistic in the face of adversity.

Control (C): This determines how much control one has over the adversity. There are two kinds of control: (1) one is to what extent you perceive you can influence the situation no matter how impossible it is; (2) second is response control or controlling your response to the adversity.

Ownership (O): This determines to what extent you take it upon yourself to better the situation. It rolls into accountability. It is the backbone of action.

Reach (R): This refers to how far adversity reaches into other parts of your life. It is essential to keep the fall out under control and limit the reach of adversity to other parts of life for efficient and effective problem solving.

Endurance (E): It means how long the adversity will last. One has to see beyond all the difficulties for maintaining hope.

Objective of the Study: To study the effectiveness of intervention programme to enhance adversity quotient of the students

Hypothesis of the Study: There is no significant difference in mean scores of post-test on adversity quotient between experimental and control group.

Delimitations of the Study: The present study was confined on standard 11th students in English medium schools in Ahmedabad.

Variables of the Study :Dependent Variables:Adversity Quotient –Control, Ownership, Reach, Endurance
Independent Variables: Intervention Programme to enhance adversity quotient

Operational definition of Key Terms:
a) Adversity: Adversity refers to a situation which causes a person's stress, conflict, challenges, academic difficulties, misfortune during their life.
b) Adversity Quotient: Adversity quotient refers to the numerical figure that represents the ability of an individual to handle unpleasant or adverse situations. Based on the scores obtained on the four dimensions (control, ownership, reach and endurance) of adversity quotient scale, individuals were classified as people with high, moderate and low adversity quotient. The total score of all the dimensions obtained from the self-constructed scale was the total Adversity Quotient score of an individual.
c) Adversity Quotient Dimensions:
Control: It measures the degree of control that a person perceives over adverse events. It shows a strong determine of resilience and health. The scores obtained from the statements which measure the control dimension was the control score of an individual.
Ownership: It measures the extent to which a person holds himself or herself accountable for improving a situation. It shows a strong determine of accountability and likelihood to take action. The scores obtained from the statements which measure the ownership dimension was the ownership score of an individual.
Reach: It refers to the perception of how large or far reaching events will be. It shows a strong gauge of perspective burden and stress level. The scores obtained from the statements which measure the reach dimension was the reach score of an individual.
Endurance: It refers to the perception of time over which good or bad events and their consequences will last or endure. It shows a strong gauge of hope or optimism. The scores obtained from the statements which measure the endurance dimension was the endurance score of an individual.
e) Intervention Programme: An intervention programme was defined as a programme or a set of activities aimed at bringing about a desired change in an individual. In the context of this research, it was the investigators

purpose to bring about a change in the adversity quotient level of the identified group. This set of activities in the form of a workshop was here referred to as the ―intervention programme.

II. METHODOLOGY

Research Design: For that purpose experimental research method was employed. The investigator chooses the true experimental design as randomization was used to assign students to experimental group and control group. Randomization was done by lottery chit technique. After making groups, the researcher provided treatment in the form of program developed by the researcher to the experimental group. After the completion of the program the post test is provided in both the groups, experimental and control group. The same process was carried out another time i.e experiment was replicated in another set of students from the same school and the data was collected.

Population and Sample: Population of the research encompasses all the English medium 11th standard students of Ahmedabad city. For the present study, the researcher has used non-probability type of sampling technique in which the purposive Sampling has been chosen. This technique was implemented with respect to the feasibility for the execution of the experiment and availability of time and students for the longer duration of time for which the researcher has to depend on the permission of the Principal of the school, to conduct the experiment. Hence, purposive sampling technique was used to select the school. One English medium higher secondary school in Ahmedabad was taken up for this study.

Table 1: Sample in Experimentation and Replication

Experimentation		Replication	
Experimental Group	Control Group	Experimental Group	Control Group
44	46	42	40

Research Tool: In the present study, the researcher used self-constructed adversity quotient scale and checked its reliability and validity and then implemented it. Researcher prepared a self-constructed tool with 5 point scale. This scale was constructed based on the dimensions of adversity quotient i.e. control, ownership, reach and endurance. Following steps were followed for the construction of adversity quotient scale: 1. Content Analysis; 2. Item Construction and Compilation; 3. Pre-piloting of the Tool; 4. Feedback from Experts; 5. Piloting Study – Item Analysis; 6. Finalization Adversity Quotient Scale

The final tool comprised of 12 events. Each event included 4 statements, one each for control, ownership, reach and endurance dimension of adversity quotient. There were 48 statements altogether, of which 24 statements were positive and 24 statements were negative. According to the dimensions, statements related to control dimension were 5 positive statements and 7 negative statements; ownership dimension included 6 positive and 6 negative statements; reach dimension included 6 positive and 6 negative statements and endurance dimension included 7 positive and 5 negative statements. The scoring of the Adversity Quotient scale was done based the options Strongly agree, Agree, Neutral, Disagree, Strongly Disagree were scored as 5, 4, 3, 2, 1, respectively for positive statements and 1, 2, 3, 4, 5, respectively for negative statements. The sum of the scores on these four dimensions was the total score of the individual. Minimum and maximum scores on each dimension scale are 12 and 60, respectively. Consequently, the minimum and maximum total AQ scores are 48 and 240, respectively. This Adversity Quotient Scale was used to collect the data from the students after experiment. The tool was checked for reliability using Test-Retest method, Split-half method and internal consistency-method of equivalence method. The tool was also found to have face validity, content validity and concurrent validity.

Development of Intervention Programme Following steps were involved in the preparation of the intervention programme for higher secondary school students. Those were 1. Framing the objectives of the activities; 2. Selecting the content to achieve the objectives; 3. Selecting suitable methods and strategies; 4. Sequencing and listing the activities with time frame; 5. Preparing or collecting the handouts and worksheets; 6. Content validation of the programme; 7. Trial run of the completed programme. The final programme comprised of 16 activities which were distributed into 15 sessions. Each session was of 40 minutes duration. Necessary handouts and worksheets were provided to the students during the programme. The programme lasted for 15 days. The names of the activities included in the programme were Icebreaker, Warm-up, Resilient hero inspiration, Crossing the obstacles, Learning by cognition, Roots of Adversity-ABC model to manage adversity, LEAD me on!, Reflection time – Be thankful for what you have, What troubles me?, Seven summit, Movie Alive, Optimistic Imagination and Action Plan, Feeling proud after dealing with a setback- Motivation, What happens Next?- Story writing, My accountability, All about me, Its great to be me, Finding support, Balancing risk and reward.

Data collection: Following permission from the Principal, sampling was done to make the groups, and the programme was administered according to the schedule. The programme was administered to the experimentation group and replication group in parallel. The data was collected after the implementation of the intervention programme. The Self-constructed Adversity quotient scale was used to collect the data from students.
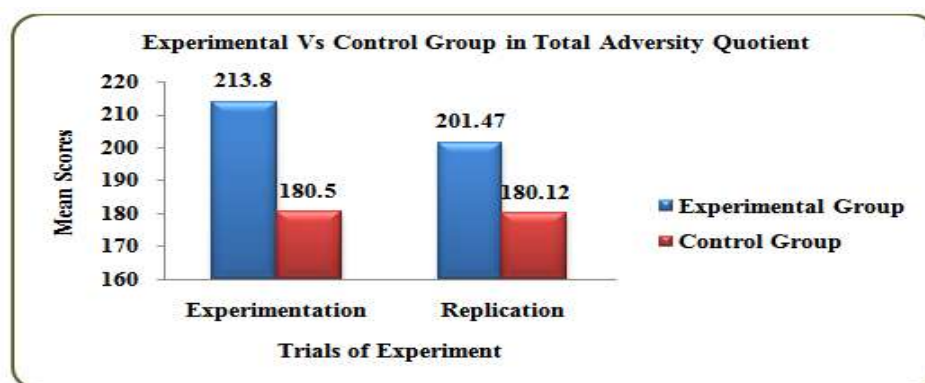
III. DATA ANALYSIS AND INTERPRETATION

Following table presented the effectiveness of intervention programme between experimental and control group on total adversity quotient of the students in experimentation and replication.

Table 2 Total Adversity Quotient in Experimental and Control Group

Trials	Groups	N	Mean	SD	SED	t value	Remarks
Experimentation	Experimental Group	44	213.8	7.03	2.08	15.98	**Significant at 0.01 level**
	Control Group	46	180.5	12.02			
Replication	Experimental Group	42	201.47	7.37	2.14	9.97	**Significant at 0.01 level**
	Control Group	40	180.12	11.47			

Comparison of post-test total adversity quotient scores between experimental group and control group were clearly shown in the above table 2. In the experimentation, i.e. when the experiment was conducted for the first time, it was found that the computed t-value (15.98) was significantly higher than the table value (2.63) at 0.01 level for df=88. Similarly, in replication i.e., during replicating the experiment, the computed t-value (9.97) was significantly higher than the table value (2.64) at 0.1 levels for df=80. Thus, the null hypothesis was rejected in experimentation and replication as there was significant difference found in the post-test scores of total adversity quotient of students between experimental and control groups. It means there was real difference found in the post-test mean scores of total adversity quotient between experimental and control group. It was drawn from the data that the post-test mean scores of experimental group were significantly higher than the mean scores of control group in both experimentation and replication. Thus, the intervention programme developed for enhancing the adversity quotient was found to be effective in 11th standard school students.
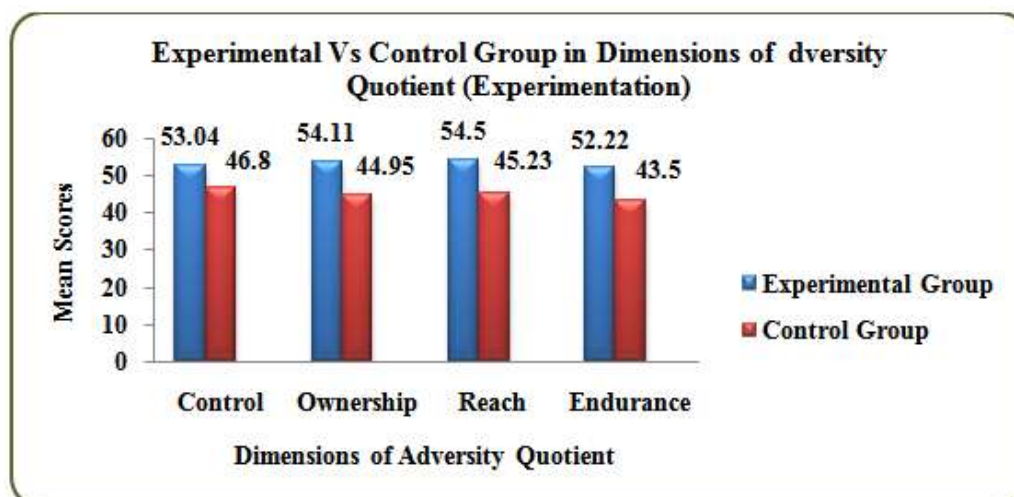

Graph 1 Comparison of Post-test Mean scores of Total Adversity Quotient in Experimental and Control Group

Following table presented the effectiveness of intervention programme between experimental and control group based on dimensions of adversity quotient of the students in experimentation.

Table 3 Dimensions of Adversity Quotient in Experimentation

Group	N	Mean	SD	SED	t-value	Remarks
Control						
Experimental	44	53.04	3.27	0.73	8.45	**Significant at 0.01 level**
Control	46	46.80	3.70			
Ownership						
Experimental	44	54.11	2.58	0.92	9.90	**Significant at 0.01 level**
Control	46	44.95	5.68			
Reach						
Experimental	44	54.5	1.71	0.42	21.63	**Significant at 0.01 level**
Control	46	45.23	2.31			
Endurance						
Experimental	44	52.22	3.86	0.79	10.96	**Significant at 0.01 level**
Control	46	43.5	3.68			

The above table 3 showed comparison of post-test scores between experimental group and control group according to the dimensions of the adversity quotient. In the experimentation, it was found that the computed t-values were significantly higher than the table value at 0.01 and 0.05 levels for df=88. Thus, there was significant difference found in the post-test mean scores of control, ownership, reach and endurance dimensions in 11th standard students between experimental and control groups. It means there was real difference found in the mean scores of dimensions of adversity quotient between experimental and control group. It was drawn from the data that the post-test mean scores of experimental group were significantly higher than the mean scores of control group in the experimentation.
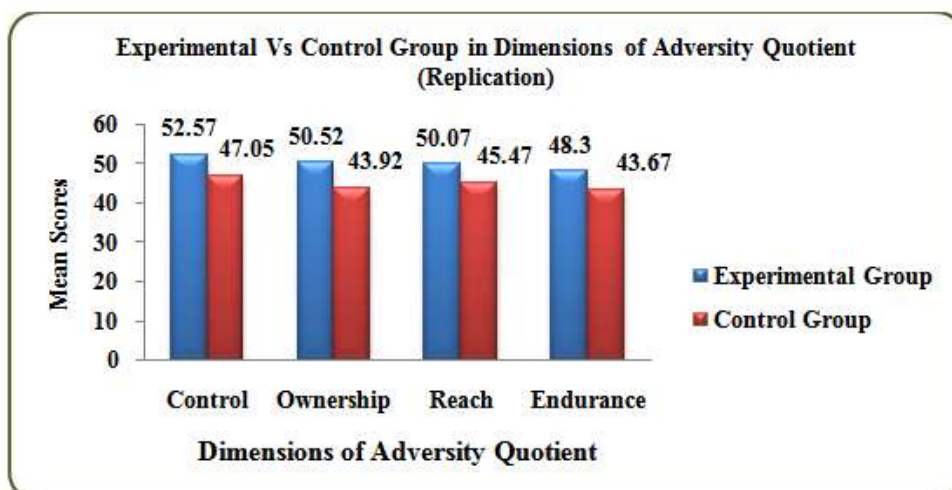

Graph 2 Comparison of Post-test Mean scores of Dimensions of Adversity Quotient in Experimentation

Following table presented the effectiveness of intervention programme between experimental and control group based on dimensions of adversity quotient of the students in replication.

Table 4 Dimensions of Adversity Quotient in Replication

Group	N	Mean	SD	SED	t-value	Remarks
Control						
Experimental	42	52.57	3.28			**Significant at**
Control	40	47.05	3.62	0.76	7.21	**0.01 level**
Ownership						
Experimental	42	50.52	3.40			**Significant at**
Control	40	43.92	4.41	0.87	7.55	**0.01 level**
Reach						
Experimental	42	50.07	3.53			**Significant at**
Control	40	45.47	2.25	0.65	7.05	**0.01 level**
Endurance						
Experimental	42	48.30	3.28			**Significant at**
Control	40	43.67	3.57	0.75	6.10	**0.01 level**

The above table 4 showed the comparison of post-test scores between experimental group and control group according to the dimensions of the adversity quotient. In the replication, it was found that the computed t-values were significantly higher than the table value at 0.01 and 0.05 levels for df=80. Thus, in replication of the experiment also as there was significant difference found in the post-test mean scores of control, ownership, reach and endurance dimensions in 11th standard students between experimental and control groups. It means there was real difference found in the mean scores of dimensions of adversity quotient between experimental and control group. It was drawn from the data that the post-test mean scores of experimental group were significantly higher than the mean scores of control group in the replication. Thus, the intervention programme developed for enhancing the dimensions of adversity quotient was found to be effective in 11th standard school students.

Graph 3 Comparison of Post-test Mean scores of Dimensions of Adversity Quotient in Replication

IV. DISCUSSION AND EDUCTIONAL IMPLICATIONS

On the basis of the major findings of the present study, the following points were discussed.

In the present study, the intervention programme to enhance adversity quotient in higher secondary school students was found to be effective. There was significant difference in the post-test means of total adversity quotient and its dimensions. This finding was supported by the findings of Jain (2013), Almeida A (2009), Deesom N (2011), and Enriquez, J. (2009).

In view of the results of the present study the researcher laid down the following educational implications. Teachers can discuss and arrange debates, discuss real life adverse situations, play video clips on adversity, arrange expert talks on motivation in class regarding adversity quotient and related topics to improve the adversity quotient of students. Students can be given simulated real life situations and encourage them to think of alternate strategies in overcoming adversities. Articles and newspapers showing adversity situations should be read out and discussed with the students to help them to reach solutions. Principals can organize workshops and seminars for teachers, students and parents on adversity quotient and the ways to improve it for facing adversities in life.

V. CONCLUSION

The intervention programme developed to enhance adversity quotient was found to be effective.

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