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Effect of locus of control, gender and locality on adversity quotient among high school students

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Abstract: The present investigation done intends to measure the effect of locus of control, gender and residence on Adversity Quotient among high school students. For the present study a sample of 400 high school students was selected from 25 schools located in rural and urban areas from each district of five zones of Haryana state. For investigation purpose descriptive survey method was employed. To analyze the effect of locus of control, gender and residence on Adversity Quotient ANOVA (2×2×2 factorial) design was employed. The study revealed that locus of control has a significant effect on Adversity Quotient while other factors i.e gender and locality did have any significant main and interaction effect on Adversity Quotient of high school students

Key Words: Locus of Control and Adversity Quotient.

INTRODUCTION

In the last decade in all over the world, it has been witnessed the problems of drug abuse, teenage pregnancy, suicides, rapes, depression, assaults, dropping out of school etc., (Stolz, 1997). These situations are the challenges that the students face today. These challenges are referred as adversities. Adverse conditions play an important role in our life. Adversity quotient is the capacity to deal with the adversities of one's life. It measures our abilities to face the adversities. It is considered to be a science of human resilience. (Parvathy and Praseeda, 2014). Adversity quotient tells about how well one withstands adversity and can triumph over them. According to Bhamra et al. (2011), resilience is closely related with the capability and ability of an element to return to a stable state after a disruption and is related to both the individual and organizational responses to turbulence and discontinuities. It includes various components like performance, motivation empowerment, creativity, learning etc. It can help in improving how one respond and thus overall professional effectiveness. Adversity affects individuals and institutions both globally and specifically. Education is under increasing pressure to produce more successful students. Students face a lot of situations or challenges in their life. In case of students, adversities include various hardships in society; peer pressure, unfavourable organizational climate, poor social relationship at home, gender discrimination, disordered family environment, loneliness etc., (Nikam and Uplane, 2013). All age groups of students face different sorts of adverse situations. The level of adversity influences the

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personal and professional life of learners thus manifesting varied consequences on their life. Hence, it is an alarming situation to address the problems of the students and important to note that students are under various stresses and how they face the adverse situations at school, home and with peer group (Hema, 2015). Protecting students from violence and drugs, lowering the teen pregnancy rates, and offering HIV/AIDS education are but a small sample of the emergent adversities with which educational leaders must contend (Williams, 2013). It has been found that many students look fine when things are easy and all is going well. But many students, even very bright ones, are not equipped to deal with challenges. When they hit more difficult work, in high school, they begin to doubt their intelligence, they withdraw their effort, and their performance suffers. People have seen this happen to students who were top students in grade school -- they seem to lose their confidence, their liking for school, and their determination to do well (Dweck, 2005). The increasing uncertainty and complexity of their studies and duties, Adversity Quotient will help them predict who can thrive in the face of adversity. Students who seek and accept challenges are considered climbers, no matter how hard their academic subjects are, the assignments, projects and reporting they still manage to perform well. They are motivated to learn almost everything. Next are the students who are campers, these are the students who can cope well in depressing events but have less drive than those with high adversity quotient. They do not accept any difficulties and they resist in giving up their comforts, no matter what the price is. The students who escape from challenges, they tend to give-up if worse situation arises. If being scolded by the instructors, they would rather go home or cut class. Sometimes, if they do not reach the expectations of their instructors or parents, they back out. Stolz has described four dimensions of Adversity quotient i.e **Control** (it is the perceived control the extent to which an individual can influence any situation), **Origin and Ownership** (the extent to which one feels themselves accountable and responsible to any adversity and try to do efforts to bring improvement into it), **Reach** (The extent to which one perceives that adverse conditions can influence other areas of one's life) and **Endurance** (it reflects how long adversity would influence a person)

Locus of Control:

Locus of control is an important concept in the field of psychology coined by Rotter (1966). It refers to the extent to which an individual's beliefs concerning his or her control over their environment. Chan, 1977 reported that, "to the extent that an individual judges himself/herself to have control or mastery in a situation, the probability is that he/she will be less likely to perceive the situation as threatening or stress-inducing." It has been found out by Spector (1986) that perceived control leads to greater satisfaction, commitment, involvement, motivation and performance, and lower physical and emotional distress, role stress and withdrawal. Anderson (1997) concluded that individuals with internal locus of control react more constructively to frustration. Brandt (1975) reported that internals perform better than external subjects in internally oriented learning situations and external subjects will perform better than internal subjects in externally oriented learning situations. Basim and Sesen (2006) determined that the



individuals with internal locus of control had more tendencies to help and perform courteous attitudes when compared with the ones with external locus of control.

Morrow (1989) accounted that Locus of Control was found to be influenced from locality of high school students. Rural students exhibited more responsibility for negative events in the academic domain in comparison to the urban students. **Chan and Silverthorne (2008)** opined that internal locus of control have considerable impact upon work performance and content levels. Schools play a very important role in such situations. AQ has been found to help a person to adapt well to stress, adversity, trauma or tragedy. People who apply AQ perform optimally while facing adversity. Actually, they not only learn from these challenges but also respond to them healthier and more rapidly. Not all the students are capable of handling these adverse or not so favorable situations. Therefore, the investigator decided to examine empirically that whether or not locus of control gender and locale interact with each other on the scores of adversity quotient.

OBJECTIVES:

- O₁.** To study the effect of Locus of Control, Gender and Locale on Adversity Quotient of high school students
- O₂.** To study the interaction effects of Locus of Control and gender, Locus of Control and locale and Gender and Locale on Adversity Quotient
- O₃.** To study the interaction effects of Locus of Control, gender and locale on Adversity Quotient of high school students

HYPOTHESES

- H₁.** Externally Controlled and Internally Controlled high school students will significantly differ on Adversity Quotient.
- H₂.** Male and Female high school students will differ significantly on Adversity Quotient.
- H₃.** Rural high school students will be significantly different from Urban high school students on Adversity Quotient
- H₄.** There will be significant interaction effect of Locus of Control and Gender on Adversity Quotient
- H₅.** There will be significant interaction effect of Locus of Control and Locale on Adversity Quotient of high school students
- H₆.** There will be significant interaction effect of Gender and Locale on Adversity Quotient of high school students
- H₇.** There will be significant interaction effect of Locus of Control, Gender and Locale on Adversity Quotient of high school students



METHODOLOGY AND RESEARCH DESIGN OF THE STUDY:

Method of the Investigation and Procedure:

The study has been undertaken to ascertain the effect of three independent variable i.e Locus, Gender and Locality and on adversity quotient among high school students of 9th class belonging to rural and urban areas. The investigator had employed descriptive survey method of research for the present study. In order to collect the data, Adversity Quotient Assessment scale was administered on male and female high school students. The scores of high school students in these scales were tabulated and analyzed by using appropriate statistical techniques.

Design of The Study: 2*2*2 design was employed

Varibales:

Dependent Variable: Adversity Quotient

Independent Variable: Locus of control, Gender and Locality

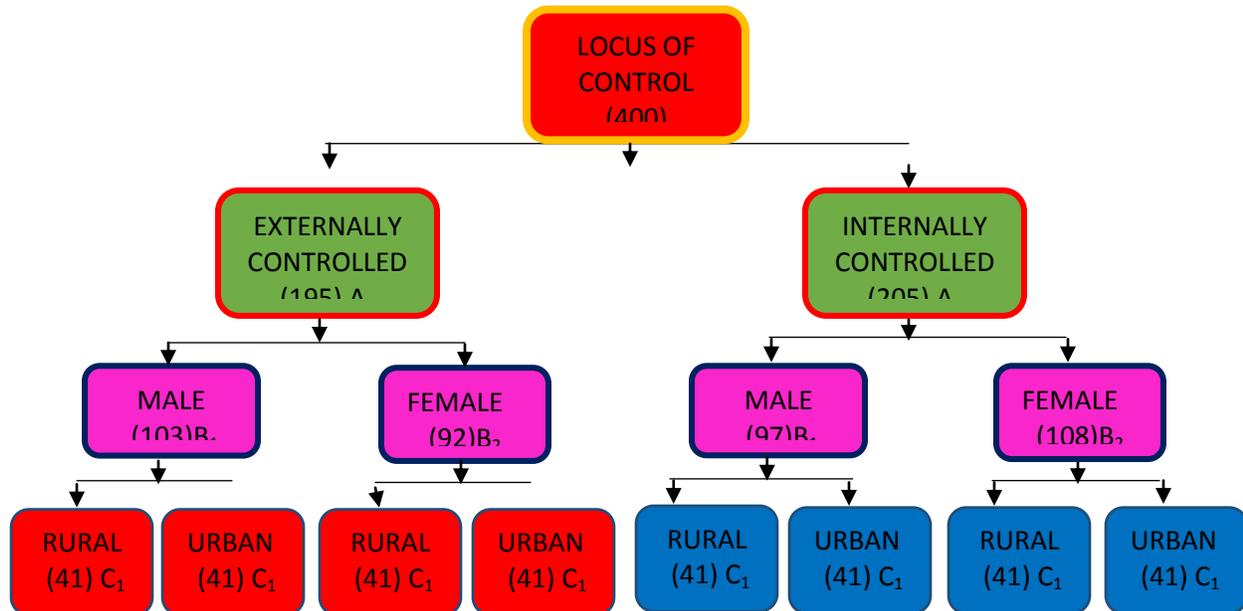
TOOLS USED:

For the present Study following two Scales were administered:

- Adversity Quotient Assessment Scale: Tool is constructed and standardized by **Rathee and Sharma (2015)**
- Locus of Control Scale (SAS) developed by Husnain and Joshi (**1992**)

SAMPLE

A sample of 400 High school students (200 Male and 200 Female) of 9th of class was selected by employing (multistage random sampling method) from 25 secondary schools located in urban and rural areas of from each district.of five zones of Haryana State. For the present study the participants were divided on the basis of locus of control, gender and locality. 2×2×2 factorial design was employed with two levels of each variables i.e external and internal locus of control, Male and Female as gender and Rural and Urban as locale on adversity quotient. The final sample constituted of 328 high school students. The students were kept in eight cells with equal subjects i.e 41 for each cell.



STATISTICAL TECHNIQUES EMPLOYED:

Mean and S.Ds were worked out on the scores of adversity quotient of high school students under study. ANOVA (analysis of variance) with 2×2×2 factorial design was employed to study the main effects of independent variables i.e gender, locale and alienation on dependent variable i.e Adversity Quotient supplemented by t' tests. To test the Assumption for ANOVA, Levene's Test of homogeneity of variance was employed. Analysis of the data was done with help of SPSS software (21st version).

ANALYSIS AND INTERPRETATIONS:

The collected data were classified, tabulated and subjected to statistical analysis. The number of respondents in different possible combinations of the three independent variables i.e Locus of Control, Gender and Locality along with mean scores on Adversity Quotient which are as presented below in Table 1:



Table I
Mean scores of all the groups on Adversity Quotient

Groups	A ₁ (ExternalLocus)		A ₂ (Internal Locus)	
	B ₁ (Male)	B ₂ (Female)	B ₁ (Male)	B ₂ (Female)
C ₁ (Rural)	184.122	175.463	185.35	187.657
C ₂ (Urban)	179.78	179.780	190.43	195.024

TABLE II
Leven's test of Equality of Error of Variance.

F	df ₁	df ₂	Sig.
2.361	7	320	.063

It is evident from Table II that the observed F-ratio for equality of error variance on adversity quotient came out be 2.361 which is not significant at 0.5 level of significance. This indicates that error variance of dependent variable is equal across groups meaning thereby that the groupware homogenous and fulfill the requirement of application of 2×2×2. As per factorial design of 2×2×2., three way analysis of variance was performed on the scores of Adversity Quotient to find out the main and interaction effects of three independent variables namely locus of control, gender and locality on adversity quptient. The obtained vales are being presented here in Table III

Table III
Summary of 2×2×2 factorial design

Tests of Between-Subjects Effects					
Dependent Variable: A.Q					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	11593.875 ^a	7	1656.268	4.309	.000
Intercept	11189938.686	1	11189938.686	29114.772	.000
LOC	7932.223	1	7932.223	20.639	.000
GENDER	16.247	1	16.247	.042	.837
LOCALITY	789.881	1	789.881	2.055	.153
LOC * GENDER	1237.101	1	1237.101	3.219	.074
LOC * LOCALITY	796.101	1	796.101	2.071	.151
GENDER * LOCALITY	614.637	1	614.637	1.599	.207
LOC * GENDER * LOCALITY	207.686	1	207.686	.540	.463



Error	122988.439	320	384.339		
Total	11324521.000	328			
Corrected Total	134582.314	327			
a. R Squared = .086 (Adjusted R Squared = .066)					

*Significant at 0.01 level

MAIN EFFECT:

1. **LOC (Locus of Control):** the obtained values as presented above in table 3 indicates that F-ratio for main effect of locus of control is 20.639 which is significant at 0.01 level for df_1 and df_2 320 leading to the inference that Locus of Control significantly effect Adversity Quotient of high school students. Further the mean scores of Internally Controlled and Externally Controlled high school students are 189.622 and 179.78 respectively. Thus it can be deduced that Internally Controlled high school student are higher on A.Q than Externally Controlled students. The Bar diagram (Figure 1) substantiates these results. Hence the proposed hypothesis that “,Externally Controlled and Internally Controlled high school students will significantly differ on Adversity Quotient,” **has been retained**. Similar results were reported by **Bagawathy and Ramakrishan (2015)** and **Brandt (1975)** in their research studies. To supplement the obtained results of main effect, t-test was applied. The results (from the Table IV) inferred that the mean scores of Internally Controlled high school students higher than Externally Controlled high school students. The obtained ‘t’ value is 4.51 which is significant at 0.01 level. Therefore, it can be clearly interpreted that Internally Controlled high school students are higher on Adversity Quotient in comparison to Externally Controlled high students.

TABLE:IV
Means, S.Ds and t-values for Locus of Control on Adversity Quotient of High School Students

VARIABLE	Groups	Mean Scores	S.Ds	t-value
Locus of Control	Externally Controlled	179.78	21.34	4.51*
	Internally Controlled	189.622	17.92	

P<0.01, df=328, *Significant at 0.01 level

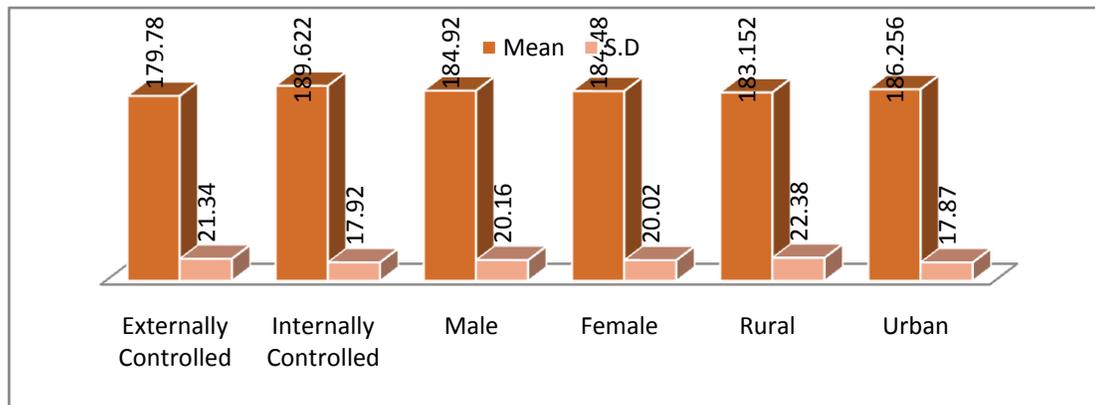
2. **GENDER:** Table 3 reveals that F-ratio for main effect of gender is 0.42 which is not significant at any level for df_1 and df_{320} . Thus it can be concluded that gender does not play any significant role in determining the adversity quotient of high school students. Therefore, the proposed hypothesis that, “Male and Female high school students will differ significantly on Adversity Quotient,” **stands rejected**. Results are supported by the findings obtained from the research work done by **Vakharia (2013)**. She also found that gender did not differ



significantly and respond to adversity in the similar manner. This means that both perceives themselves to be in control of adverse events and take responsibility for its outcomes to the same extent. It can also be explained in terms of that both male and female students are provided with similar environment at home and school in spite of their magnitude of treating may be different.

- LOCALITY:** table 3 shows that F-ratio of locality was found out to be not significant at any level. Therefore it can be inferred from the analysis that both the groups do not have any significant effect on adversity quotient of high school students. Therefore it can be deduced from the results that locality have no significant effect on adversity quotient of high school students. This may be due to that locality does not matter in facing adversities. Both rural and urban high school students face similar adversities in their school life. Therefore, the proposed hypothesis that, "Rural high school students will be significantly different from Urban high school students on Adversity Quotient", **has been rejected.**

Figure:1 Means and S.Ds of All the Groups on Adversity Quotient.



FIRST ORDER INTERACTIONS:

The Three Way Interaction Effects of two factors were found out and are presented below:

- Locus Of Control (A)×Gender(B):** the table 3 indicates that F-ratio for A×B interaction came out to be 3.219. which is not significant any level. It means that difference between the means of A_1 and A_2 for male (B_1) high school students do not differ significantly from the difference between means of A_1 and A_2 for female high school students (B_2). Thus the research hypothesis "There will be significant interaction effect of locus of control and gender on adversity quotient has **been rejected.**" The results obtained in this study were against the findings reported by Hema (2015) in her research. She found that Locus of Control significantly influenced by gender. Heenu (1987) found that locus of control and gender was found with a significant difference. While the results



obtained by **Naik (2015)** were contrasting with the results of the present study. He found that locus of control and gender were did not found to be influencing factors.

2. **Locus Of Control (A)×Locality (C):** it is evident from table 3 that F-ratio for A×C interaction came out to be 1.599. Which is not significant any level. In other words, difference between means of Externally controlled (A_1) and internally controlled (A_2) high school students belonging to rural (C_1) and Urban (C_2) high school students do not differ significantly on adversity quotient. Thus, the proposed hypothesis that, “There will be significant interaction effect of Locus of Control and locality on Adversity Quotient,” **stands rejected.** **Heidari (2013)** had also reported the similar findings.
3. **Gender (B)×Locality (C):** it is evident from table 3 that F-ratio for B×C interaction came out to be 2.071. which is not significant any level. In other words, difference between means of male (B_1) and (B_2) high school students belonging to rural (C_1) and Urban (C_2) high school students do not differ significantly on adversity quotient. Thus, the proposed hypothesis that there will be significant interaction effect of gender and locality on adversity quotient **stands rejected.**” The results obtained from the present analysis were supported by earlier research work done by **Bakare (2013)** who reported that gender and state of location of school were the most influencing predictors of Adversity Quotient.

SECOND ORDER INTERACTION

The three factor interaction effect of Locus of Control (A) Gender (B) and Locality (C) was also using three way analysis of variance. The result of the analysis of variance as entered in table 3 indicate that F-ratio of 0.540 which is found to be insignificant for df_1 and df_{320} . Thus, the research hypothesis that, “ There will be a significant interaction effect of locus of control, gender and locality of high school students on Adversity Quotient”, **has been rejected.**

SUMMARY AND CONCLUSIONS

The present study was carried out to address the following questions. Do locus of control, gender, and residence have significant effect on adversity quotient of high school students?

Is there any interaction effect among locus of control, gender and locality of high school students on adversity quotient? On the basis of the analysis following conclusions can be drawn:

- Locus of control has a significant effect on adversity quotient of high school students. Internally controlled students were found higher on adversity quotient in comparison to externally controlled high school students.
- No significant effect of gender was found on adversity quotient of high school students
- No significant effect of locality was found on adversity quotient of high school students.
- No significant interaction effect of locus of control and gender, locus of control and locality and gender and locality was found on adversity quotient of high school students.



- locus of control, gender and locality do not significantly interact with reference to adversity quotient of high school students.

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