Impact of Cognitive and Decision Making Style on Resilience: An Exploratory Study

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Abstract

Resilience refers to successful adaptation of an individual despite risk, acute stressors, and chronic adversities. Resilient students are more determined and they can enhance their efforts especially under difficult situations. Students need to be more resilient so that they can bounce back from the loads of pressures and adversities they encounter in studies. In this context there is a need to understand the resilient quality of students against his/her cognitive styles and thinking pattern. With this assumption, a research is designed to examine the relationship of cognitive and decision making styles with resilience of students of different departments. A sample of 152 students was selected randomly between the age group of 20 - 25 years from different departments of university of Gujrat, Pakistan. Correlation and Regression analysis were conducted to examine the relationship and impact of cognitive and decision making styles on Resilience. Results showed that resilience has a positive association with cognitive style whereas; there exists no relationship with decision making style. Furthermore, the systematic and intuitive cognitive styles have shown positive correlation with resilience. Finally, the cognitive styles have shown significant influence on resilience. The study concludes with the implication of resilience in the academics and approaches to enhance resilience in students.

Keywords: Cognitive Styles, Decision Making, Resilience and Students

1. Introduction

The root word for resilience is resile, which means to bounce back or rebound after being stressed. Zimmerman and Arunkumar (1994) described resiliency as "the ability to spring back from adversity that interpret the trajectory from risk to problem behavior or psychopathology and thereby result in adaptive outcomes even in the presence of challenging and threatening circumstances." According to Masten (1994), resilience refers to successful adaptation of an individual despite risk and adversity. It also refers to a pattern over time, characterized by good eventual adaptation despite developmental risk, acute stressors, or chronic adversities

Indeed, resilience refers to a class of phenomena characterized by good outcomes in spite of serious threats to adaptation or development (Masten, 2001). Resilience is a dynamic process that can be learned at any given point in life by an individual (Masten, 2001).

Youth with a positive attitude toward social relationships are more resilient, do better in school and contribute more to those around them (Wilson, O'Brien, & Sesma, 2009). Unfortunately, students in poverty, especially homeless and highly mobile students, are at high risk for disconnection from positive relationships with peers and supportive adults. Poor academic achievement and poor social relationships are two factors that place homeless youth in danger of future difficulties (Levy & Wall, 2000). On the other hand, positive relationships

with parents, teachers, and others can support resilience by eliminating or mitigating risk, buffering youth from risk, empowering youth, or through some combination of these three. Relationships, then, can be a conduit through which academic outcomes are improved.

Cognitive styles of students mean the mental activities that take place for processing and acquiring information. According to Witkin, Moore, Good enough and Cox cognitive styles are the individual preferences in the perception, thinking and learning. In this research paper Cognitive styles of students of different departments explains how students react differently to certain situations according to their mental level during the study phase of their life. This research paper focused on two types of cognitive styles i.e. systematic style and intuitive style.

The studies conducted by Hertzman. et. al. (1954); Witkin. et .al. (1962); and Bruner (1966) developed theories about cognitive styles. These and other studies resulted in theories that generally assumed a single dimension of cognitive style, with an individual's style falling somewhere on a continuum between the extremes of this dimension. The two extremes are described in general terms by Keenthe (1973), McKenney and Keen (1974), and Botkin (1974):systematic style is associated with logical, rational behavior that uses a step-by-step, sequential approach to thinking, learning, problem solving, and decision making; in contrast, the intuitive style is associated with a spontaneous, holistic, and visual approach.

In 1960's a brain research was conducted which stated that two sides of brain are responsible for different mental functions which are as follows:

Left brain: analytical, linear, sequential, concrete, rational, and goal oriented; and

Right brain: intuitive, spontaneous, holistic, symbolic, emotional, and visual.

These early theories and new studies can be linked in such a way:

Findings of Harvard studies stated that, an individual with systematic approach uses step by step process for making any decision and make plans for solving any problem and people with this style are intuitive, they use an unpredictable ordering of analytical steps when solving a problem, relies on experience patterns for decision making.

This research focused on whether students of different departments are of systematic or intuitive in their cognitive styles.

1.1 Decision making styles

Decision-making style is generally conceptualized as a learned response through which an individual approaches important decisions (Driver, 1979; Driver & Brousseau, 1993; Harren, 1979; Keen, 1973; & McKenney & Keen, 1974). According to Rowe and Mason (1987), decision style is primarily a cognitive process that combines the mental activities of perception, information processing or cognition, making a judgment, and coming to closure of the problem. Rowe and Boulgarides (1983) proposed a model of decision styles that recognizes the influence of values and perceptions. The model suggests that decision makers are driven by four forces - directive, analytic, conceptual, and behavioral - can be related to the typology of needs developed by McClelland (1962). McClelland initially proposed that behavior is motivated by the needs for achievement, power and affiliation. Subsequently, he recognized that the need for achievement may be satisfied in two different ways, either intrinsically by taking on new challenges or extrinsically by receiving praise and recognition.

1.1.1 Directive Decision Makers

Power is the primary need of directive decision makers. This type of decision makers want to dominate others and are result oriented. They have a low tolerance for ambiguity and prefer low levels of cognitive complexity. This preference limits the amount of information that they gather and the number of alternatives that they consider. People with this style may be characterized as rigid, structured, practical, and impersonal.

1.1.2 Analytic Decision Makers

They have a strong need for achievement in the form of new challenges. They have greater tolerance for ambiguity than their directive counterparts. Their comfort with cognitive complexity strongly encourages data collection and processing. They make decisions slowly because they want to examine the situation thoroughly and consider many alternatives systematically to take a long-term perspective. People with this style may be characterized as intellectual with ability to deal with new and complex situations, analyze details, and predict outcomes.

1.1.3 Conceptual Decision Makers

This style is characterized by a creative, risk taking orientation. These individuals have a high tolerance for ambiguity and high cognitive complexity. This decision style focuses on social concerns and connecting with people. People with this style may be characterized as people-oriented, open, and truthful. Such individuals like to share power and do not look to control the situation. Conceptual decision makers typically gather information from multiple sources and consider many alternatives. They tend considerable creativity and idealism.

1.1.4 Behavioral Decision Makers

This style people are driven primarily for a need for affiliation. This type has a low cognitive complexity, but a strong people orientation. Behavioral style managers tend to communicate easily and be very concerned with the well-being of their peers and subordinates. They are typically receptive to suggestions, willing to compromise, and prefer loose controls.

2. Significance of the Study

It is very important to introduce the concept of Resilience to students and how cognitive and decision making styles effect it .This research is helpful to create awareness of this useful concept in determining the resilience level and learning of how to increase this level by enhancing cognitive and decision making abilities in students of university of Gujrat. As resilience is ability to bounce back to normal position after facing difficulties and bad situations. Resilience will help them to grow and develop academically and professionally as well.

3. Contribution to Existing Literature

This research contributes to existing literature by introducing new combination of variables further diversification of sample, increased focus on individual characteristics of our respondents. The introduction of this concept in students of our university while making discussion with those students whose resilience level were higher than others also contributed to the growth and development of students in their academic career.

4. Objective of the Study

On the basis of review of existing literature the following objectives are formulated:

   I.   To introduce the concept of resilience to students.
  II.   To study the relationship between cognitive styles, decision making styles and resilience in the students of different departments.
 III.   To study the impact of cognitive styles and decision making styles on resilience students of different departments.

5. Literature Review

Maris G. Martinsons conducted a research in different Asian's countries. They examined that globalization had increased with the passage of time so how business leaders of the world in different industry and commerce takes decision. Researcher investigates the comparison of American leader's decision style to the Asian leader's decision style. The sample of the research study was American's and Asian's 219 business leaders. 19 items questionnaire is used for collection of data. Each question had four parts. Standard deviation, ANOVA F test and pair wise t test is used to analyzed the data. The findings of the research study explain that Japan and the People's Republic of China. American, Chinese and Japanese business leaders were each found to have a distinctive decision making style.

The study conducted by Evan.M.K. et. al. on enhancing attributional style resiliency factor in depressogenic stress generation in USA in 2012. The study examined that whether an enhancing attribution style, the tendency to make global and stable inferences following occurrence of a positive event, function as a resilience factor in stress generation. A sample size of 167 undergraduate's females was selected and a series of independent sample t test were conducted. The participants were assessed at two different points. The finding shows that females are more susceptible to the negative events and are more likely to generate stress. It also shows that resiliency factor can help protect individuals from the generation of stressful events.

Staci M.Z. et. al. conducted a research on the resilience in children and youth in the united state in 2012. The study reviews the definition of the resilience, advancement in resilience researches, protective factors, models of resilience, models and issues and the resilience interventions. The study shows that the resilience refers to achieving positive outcomes despite the challenging circumstances. The study also showed that individuals facing problems were able to handle by making sensible choices and also taking the advantages of the opportunities. Resilience was measured by using the checklist, scales and interviews. Resilience provide

conceptual model to understand how the children and youth overcome adversity.

Ahmad R. M. et. al. (2011) conducted a research in Malaysia. They examined the effectiveness of using graphic animation course wise and checked on it the student cognitive and spatial visual abilities. The research sample was 138 semesters of the students with experimental and control group. Quasi experimental with (2 * 2) factorial design was used for collection of data. Descriptive statistics and independent sample t test were used for analysis of data. The findings of the research show that students had significant differences in achievement with cognitive styles. As compare to experimental group control group performs better.

This was the study of Reza G.A. (2010) conducted in Tehran. The research paper investigates the relationship of resilience with personality, decision and cognitive style. The sample of the research was 130 management students of Tehran. They were selected randomly between the age group of 20 – 25. The data was collected through questionnaire. All variables have developed inventory questionnaire. Descriptive statistics, correlation and regression were used for analysis. The findings of the study explain that systematic and intuitive style of cognitive inventory had positive relationship with resilience and behavioral decision style had negative relationship with resilience. Systematic cognitive style had significant influence on resilience and resilience implication in business word enhances the resilience of management students.

Fulya C. O. et. al. (2010) conducted a research in Turkey. The purpose of their investigation was carrier decision making of the high school students according their parenting style. The sample of the study was 382 Turkish high school students aged 14 – 18. In which 200 females and 182 were males. Parenting decision making style questionnaire was used for collection of data. One way ANOVA was used for data analysis. The results of the study explained that the students of literate and authoritarian parents were found more deceive as compare to neglect parents. So it finds out that the parenting effect the children carrier decision making styles.

This research was conducted by Gerald and Ivan (2010). It was the research study of USA to investigate the resilience to depressive symptoms and effects on cognition style due to life events. To examine this they select a sample of 128 under graduate's students of University of Notre Dame. 4 week longitudinal design methodology was used for collection to test the interaction between cognitive style (positive or negative) and positive or negative life events. Actual life events, Back depression inventory and Cognitive style questionnaire used for this purpose. Data analyzed by standard deviation, mean, correlation, regression analysis and graphs. The results of study interpret that cognitively vulnerable individuals were buffered from the depressive effects of stress if they also possessed an enhancing cognitive style or experienced high numbers of positive life events. Individuals with low levels of negative cognitive style and life stress, but high levels of enhancing cognitive style or positive life events were the most resilient to depressive symptoms.

The study conducted by Yao Z. on the decision making style in china in 2008. It investigates the decision making style of the Chinese collage students online apparel shoppers and to study the relationship between the decision making characteristics and the online apparel shopping behavior and consumption. A questionnaire was used as a data collection method. The data was collected from the students at five universities from the different cities of china. The results proved that students spent more time for online pre-purchase decision making activities. Most of them spent time looking for different apparel products and evaluating them but do not order the selected product. It also showed that only the Chinese students who are the brand conscious and loyalty conscious spent money for the online purchase of products. The SPSS 14 was used for descriptive analysis, correlation testing and t-test.

Leele S. J. et. al. conducted research on decision style inventory on Deans of Malaysia to check their managerial style. It's said that decision making reflects the leadership. So four categories of decision making style behavioral, analytical, directive and conceptual are used in questionnaire to check the decision making style and its effect on leadership of deans and their performance. Questionnaire of Decision Making Styles Inventory (DMSI) developed by Rowe and Boulgarides (1992) was used to collection of data. Descriptive statistics were used to analyze the data. The findings of the study explain that majority of the deans adopted at least the very dominant or dominant decision making style. Deans reflect their decision making style with little difficulty to handle the situation.

Eunjoo O. and Doohun L. (2005) conducted a research in USA to investigate the student's cognitive style with their demographic variables and towards online education and learning behaviors in online learning environment. The selected sample of the research was 104 students of spring semester 2003 of University of Tennessee who were enrolled in different online courses. The data of research was online collected. An independent t test, ANOVA and chi square were used for analyzed the data. The findings of the research state that student's

cognitive styles were not significantly correlated with student's online learning, their demographic patterns and learning outcomes towards online learning instructions.

Cheryl L. et. al. (2005) examines the cross cultural differences in consumer decision making styles in Singapore and Australia. The purpose of the study to compare the decision making style of the Singaporean consumers and Australians consumers. Research sample of the paper was consumers of both cities. Data is collected by using online five likert scale questionnaire. Arithmetic Mean, correlation and ANOVA was used to analyze the data. The findings of the study state that majority of the respondents were females consumers in both countries and consumer decision styles were changed due to change in culture. Most differences occur due to brand consciousness, innovativeness and confused by over choice in both countries.

Prof. Sudharani. et. al. conducted a study on decision making styles of consumers in malls in India. The study investigates the decision making styles of Indian shoppers in shopping malls and to study the variation in these styles across the different demographic variables. They selected the sample size of 128 active mall shoppers. They used the structured questionnaire for identifying the consumer decision making style. They identified the six decisions making styles including the price consciousness, quality consciousness, novelty consciousness, recreational, confused by over choice and variety seeking. The findings shows that the Indians shoppers are not the brand conscious, single consumer is more prices conscious then the married consumer and shopping is funny activity for them.

Another study conducted by the Oddgeir F. et. al. on resilience in relation to the personality and intelligence in Norway in 2005. The study included 482 applicants to the military collage. The instruments used include the resilience scale for adults, for measuring personality- the big five and the social intelligence scale for collection of data. SPSS was used to perform the standard descriptive, reliability and for correlation analysis as well as for exploratory factor analysis. The findings show that resilience factors are positively correlated with the adjusted personality profile. RSA personal strength was strongly associated with the 5PFs-emotional stability, RSA-social competence with extroversion, agreeableness as well as social skill. It also finds that RSA was unrelated with the cognitive abilities.

Another study conducted by the Abdulrahman .A on the managerial decision style of Florida's state university in 2003. It investigate the decision making style which is the main factor for the success of organization. The main purpose of this study is to explore the managerial decision making style of managers and the relationship between different decision making styles. A questionnaire was used for collecting the descriptive data. The study improves our understanding of library managers and their management. The study showed that the decision making is influenced by the age, education level, and gender and organization type. The study showed that majority of the managers think by using the right side of the brain rather than the left side.

Nancy R.A. conducted a research on the resiliency in adolescent collage students in 1996 at the University of Central Florida. Resilience is considered of great importance and id dynamic, developmental in nature and interactive with environment. A connivance sampling method was used for the data collection and the questionnaire was used for this. Descriptive statistics, correlation, multiple regression and path analysis was used for this study to test the results. The finding was necessary for the health care providers to optimize the resilience and reduces the stress.

Ghodeswar B. M. conducted a research in India. They investigated the seven consumer decision making style of the Indian engineers under graduate students. They selected 72 students for collection of data. The age of all students were ranged between 21 to 25 years. Sproles and Kendall (1986) Questionnaire was used for collection of data. Questionnaire consists on 39 items and factor analysis used for analysis of data. From the seven styles two of them value of money and price consciousness were not confirmed in the finding.specific cost of each resource or to help minimise the aggregate cost of production.

5.1 Resilience about youth

In resilient theories according to child-development experts, we all are born with no concept of "self." We construct a self-image first of our bodies, its capacities and limitations through experimentation and then of our essential nature. Resilient individual must show positive outcomes across multiple aspects of life over a period of time (Cicchetti &Rogosch, 1997).Resilient youth are expected to have basic skills inner and outer both. Internal and external skills contribute to the protective factors that keep people with adversity thriving well and towards a life filled with safe risks. Inner components (intrinsic) or self leadership skills include empathy, caring, equity and social justice, safety, restraint and resistance skills (setting boundaries), planning and decision making (goal setting, problem solving and creativity), self efficacy, self esteem, acceptance, cultural awareness and spirituality.

On the other hand, outer components (extrinsic) or relationship, community and social skills include caring family, family communications, family support, high-expectation parents (not expecting perfection but excellence), achievement, family role models, school engagement, parental involvement with school, high expectations school, bonding to school, school boundaries, achievement, caring neighborhood, neighborhood boundaries, community values, adult relationships, positive peer relationships and positive peer influence (Reza G. A. 2010).

6. Research Methodology

6.1 Variables

6.1.2 Independent Variables

- Decision Making
- Cognitive Style

6.1.3 Dependent Variable

- Resilience

6.1.2.1 Decision Making

Decision-making is one of the most important elements in any field of life. Decisions are taken on the basis of experience, observation of the situation, experimentation, intuition and on analysis of the research. Everyone take decision on the basis of his abilities. Some take decisions quickly and some take much time. Good decision making make things easy and bad decision making make situations worse. It refers to the way in which an individual perceive and comprehend stimuli and how he choose to respond, pragmatically either through directive, analytical, conceptual or behavioral (Reza G. A. 2010). According to Rowe and Mason (1987), decision style is primarily a cognitive process that combines the mental activities of perception, information processing or cognition, making a judgment, and coming to closure of the problem.

6.1.2.2 Cognitive Style

Cognitive styles describe how the individual acquires knowledge (cognition) and processes information (conceptualization). Cognitive styles are related to mental behaviors which individuals when they solving the problems. Cognitive style historically has referred to a psychological dimension representing consistencies in an individual's manner of cognitive functioning, particularly with respect to acquiring and processing information (Ausburn & Ausburn, 1978). It refers to the characteristics ways in which an individual conceptually organizes the environment and adapting to either systematic or intuitive approach (Reza G. A., 2010).

6.1.3.1 Resilience

The root word for resilience is resile, which means to bounce back or rebound after being stressed (Moore J., 2013). It refers to an individual's ability to cope with adversity. Outcomes are successful or not is determined by the presence (and balance) of both risk factors and protective factors over time (Reza G. A., 2010). Resilience involves a dynamic process involving an interaction between both risk and protective processes, internal and external to the individual that can modify the effects of an adverse life event (Rutter, 1985).

In resilience the risk factors is defined as Risk factors are those characteristics thought to present a group of people, usually children, with a higher probability of an undesirable outcome (Masten, 1994).

A protective factor generally describes the circumstances that moderate the effects of risks and enhance adaptation (Masten, 1994). Researchers explained that protective factors – both internal and external – may buffer, intercept, or even prevent risk Werner, 1982).

6.2 Hypothesis

H_1 = Decision Making and Cognitive Style of students have some relationship with Resilience.

H_2 = There is impact of Decision Making and Cognitive Style of students on their Resilience.

6.3 Population and Sample

This research is conducted on the students of university of Gujrat and by using convenient sampling technique the selected sample was the 152 students from different departments of university. All of the students belong to age group 20 – 25.

6.4 Tools of Data Collection Method

6.4.1 Resilience Inventory

The questionnaire used for data collection of resilience was developed by Gail M. Wagnild & Heather M. Young (1987). The inventory had 25 questions on 7 likert scale. The Cronbach Alpha of the inventory is 78.8%. It means the inventory is 78.8% reliable for the research.

Table 1: Reliability Statistics of Resilience Inventory

Cronbach's Alpha	No of Items
.788	25

6.4.2 Decision Making Inventory (DSI)

Decision style inventory is used for collection of data about decision making style. It was developed by Rowe and Mason in 1987. Its calculated Cronbach Alpha was 90% face validity and 70% retested reliability. It measures four styles of decisions (Directive, Analytical, Conceptual, and Behavioral) and each decision contains 20 questions.

Table 2: Style Reactions of Decision Style Inventory

Basic Style	Under Stress	Motivated By:	Solves Problems by:	Manner of Thinking
Directive	Explodes	Power and Status	Rules and Policies	Focused
Analytical	Follows Rules	Challenge	Analysis and Insight	Logical
Conceptual	Is Erratic	Recognition	Intuition and Judgment	Creative
Behavioral	Avoids	Acceptance	Feeling and Instinct	Emotional

Rowe and Boulgarides(1992).

The table 2 explains the description about each decision style of Decision Style Inventory (DSI). It explains the reactions of each decision under different circumstances.

6.4.2 Cognitive Style Inventory (CSI)

Lorna P. M. developed the Cognitive style inventory. This inventory used for collection of data. The inventory contains two cognitive styles (Systematic and Intuitive). The inventory consists of 40 statements. There are 20 questions about Systematic Cognitive Style and 20 about Intuitive Cognitive Style on 5 likert scale. The Cronbach Alpha of the questionnaire is 84%.

Table 3: Reliability Statistics of Cognitive Style Inventory

Cronbach's Alpha	No. of Items
.841	40

Table 4: Style Reactions of Cognitive Style Inventory

Basic Style	Description	Manner of Thinking	Solve problems by	Non verbal pattern
Systematic	Convergent Thinker	Logical	Step by Step Approach	Creates an endless list
Intuitive	Divergent Thinker	Abstract	Concentrate on ideas and feelings	Very visual approach

The table 4 explains the descriptions about Systematic Cognitive Style Inventory and Intuitive Cognitive Style Inventory. It explains their style reactions for problem solving and the manner of thinking.

7. Analysis of Research Study

The data of research study is analyzed by using Descriptive Statistics, Frequency Tables, Correlation and Regression Analysis by using SPSS 16.

Table 5: Descriptive Statistics

Variables	Mean	Standard Error	Standard Deviation
Resilience	4.926316	0.064032	0.320162336
Directive	3.757238	0.099561	0.445249157
Analytical	3.978947	0.124114	0.555056712
Conceptual	3.898684	0.123286	0.551353857
Behavioral	3.447679	0.132318	0.591745
Intuitive	3.32731	0.030416	0.136022824
Systematic	3.370395	0.03725	0.166587484

Table 5 shows some statistical calculations of the data. Arithmetic mean and standard deviation are calculated for resilience, decision making style and cognitive style. Mean score of resilience and decision style except behavioral decision making style is fall in high category as compare to cognitive style.

Table 6: Sex of students from all departments of UOG

Sex	Frequency	Percent
Male	57	37.5
Female	95	62.5
Total	152	100.0

The sex of all respondents is explained in table 6. Total 152 students were selected as respondents; consist of 57 male and 95 female students.

Table7: Student Departments of UOG

Departments	Frequency	Percent
Management	62	40.8
Chemistry	14	9.2
Psychology	14	9.2
Engineering	17	11.2
Physics	7	4.6
Information Technology	8	5.3
Economics	2	1.3
Mathematics & Statistics	8	5.3
Mass Communication & Media	5	3.3
Medical	15	9.9
Total	152	100.0

Table 7 shows that students from 10 different departments contributed for data collection. Majority of the students (41%) are from management, Remaining students are from Chemistry, Psychology, economics, Engineering, Physics, Information Technology, Mathematics & Statistics, Mass Communication & Media and medical department.

Table 8: Correlation

	Resilience	Directive	Analytical	Conceptual	Behavioral	Intuitive	Systematic
Resilience	1						
Directive	-.096	1					
Analytical	.044	.031	1				
Conceptual	.090	-.616[**]	-.206[*]	1			
Behavioral	.010	-.489[**]	-.529[**]	.114	1		
Intuitive	.445[**]	-.076	.088	.164[*]	-.029	1	
Systematic	.544[**]	-.126	.101	.154	.020	.752[**]	1

[**]. Correlation is significant at the 0.01 level (2 tailed).

[*]. Correlation is significant at the 0.05 level (2 tailed).

Table 8 shows the correlation between students Resilience, Decision making and Cognitive style. Resilience has strong positive relationship with intuitive style (44.5%) and systematic style (54.4%). Decision making dimensions has no relation with resilience. It means this predictor creates no effect on their bounced back ability. The research hypothesis (H_1) partially proves here. Only Systematic and Intuitive Cognitive style have strongly positive relationship with resilience. It proves here that all students using evaluate approach, solve their problems by proper planning and according to their past experiences and intuitions. It means "Resilient students have good problem-solving skills" (Reza G. A., 2010). According to Lazarus and Folkman (1984), problem solving skills are one of the most significant coping strategies when confronted with stress.

Table 9: Regression

Coefficients						
Model	**Unstandardized Coefficients**		**Standardized Coefficients**	**T value**	**Sig.**	**Sig.**
	B	Std. Error	Beta			
(Constant)	87.720	35.813		2.449	.016	.000[a]
Directive	-.113	.141	-.101	-.801	.424	
Analytical	-.085	.143	-.061	-.598	.551	
Conceptual	-.089	.149	-.065	-.596	.552	
Behavioral	-.081	.132	-.071	-.614	.540	
Intuitive	.149	.182	.087	.819	.414	
Systematic	.799	.175	.484	4.554	.000	
R	.550					
R^2	.303					
Adjusted R Square	.274					
a. Dependent Variable: Resilience						

The regression analysis revealed in table 9. It explains the influence of decision making and cognitive style on resilience among UOG students. The result indicates that cumulatively 30.3% variations occur in resilience due to Decision making and cognitive style. R is .550 between the predictor and dependent variable. The t value of model is above 2 which show that both coefficients of the predictors are significant for the research model. Therefore higher the t-value, the greater the confidence we have in the coefficients as predictors (Dr. Bashir, 2011). The t statistics of research is 2.449. The .000 p value shows that there is linear relationship between dependent and independent variables. Only systematic cognitive style has positive influence on resilience. Because p < 0.05. Intuitive cognitive style and all dimensions of decision making style have no influence on

resilience

Levels of Resilience

Very low	Low	Mod. Low	Mod. high	High	Very high
50-100	101 - 115	116 – 130	131 – 145	145 – 160	160 – 175

M. Wagnild & Heather M. Young (1987).

Table 10: Resilience of students from all departments of UOG

Student Departments	Very low	Low	Mod. Low	Mod. High	High	Very High	Total Students
Management	7	10	23	15	7	-	62
Chemistry	3	-	7	4	1	-	14
Psychology	3	4	1	5	1	-	14
Engineering	2	4	6	5	-	-	17
Physics	1	1	2	3		-	7
Information Technology	1	-	2	2	3	-	8
Economics	-	2	-	-	-	-	2
Mathematics & Statistics	3	1	3	-	-	1	8
Mass Communication & Media	-	2	2	1	1	-	6
Medical	1	1	2	10	-	1	15

Table 10 explains the resilience of 152 students from 10 departments of UOG (University of Gujrat) and management department show the highest ratio of contribution. Its 15 students fall in moderate high range and 7 in high range. But 22 students have low level of resilience. 15 students from medical department were present in research study and its 10 students show the moderate high resilience. Students from rest of the departments usually fall in moderate low range of resilience. The result concludes that majority of high resilient students are from medical and management departments which indicates that they are being taught in their courses and trained in way to bounce back from difficulties and the reason behind it also the nature of the courses offered to these two departments.

Decision Style Intensity Levels

Style	Least preferred	Back-up	Dominant	Very dominant
Directive	Below 68	68 to82	83 to 90	Over 90
Analytic	Below 83	83 to 97	98 to 104	Over 104
Conceptual	Below 73	73 to 87	88 to 94	Over 94
Behavioral	Below 48	48 to 62	63 to 70	Over 70

Decision Style Intensity Levels (Rowe & Boulgarides 1992)

Table 11: Directive Style of Students of all departments of UOG

	No of Students				
Student Departments	**Least Preferred**	**Back up**	**Dominant**	**Very Dominant**	**Total Students**
Management	22	24	7	9	62
Chemistry	5	3	3	3	14
Psychology	6	5	1	2	14
Engineering	4	8	2	3	17
Physics	-	3	3	1	7
Information Technology	3	2	1	2	8
Economics	-	1	1	-	2
Mathematics & Statistics	3	1	1	3	8
Mass Communication & Media	3	2	-	-	5
Medical	7	4	1	3	15

Student's directive decision style reactions are shown in table 11. Mostly students agree with the option of least preferred. Few of them fall in dominant or very dominant category. It means that they don't follow the characteristics of directive decision style which mentioned above in table 2.

Table 12: Analytical Style of Students from all departments of UOG

	No. of Students				
Students Departments	**Least Preferred**	**Back up**	**Dominant**	**Very Dominant**	**Total Students**
Management	41	16	3	2	62
Chemistry	9	3	1	1	14
Psychology	10	2	2	-	14
Engineering	7	6	2	2	17
Physics	6	1	-	-	7
Information Technology	4	4	-	-	8
Economics	1	-	-	1	2
Mathematics & Statistics	2	4	2	-	8
Mass Communication & Media	4	1	-	-	5
Medical	13	2	-	-	15

Table 12 interprets the analytical style reactions of the UOG students. Students don't adopt the analytical style for their decision making. From 62 students of management 41 lie in least preferred and only 2 in dominant. It clears that respondents of this research don't possess characteristics of analytical decision style that mention above in table 2.

Table 13: Conceptual Style of Students from all departments of UOG

Student Departments	No. of Students				
	Least Preferred	Back up	Dominant	Very Dominant	Total Students
Management	21	23	9	9	62
Chemistry	4	6	2	2	14
Psychology	4	6	3	1	14
Engineering	7	6	1	3	17
Physics	3	3	1	-	7
Information Technology	3	4	1	-	8
Economics	2	-	-	-	2
Mathematics & Statistics	3	3	2	-	8
Mass Communication & Media	2	2	1	-	5
Medical	4	5	4	2	15

According to table 2 the conceptual style of students which shows that students are motivated by recognition and take decisions on the basis of thinking and intuition. The table 13 shows that management students used conceptual style for motivation and judgment. Out of 62 students 9 students fall in dominant and 9 in very dominant category.

Table 14: Behavioral Style of Students from all departments of UOG

Students Departments	No. of Students				
	Least Preferred	Back up	Dominant	Very Dominant	Total Students
Management	3	17	13	29	62
Chemistry	1	6	1	6	14
Psychology	-	2	4	8	14
Engineering	3	9	1	4	17
Physics	1	2	2	2	7
Information Technology	1	1	3	3	8
Economics	1	-	-	1	2
Mathematics & Statistics	2	2	-	4	8
Mass Communication & Media	-	-	-	5	5
Medical	2	1	-	12	15

Table 14 interprets the behavioral decision style of students. It shows that students from different departments mostly use behavioral decision style. As explain in table 2, according to this style people motivated by acceptance of their work and solve problems by their feelings and interest. They prefer emotions in thinking styles. Majority students of management, chemistry, mass communication and medical are behavioral decision maker.

Cognitive Style Intensity Levels

Style	Low	Medium Low	Medium High	High
Intuitive	Below 60	61 – 70	71 – 80	Above 80
Systematic	Below 60	61 – 70	71 – 80	Above 80

Table 15: Intuitive Style of Students from all departments of UOG

Students Departments	No. of Students				
	Low	Medium Low	Medium High	High	Total Students
Management	21	20	18	3	62
Chemistry	3	4	7	-	14
Psychology	6	6	2	-	14
Engineering	4	5	5	3	17
Physics	-	6	1	-	7
Information Technology	1	4	2	1	8
Economics	-	1	-	1	2
Mathematics & Statistics	3	2	1	2	8
Mass Communication & Media	-	3	2	-	5
Medical	4	4	3	4	15

Table 15 shows the students intensity level about cognitive intuitive style. It's shown in table that 18 management students lie in medium high range and 3 in high range. Chemistry, Engineering and medical students half lie in low range but half lie in high range. It concludes here students take their decisions according to cognitive systematic style. According to Loran P Martin the intuitive cognitive style people usually have career positions of marketing manager, advertising agent, therapist and graphic artist.

Table 15: Systematic Style of Students from all departments of UOG

Students Departments	No. of Students				
	Low	Medium Low	Medium High	High	Total Students
Management	25	15	14	8	62
Chemistry	4	4	4	2	14
Psychology	5	5	3	1	14
Engineering	3	7	5	2	17
Physics	3	4	-	-	7
Information Technology	1	2	4	1	8
Economics	-	1	-	1	2
Mathematics & Statistics	4	1	1	2	8
Mass Communication & Media	1	2	2	-	5
Medical	3	6	5	1	15

Table 15 explains the student's intensity level of systematic cognitive style. It's shown in above table that management, engineering and information technology students take decisions according to systematic style. Results of this research are in favor of Loran P Martin that the students of systematic cognitive style have projected carrier positions of engineering, system analyst, computer programmer, production manager, accountant, purchasing agent, personal specialist and public administer.

It's hypothesized that decision making and cognitive styles of students have some relationship with Resilience. It's partly proves here according to table 8 that resilience have strongly positive relationship with both dimensions systematic (54.4%) and intuitive (44.5%) of cognitive style by supporting the previous study of (Reza G. A., 2010). Decision making dimensions has no relation with resilience.

The second hypothesis of the research is impact of decision making and cognitive style of students on their Resilience. According to table 9 of regression analysis only cognitive style has positively influence on resilience. Due to increase in cognitive style resilience increases. But again the hypothesis partly proves here in favor of (Reza G. A., 2010).

8. Findings

This study of impact of decision styles and cognitive styles on resilience of students from different departments of UOG (University of Gujrat) consist of following findings:

- The majority of respondents of this research are females, i.e. 95 students are female where as 57 are male.
- Data collected from 10 different departments of UOG and the highest ratio of contribution (62 students) is from management department.
- Systematic cognitive style and intuitive cognitive style has strong positive relationship with resilience 54.4% and 44.5% respectively.
- Resilience has only influence of cognitive intuitive style. Decision making dimensions (directive, analytical, conceptual and behavioral) don't create any influence on resilience.
- Students usually posses characteristics of systematic and intuitive cognitive style.
- Majority of students fall in least preferred category of directive, analytical and conceptual. But management, chemistry, mass communication & media and medical students are behavioral decision maker.
- Management and medical students are more resilient students from 10 departments. Engineering and Information technology students are fall in low moderate range but rest of the departments is included in low resilient category.
- Management, medical, engineering and chemistry student's posse's intuitive cognitive style and these qualities of people usually have carrier positions of marketing manager, advertising agent, therapist and graphic artist.
- Management, engineering and information technology students take decisions according to systematic style and they have projected carrier positions of engineering, production manager, system analyst, accountant, computer programmer purchasing agent, personal specialist and public administer.

9. Conclusion

Better Results of academic life is the most decisive factor as far as the success of a student is concerned. The Results in turn is dependent on the student's mental level and ability to cope with failures. In an age of highly dynamic and competitive world, students are exposed to all kinds of stressors that can affect them on all realms of life. The findings of the study suggest that cognitive styles are playing a decisive role in influencing resilience. The present study also insists that management and medical students who possess logical thinking better resilience abilities then other students. Ironically the students who were inclined more on emotions and feelings had displayed lesser resilience. Management and medical students had shown step by step approach in solving problems and then make overall plan that would enable them display better resilience. On the other hand some students from other departments had displayed unpredictable approach in handling analytical problems; this would certainly act as a pulling factor in resilience. Finally, those students who follow behavioral-decision making style had proven to have low resilience skills.

10. Recommendation

On the basis of our findings we recommend following:

- Resilience level in students should be high because it makes them ambitious and ability to bounce back.
- Students can measure their resilience, analyze their decision and cognitive style and can take steps to grow and develop academically and professionally as well.
- Children and young people who are best equipped to overcome adversities will have: strong social support networks; a committed mentor or person from outside the family; a range of extra-curricular activities that promote the learning of competencies and emotional maturity; the capacity to reframe

adversities so that the beneficial as well as the damaging effects are recognized (Newman and Blackburn, 2002).

- Resilience developed in children at the age of their childhood. When they don't get caring, supportive environment and proper time from their parents, their ability to bounce back diminishes. Care and peaceful environment is more beneficial for high resilience.
- The quality of care for young people develops a positive sense of identity, including their self knowledge, self-esteem and self-efficacy, may also promote their resilience (Mike Stein, 2005).
- Following are characteristics that highly resilient students develop:

I. Positive peer and adult interactions

II. Low degrees of defensiveness and aggressiveness and high degrees of cooperation, participation, and emotional stability (teachers' ratings)

III. A positive sense of self

IV. A sense of personal power rather than powerlessness

V. An internal locus of control (a belief that they are capable of exercising a degree of control over their environment)

- Parents need to take care of their children because resilient children also tend to have parents who are concerned with their children's education, who participate in that education, who direct their children's everyday tasks, and who are aware of their children's interests and goals.
- Provide mentors for students who are facing high-risk situations to reduce risk exposure (Linda F. W., 1995).
- Higher education institutions should develop structures and programs that expose students to undergraduate research, provide professional work experience, and establish faculty and student networks in academic disciplines (Linda F. W., 1995)
- Encourage student development of long term goals and plans through rewards and incentives within the school and community.

Acknowledgement

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