COGNITIVE STYLE OF SECONDARY SCHOOL STUDENTS IN RELATION TO ADVERSITY QUOTIENT

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In partial fulfilment of the requirements for the award of degree of

Master of Education

By

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DECLARATION

I do hereby declare that the dissertation entitled "COGNITIVE STYLE OF SECONDARY SCHOOL STUDENTS IN RELATION TO ADVERSITY QUOTIENT" submitted in partial fulfilment of the requirement for the award of the degree of M.Ed. is entirely my original work and all ideas and references have been duly acknowledged. It does not contain any work that has been submitted for the award of any other degree or diploma of any university.

Signature

Date

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CERTIFICATE

This is to certify that Mr. Monu Kumar has completed his dissertation entitled "Cognitive Style of Secondary School Students in Relation to Adversity Quotient" under my guidance and supervision. To the best of my knowledge, the present work is the result of his original investigation and study. No part of the dissertation has been submitted for any other degree or diploma to any other university. The dissertation is fit for submission for the partial fulfilment of the requirements for the award of M. Ed. degree.

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ABSTRACT

This study was conducted to investigate into the cognitive style of secondary school students in relation to their adversity quotient. Descriptive survey method was used in this study to obtain pertinent and precise information. The objectives of the study were to study the levels of cognitive style among secondary school students; to study levels of adversity quotient among secondary school students; to analyse the difference between male and female secondary school students in their cognitive style; to explore the difference between rural and urban secondary school students in their cognitive style; to analyse the difference between male and female secondary school students in their adversity quotient; to explore the difference between rural and urban secondary school students in their adversity quotient; to analyse the difference in cognitive style of secondary school students having high and low adversity quotient; to explore the relationship between cognitive style and adversity quotient of secondary school students. The investigator selected 400 secondary school students as sample through stratified random sampling technique. For collection of data the investigator used Cognitive Style Inventory developed by Dr. Praveen Kumar Jha and Adversity Quotient Profile developed by investigator. For the purpose of drawing out results the investigator used statistical techniques like percentage, mean, SD, t-test, coefficient of correlation. Pie-charts and bar graphs were used as graphical techniques. The results of the study revealed that 19.75% secondary school students possess low level of cognitive style, 65.75% secondary school students possess moderate level of cognitive style whereas 14.50% secondary school students possess high level of cognitive style;17.25% secondary school students possess low level of adversity quotient, 69.00% secondary school students possess moderate level of adversity quotient whereas 13.75% secondary school students possess high level of adversity quotient; female secondary school students are more systematic as compared to their counterparts' male secondary school students; female secondary school students possess higher intuitive style as compared to their counterparts' male secondary school students; female secondary school students possess higher cognitive style as compared to their counterparts' male secondary school students; rural secondary school students are more systematic as compared to their

counterparts' urban secondary school students; there exists no significant difference between rural and urban secondary school students in their intuitive style; there exists no significant difference between rural and urban secondary school students in their cognitive style; female secondary school students possess greater adversity quotient as compared to their counterparts' male secondary school students; there exists no significant difference between rural and urban secondary school students in their adversity quotient; secondary school students having high level of adversity quotient possess high level of cognitive style than their counterparts secondary school students having low level of adversity quotient; there exists significant positive relationship between cognitive style and adversity quotient of secondary school students.

***Keywords**: Cognitive Style, Adversity Quotient, Secondary School Students.*

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INTRODUCTION

1.1 THEORETICAL ORIENTATION OF THE PROBLEM

COGNITIVE STYLE

Cognitive style can be stated as a frequent design of perceptual and experienced process. Cultures offer people with a series of cognitive styles that are suitable for divergent cognitive tasks in changed situations. Psychological specialists have made an attempt to relate cognitive styles in cross-sectional cultural. Many of them have asserted that the styles of individuals and groups can be tracked on a series between a global style and an expressed style. People who use a global style tend to view the world holistically; they first concentrate on a package of relationships and only later the bits and pieces that are related. They are said to be field dependent. As opposed to it, people who use an expressed style tend to break up the world into smaller and smaller sections, which can then be organized into larger quantities.

They also tend to see a sharp limit between their own bodies and the external domain. Persons expressed style as ability to consider whatever they happen to be paying helpfulness to apart from its context and so are referred as field independent. Originally, most people in Western societies were thought to be independent, whereas most people lives in non-Western cultures were thought to be field-dependent. However, more detailed research shows that these generalities are deceptive. For example, the preferred cognitive style of an individual often varies from task to task and from different situation. People who use pronounced styles for some tasks also use global styles for other tasks. In fact, they may reflect a range of different styles to bear on a single task. North Americans are not field independent in all of the contextual frameworks, even when the task involves mathematics, which would seem to be the most field independent of all cognitive activities. Cognitive style is non – intellective construct, which has drawn attention of the educational researchers. Although, intelligence, personality and interests are considered serious determinants

of academic attainment and vocational success, Cognitive style is a constructive process, in which it has been established by researchers to describe the method of mediation between stimulation and reactions. Different authors have described this term in different ways. According to Sigel, Cognitive styles are stable preferences in mode of perceptual organization and conceptualization of external environment.

1.2 Concept of Cognitive Style

Cognitive-style is a hypothetical construct that has been developed to explain the process of mediation between stimulus and response. The term cognitive style refers to the characteristic ways in which an individual conceptually organizes the environment. It is viewed that cognitive style refers to the way an individual filters and processes stimuli so that the environment takes on psychological meaning. It is representative of this use of term. As such cognitive representations modify the one-to-one relationship between stimulus and response. If it were not for these cognitive representations: stimuli would have been irrelevant for the individual as the individual would respond to the stimulation in a robot like fashion.

Cognitive style is also understood in terms of consistent patterns of organizing and processing information. Coop and Sigel (1971) equated cognitive style with modes of behaviour rather than mediating processes. They used the term cognitive style to denote consistencies in individual modes of functioning in a variety of behavioural situations.

Therefore, it is proper to mention here that cognitive style is conceived as one of the aspects of psychological differentiation. Psychological differentiation refers to differentiate mode of perceiving. Judging and appraising things to which people are exposed to under different conditions. The notion of cognitive style has been defined as self-evident modes of functioning which the individual shows in his perceptual and intellectual activities. It is conceptualized as stable attitude or habitual strategy which determines a person's typical modes of perceiving, remembering and problem-solving. There are several types of cognitive functioning among which field dependence and field independence are well known. A field dependent individual is found to be passive and less competent in analytical functioning having greater social

orientation. He has poor impulsive control and undifferentiated self-concept. He is more socially sensitive. On the other hand, a field independent individual is found to be more active and competent in analytical functioning having less social orientation. He is less impulsive and socially sensitive.

Dimensions of Cognitive Style

Theories of cognitive styles were developed as a result of early studies conducted by Witkin, et el; (1954; 1962). These studies resulted in theories that generally assumed a single dimension of cognitive style with two extremes. The two extremes were described in general terms by Keen (1973); Mikenney & Keen (1974) and Botkin (1974) as; Systematic Style and Intuitive Style. The systematic style is associated with logical, rational behaviour 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. These two styles however did not reflect the entire spectrum of people's behaviour with regard to thinking, learning and especially problem solving and decision making. Therefore, a multidimensional model intended to reflect the entire spectrum was postulated (Martin, 1983). This model consisted of two continuum; i.e.; (1) High systematic to low systematic and (2) High intuitive to low intuitive. Ongoing observational studies, along with effects to develop measurement devices for assessing cognitive behaviour, have resulted in an expanded version of the original model. Which led to the development of five following styles:

Systematic Style: An individual who typically operates with a systematic style uses a well-defined step by step approach when solving a problem; looks for an overall method or pragmatic approach; and then makes an overall plan for solving the problem.

Intuitive Style: The individual whose style is intuitive, uses an unpredictable ordering of analytical steps when solving a problem, relies on experience patterns characterized by verbalized areas or hunches and explores and abandons alternatives quickly.

Integrated Style: Person with an integrated style is able to change styles quickly and easily. Such style changes seem to be unconscious and take place in a matter of seconds. The result of this "rapid fire" ability is that it appears to generate an energy and proactive approach to problem solving. In fact integrated people are often referred to as "problem-seekers" because they consistently attempt to identify potential problems as well as opportunities in order to find better ways of doing things.

Undifferentiated Style: A person with such a style appears not distinguish or differentiate between the two style extremes; i.e.; systematic and intuitive, and therefore; appears not to display a style. In a problem solving situation, he will exhibit a receptivity to instructions or guidelines from outside sources. Undifferentiated individuals tend to be withdrawn, passive and reflective and often look to others for problem-solving strategies.

Split-style: An individual with split style shows fairly equal degrees of systematic and intuitive specialization. However, people with a split style do possess an integrated behavioural response; instead, they exhibit each separate dimension in completely different in settings; using only one style at a time based on nature of their tasks. In other words, they consciously respond to problem-solving by selecting the most appropriate style.

Cognitive Style Inventory (CSI) is a self-report measure of the ways of thinking, judging, remembering, storing information, decision making and believing in interpersonal relationship. Cognition is a mediating process that is the centre of a resurgence of interest. The current cognitive learning perspective is that the organism responds to its cognitive construction of the environment rather than to the objective reality. Several common characteristics among the cognitive approaches to personality that have become popular during the last twenty years; were described as; (1) Individual differences in style of thinking as a starting point; (2) An emphasis on style over contact; (3) The assumption that cognitive styles are related to other personality characteristics of individuals"; and (4) The treatment of cognitive styles as traits (i.e.; the characteristics are dependent of situational influences, a position leading to an emphasis on the consistency of the style).

Coop and Sigel (1971) has used the term cognitive style for functioning of individuals depends upon their mode of their behaviour and vary situation to situation.

Goldstein and Blackmann (1978) defined cognitive style a process in which individual systematically organizes the atmosphere. There is no universally agreed definition of cognitive style but almost researchers have emphasized three features; styles are characteristics of individuals; they describe processes which are relatively stable over time; and intra individual stabilities are consistent across tasks having similar requirements. The best-known cognitive style is field– independent/field–dependence (FI/FD) dimension, which was developed and used extensively by Witkin and his associates. Cognitive style may have to be closely related to vocational interests of the students, but needs exploration empirically. Cognitive style is the control procedure or style, which is self-generated, transitory and a situational determined mindful activity that a learner uses to establish and to regulate, receive and transmit information and ultimate behaviour. Studies on cognitive style have shown that individuals do not approach scientific tasks in the same manner (Babalola, 1989; Onwu & Asuzu, 1989). There are different cognitive plans for treating of information, which in turn has impact on student's academic achievement. Cognition is an action of knowing. It includes every mental process (including perceiving, recognizing, conceiving and reasoning) as well-known from an experience of feeling that have been long interested in the connection between the knowing mind and external actuality.

The term is used in numerous different loosely related customs in psychology it is used to refer to the mental process of an individual with specific relation to a view that argues that the mind has centre states such as beliefs, desires and intentions can be understood in terms of information processing, particularly when a lot of concept or concretization is involved or process such as covering various aspects like knowledge, skill or learning for example are at work. It is also employed in a wide-ranging sense to mean the act of knowing or knowledge and may be construed in a social or cultural sense to describe the emergent development of knowledge and thoughts with in a group.

Cognitive style is relating to the brain as in how we think stimuli or stimulus is something up or so something might happen. A cognitive stimulus acts as gear that causes us to think. For example, if you are talking about cognitive style in a baby it might be something as simple as a mobile or shape sorter. Style is a idea used to define a set of individual potentials, activities or behaviours that are maintained over a period of time. Style reflects an individual's potential. This in turn leads to improved routine as the individual creates and maintains a sense of identity. It is difficult for a person to switch off his style. Styles can be showed as higher order traits in the way that they inspire the cognitive abilities and affective traits related to individual behaviour.

Wallach and Kogan (1966) argued that cognitive style may be related to the different modes of thinking. They suggest that board categorization may have an advantage over narrow categorization in performance traditional qualitative aptitude tests. It is plausible, they contend, that the nature of bandwidth tasks may account for difference among creative and intelligent subjects. In bandwidth tasks the subject is confined to a limited number of possibilities whole in creativity tasks he is offered with unlimited freedom and without imposition of category boundaries. Their study suggests that highly creative children may exhibit a broader category width.

Witkin et al (1977) reported that students showed tendency to shift their choice over greater compatibility with their FI-FD cognitive style. They noticed that students who preferred science and mathematics were FI and the students who preferred social science were FD. They also noticed that the FI people preferred the areas that are interpersonal in nature lack human content and required analytical ability. They observed significant association among cognitive style and educational and career choices of the students.

Ford (1979) investigated the relation between FD-I dimension and intellectual function of 95 Black students. Significant relationships were found between the EFT and the performance scale WAIS but not between the RFT and performance scale WAIS. Significant correlations were found between verbal ability (assessed by SCAT and the WAIS) and the measures of FD-I dimensions. The common requirement to

overcome 0embedded ness both in intelligence and FD-I tests accounted for this significant relationship.

Sharma and Aggarwal (1980) defined cognitive style as a term that refers to stable individual performance in a mode of categorization of external environment.

According to Shuell (1981) cognitive style refers to the preferred way that different individuals have processing and organizing of the information and in responding to the environmental stimuli.

Chatterjee and Paul (1983) conducted a study to confirm Witkin's contention that field-independent (FI) students favour more on impersonal scientific affairs than field-dependent students (FD) students, 80 males and 80 females of class 10^{th} students were administered the Witkin's Embedded Figures Test (EFT) and Raven's Progressive Matrices as measures of field dependent independent cognitive style and general intelligence. Role of intelligence on the association between (a) field independence and sexes and (b) field independence and science achievement were found to be insignificant. Because, sex factor failed to show significant difference on EFT performance between the groups in both intelligence uncontrolled and controlled condition and field independence showed higher correspondence over science achievement in both intelligence uncontrolled and controlled condition. Moreover, when effect of intelligent was partial out from the association between field independence and science achievement, all partial 'r' values were found to be highly significant.

Bal (1989) studied the creativity, cognitive style and academic achievement amongst university students. 150 female Indian college students were administered the Embedded Figures Test- from Torrance Test of Creativity Thinking (TTC).The grades of the study revealed that field independent/dependent and academic achievement were related to tolerance test of creative thinking scores of fluency flexibility and originality and to creativity assessed by the Remote Associates Test (RAT). Cognitive style and academic achievement interacted with Remote Associate test but not Tolerance Test of Creative Thinking.

Riding and Douglas (1993) termed the cognitive style acts as, “a faired fixed characteristic of an individual of static and relatively inbuilt features of an individual”.

Hittner and Daniels (2002) examined the association of gender-role orientation to create accomplishments and cognitive styles. Three different role of gender locations were studied: instrumentality (agency, orthodox, mannish,) soulfulness (communal, orthodox, womanly) and intersexual (high levels of contributory and exploitive features). Instrumentality was positively associated with creative accomplishments in the business venture domain and the androgynous vs non-androgynous; individuals were more creativity productive in the domains of literature, theatre, and videography. Instrumentality was also definitely related with the 6 caps cognitive style, which is a quantity of cognitive flexibility, and the 6 hats style was marginally meaningfully related with androgyny.

Saracho (2003) suggested that the effects of the interactions between the teachers and students cognitive style must be considered in selecting instructional strategies and establishing an interpersonal classroom ambience. Teachers need to implement and provide a myriad of idiosyncratic teaching strategies, curricula, and teaching consequences in their classroom. This contributes to the proposition of adapting instruction to the students’ needs, thus requiring the teachers to become flexible in their cognitive style.

Gamble and Roberts (2005) revealed that girls of adverse parent’s possesses more negative impact on cognitive style than boys that the connotation between parenting and cognitive style is largely facilitated by attachment anxiety. Adolescents who perceive their parents as critical and perfectionistic tend to report uncertain attachment styles characterized by difficulties getting close to others and fears about rejection, and in turn, these measurements of attachment in security appear to contribute to low self- esteem, dysfunctional attitudes and negative attribution style.

Lee (2006) conducted a study to find whether a person’s prepositional cognitive style influenced learning attainment in a visually concerned with task for an online learning environment in higher education. Field dependence-independence was used to identify individuals’ cognitive styles. The researcher followed Dwyer and

Moore's research (1991, 2000) and divided learners into three groups (field dependent, field neutral, and the field independent students). It was found that the students from both field dependent and field independent has cognitive styles performed equally well in online learning environments. In addition, for providing initial- level instruction on visually oriented tasks in an online learning environment, directions, which underlined on field dependent approach, benefited both field independent and field dependent students in their knowledge-based learning attainment. In this approach, extra signs and sequence of content might have been the reasons that students had higher scores on their knowledge-based learning attainment and gratification levels. It was also indicated that students could establish higher performance-based learning achievement if they felt the directions were easy to follow and the workload of the module was controllable.

Backhaus and Kristin (2007) conducted a study on cognitive styles in management education. They conducted study on 222 American business students as sample by use of cognitive styles index (CSI). The researcher found that there exists a correlation between academic presentation and higher scores on deep, strategic, metacognition consciousness, academic self- confidence scale. Woman gets higher score on surface and planned of RASI by the adoption of analytic style.

Grimley, Dahraei and Riding (2008) conducted the study on the relationship between anxiety- stability, working memory and cognitive style. They conducted the study on 179 students of 12-13 years old pupils of 8 secondary schools in UK by the use of information processing index (IPI) as tool. The researcher found that cognitive style determine the position on Wholist-Analytic ratio and verbal-Imagery dimensions.

Friedel and Curtis (2009) conducted the study on relationship between student's engagement and the dissimilar cognitive styles of their undergraduate instructors. They used Kirton's Adaption Inventory as tool to measure cognitive style. The researcher found that distinction of cognitive style between course instructor and students had no relationship with student arrangement.

Shi (2011) conducted a study that focuses on the relationship between cognitive styles and learning strategies of 184 second-year English majors from the Foreign Language School of a university in Wuhan. In this study, quantitative data was presented. Two self-reported inventories were employed. Learning Style Survey was used to examine the learning styles of the participants and the Chinese version of Oxford's Strategy Inventory for Language Learning (SILL) was conducted to survey the subjects' learning strategies. The results show that cognitive styles have significant influence on learners' choices of learning strategies. Synthesizing style, sharpener style, field-independent style and impulsive style of cognitive styles correlate positively almost with every strategy, so they turned to be the most influential cognitive styles that have an impact on learners' learning strategy choices

Pearson (2014) conducted study on cognitive styles and future depressed mood in early adulthood. The researcher used sample 3500 young adults from Avon Longitudinal study for Parents and children (ALSPAC) in UK. The researcher found that cognitive style was related with unhappy mood, autonomously of base line mood.

1.3 Concept of Adversity Quotient

Adversity refers to hardships, challenges or misfortune. Adversity is a state of hardship or affliction, trouble. The word 'adversity' was originated from Classical Latin word 'adversus', which implies 'against' and 'opposite'. In Old French it was known as "adverse" and in Middle English it was 'adverse'. Adverse most often points to things, denoting something that is in opposition to someone's interests. The state of adverse conditions; state of misfortune or calamity and a tough period in one's life in which person have many problems is known as adversity.

Adversity means unfavourable situations and difficulties. Adverse conditions make one person to learn several things and it also test one's ability and courage. One's virtues get full scope for development and expression under hostile circumstances. It is difficult and tough that brings out the best in a man. It is common saying that Misery is the best teacher in person's life. The bitter experiences of life teach us many lessons. They are our best guides. They open our eyes and we can distinguish between the real and the unreal thing, concept or phenomena. They make

us mature and firm. They inculcate in us the quality of adjustments and sense of proportion. They increase the store of our knowledge and experience and thrash out the corn from the chaff. Fortitude refers to the virtue of adversity, says Bacon. It means that man should fight bravely against all type of unfavourable conditions which militate against him. He should not gently accept the dictates of force of the circumstances. Adversity is a chance to promote person beware, dynamic, attentive and set to handle with any situation. Such kind of chance should be given because that types of tests the encouragement and offers an opportunity to attain a high peak of experiences. It should be assumed time to convey important exercise. Thus adversity is not expletive.

Dr. Paul Stoltz defined Adversity Quotient as the ability of the person to deal with the adversities of his life. As such, it is the science of human toughness.

For many years, many researchers have dedicated a great deal of their work to study the phenomenon of Intelligence Quotient (IQ) and Emotional Quotient (EQ), which are treated as a basis of success and greater accomplishment. A decade ago in 1997, Paul Stoltz introduced a new interesting & exciting concept which is known as "Adversity Quotient" or AQ, which implies that how well one survives with adversity and his ability to gain victory over it.

The term deals with several important aspects of a person; (A) their history of adversity or adverse conditions faced in his/her life and how they have overcome it, (B) the ability of a person to remain level-headed in otherwise stressful situations, and (C) the ability to bear blow after blow, obstacle after obstacle and still keep moving forward. An adversity quotient is how well a person resists and works in the adverse situations. With the help of AQ concept, it is better to understand how a person and others react to challenges and adversity in all aspects of their lives. In fact, how people respond to adversity is a strong indicator of ability to succeed in many activities. History of adversity and how someone overcomes it informs one's ability to stay level-headed and make good decisions in stressful conditions.

Frequently we use the word tough, whether it was used to describe a friend, an adversary or any person "toughness" was valuable, it was necessary amongst peers

and it was useful in almost every situation of a person's life. In the professional ground, the idea of "toughness" is rarely used. The once valuable commodity was replaced with the desire to be intelligent, analytical or well-spoken. These characteristics, among others, dominate resumes and interviews in the professional world. Everybody wants to prove that they are smart no one talks about being tough. It is harmful to overlook the significance of toughness. In the same way as IQ and EQ is one of the important traits, but an individual having AQ is most important.

Adversity doesn't create challenging barriers. Each hardship is a challenge, each challenge is an opportunity, and each opportunity an embraced. Change is a welcome part of the journey. It is far more important to know how to deal with the negative than to the positive and there are mainly three types of individuals:

1. Quitter: Quitters are frequently hostile, unhappy, and passionately numbs. Further, they may be furious and irritated, striking out from world around them, offended of those who arise**.**

2. Campers: They are delighted. They are satisfied with doing, rather than motivated. The psychologist Maslow's Hierarchy of Need Campers have succeeded at achieving their basic needs- food, water, security, shelter, even a sense of survive. They have given up the top of Maslow's Hierarchy self- actualization, the pea in order to drape onto what they have. As a result, campers become strongly motivated by comfort and fear. They fear losing ground, and they seek the comfort of their cozy little campground.

3. Climber: Climbers live life fully. They feel a deep sense of purpose and passion for what they do. They know how to experience joy, identifying it as a gift and reward for the climb. Knowing that the peak may be mysterious, climbers never forget the power of the journey over the destination.

Adversity Quotient is the most broadly accepted measure and method in the world for evaluating and strengthening how people respond to and deal with adverse situations in their life. People who successfully apply AQ perform optimally when faced with the challenges, big and small, that confront us each day. In fact, they not

only learn from these adversities, but they respond to them better and faster, and hardness them as motivational fuel to excel in school, work, and life. AQ response is comprised of four CORE dimensions. C= Control, O= Ownership, R= Reach, E= Endurance.

C = Control: To what extent can you influence the situation? How much control do you perceive you have?

O = Ownership: To what extent do you hold yourself responsible for improving this situation? To what extent are you responsible to play some role in making it better?

R = Reach: How far does the fallout of this condition reach into other areas of your work or life? To what extent does the adversity extend beyond the situation at hand?

E= Endurance: How long will the adversity endure/tolerate by any person?

Dr. Paul Stoltz defined success as the degree to which one moves forward and upward, progressing in one "lifelong mission, in spite of all obstacles or other forms of adversity. According to him our success of work and life is mostly resolute by adversity quotient or AQ. (Stoltz, 1997).

Kanjanakaroon (2000) studied the relationship between adversity quotient (AQ) and self-empowerment of lower secondary grade students in schools under the authority of the Office of the Basic Education Commission. The sample in this study included 400 students and the result of the study indicated that the students' AQ and self-empowerment were at high levels and the students AQ and self-empowerment as classified by their personal information like gender, age, class and grade point average did not have significant differences. Relationship between AQ and self-empowerment was found positive.

Villaver and Lucero (2005) examined the differences between AQ levels of female grade school's teachers of public and private school. In this study 105 female grade school teachers, 74 public school teachers and 31 private school teachers were joined in Rizal province. As the majority of students coming under early stage of adulthood holds change in level AQ, while those came under older counterparts holds

change in low AQ. Those who respond as single, were found to have equal percentages for change level and low change level in AQ, and while number of married participated holds change in AQ level. They further found that number of participated belonging to lower socio-economic in status had changed in AQ level, and middle's class of SES had low AQ level. They concluded that there was not any significant difference between adversity quotient level of public and private female grade school's teachers.

Le thi (2007) conducted a study about adversity quotient in relation to job performance and the aim of the was study is to theoretically and empirically investigate a theory labelled the Adversity Quotient (AQ). Its claim of being able to predict all facets of human capacity and performance is being tested by comparing it with the more established Five Factor Model (also known as the Big Five). Data for this study were obtained from Det Norske Veritas and from CORE Learning. A total of 98 participants were recruited (41 females, 57 males). Results indicated that the total score of AQ's measurement tool (ARP) does not predict job performance better than the BFI, a measurement of the Big Five. However, there seemed to be theoretical support for the AQ framework.

Diana and Nida (2008) investgated and explained the level of adversity quotient, self-control level, origin and ownership levels, reach levels, and endurance levels of acceleration problems. and found the result of total correlation that correlation are positive and significant so that adversity quotient at class student of acceleration in SMA Negeri of Malang Worse luck in face of problem, with percentage of 48%, this data make happy for institute of education for class of acceleration especially to reconciles the quality class of acceleration and development of instruction for the future to be reliable graduated with high quality.

Yun (2008) conducted study on college students and their living surroundings. Students those having high adversity quotient results show it easy adaptive to new environment by altering unfavourable environments into favourable environments.

Zhou (2009) determined that the adversity quotient is a factor which affects academic performance. Though, not all the three variables namely sex were found to affect the adversity quotient of the respondents in this study.

Pangma, Tayraukham and Nuangchalerm (2009) conducted research to study the causal factors influencing students adversity between twelfth grade and third-year vocational students in Sisaket area, Thailand. 672 of 12th class and 376 3rd year vocational students were selected as a sample by multi-stage random sampling techniques. They found that sense of personal freedom, dominance, self-esteem, ambition, self-confidence, enthusiasm, and achievement motivation factors influencing the adversity quotient. Self-confidence while the variables both directly and indirectly influencing the adversity quotient of students were sense of personal freedom, dominance, self-esteem and enthusiasm. Achievement motivation directly influences the adversity quotient, dominance was indirectly influencing the adversity quotient, while the variables both directly and indirectly influencing the adversity quotient of these students were sense of self-esteem, personal freedom, self-confidence, enthusiasm, and ambition.

Deesom (2011) studied on a positive thinking program to the adversity quotient of 6th students. The experimental group was trained during 12 sessions in a positive thinking program but the controlled group was not trained. The study revealed that the scores of the Adversity Quotient of the experimental group were statistically higher before the experiment than those of the controlled group at the .05 level of significance.

Cornista and Macasaet (2013) conducted study on third year and fourth year students of psychology in relation between adversity quotient and achievement motivation. However, like not in all direction of adversity quotient show impact on achievement motivation as respondents in study.

Nikam and Uplane (2013) explored the relationship between adversity quotient and defence mechanism of secondary school students. They worked on the relationship between adversity quotient and defence mechanism having different dimensions like projection, turning against object, principle, turning against self and

reversal. Another objective of the study was to reveal whether there exist any difference between the level of AQ and DM of boys and girls. The sample in the study included 156 girls and 152 boys (aged from 13 years to 15 years) selected randomly from urban region of Raigad District, Maharashtra State, India. Data analysis exposed that there is no correlation between AQ and Defence Mechanism of secondary school students. Data analysis also revealed that there is no major difference in the level of AQ and Defence mechanism of boys and girls.

Wulandari Pudyantini and Giyatno (2013) conducted the study regarding the effect of entrepreneurship education. It has been considered as one of the important factors to develop the passion, spirit and entrepreneurial behaviour among the younger generation. The purpose of this study was to determine the influence of Adversity Quotient, Capital and Networking effect on entrepreneurial intentions of students and test the greatest variable that influence entrepreneurial intentions of Unsoed students. The research is useful for strategic thinking for the university in determining the appropriate strategy to increase the entrepreneurial spirit among students and become one of the references for other researchers to develop similar research. Target population in this research was the student listed in 8 (eight) faculties in Unsoed and the samples were determined using accidental sampling method. The results of the regression analysis were used to analyse the answers of 100 respondents, provide results that Adversity Quotient, Networking and Capital simultaneously and partially influence entrepreneurial intentions of Unsoed students and Capital is the most influential variable.

Fajrianthi (2013) conducted a study on nurses in relation to adversity quotient and this study aimed to discover whether there was a relationship between Adversity Quotient and turnover intention of nurses who were assigned in emergency department of General Hospital Sanglah Denpasar. To achieve the purpose of this study, a correlational research design was applied. This study used 74 samples of emergency department nurses in General Hospital Sanglah. The instruments used in this study are Adversity Response Profile which was developed by Dr. Paul G. Stoltz (2000) to measure Adversity Quotient and a questionnaire to measure turnover

intention developed by Neni Artha Doloksaribu (2002). The results showed that correlation coefficient between Adversity Quotient and turnover intentions is -0.270 with p is 0.02. The result demonstrated a significant negative correlation between Adversity Quotient and turnover intention in which 7% variation of nurse's turnover intention can be explained by their Adversity Quotient.

Shivaranjani (2014) conducted a study on women in relation adversity quotient and found that adversities come in many forms especially for a working woman as she is likely to play multifaceted roles in fulfilling her individual and societal obligations due to which she is likely to encounter organizational issues and career issues, so developing resilience deals directly with enabling a person to respond appropriately in the face of adversity, absence of resilience can be the cause of stress in life. In this context, it is interesting to examine the Adversity Quotient levels of women's in the software services sector through Adversity Quotient Profiling, a measure of one's ability to prevail in the face of adversity and also to bring awareness to women employees using Adversity Quotient Assessment tool to combat attrition rate and organizations can prevent talent leakage thereby influencing the not working category of women to get employed and contribute to the nation's economy.

1.4 SIGNIFICANCE OF THE STUDY

It is rightly stated by Secondary Education Commission (1952-53) that the destiny of India is being shaped in her classrooms. In other words we can say that future of our country is determined by the students. Students are the backbone of the nation. They must be well adjusted with their environment of the classroom in which they can apply their cognitive ability. In order to adjust in the existing environment of the classroom, students have to deal with problematic situations in their life. Adversity quotient is a measure of the capacity of the student to deal with the adversities of his life. Student faces adverse situations in the process of learning and daily life. Cognitive development is the need for success in learning. Adversity quotient is something that causes a student to make an effort to become successful and be goal oriented that helps students how to react in an appropriate manner in the classroom. Cognitive style is that kind of style which helps a person to react to an

internal stimuli for acquiring new, or modifying and reinforcing, existing knowledge, and understand the learning which provides them to acquire new knowledge and skill.

Number of studies have been conducted on cognitive style since the year 1969. Karp, Silverman and Winters (1969), Witkin et al (1977), Ford (1979), Chatterjee and Paul (1983), Gosnel (1983), Bal (1989), Huang and Chao (2000), Littin (2001), Gerstl (2002), Johnson (2003), Cakan (2003), Gamble and Roberts (2005), Lee (2006), Backhaus (2007), Grimley (2008), Chrysosotomou (2013) and Pearson (2014) conducted studies on cognitive style in relation to different other variables. It may be generalized from the findings of these studies that students belonging to science and mathematics exhibited FI whereas those belonging to arts exhibited FD style.

Review of literature reveals that adversity quotient of individuals is not influenced by gender. Course or streams of education in which they are studying in that session is directly significant related to the adversity quotient (Huijuan, 2009). Students with high adversity quotient find easy to acclimate themselves to new situation by changing unfavourable situations to their advantage (Yun, 2008). Adversity quotient was found to be related to academic achievement by Deesom, (2011) and Cornista & Macasact (2013). Nikam and Uplane (2013) found no correlation between adversity quotient and defence mechanism of secondary school students.

It may be analysed that a number of studies have been conducted on the variables cognitive style and adversity quotient separately. No study has been conducted on these two variables in their combination. Thus, in order to fill the gap in educational research it was needed to conduct the proposed study. Findings of the study will be beneficial to students, teachers, parents, administrators, and heads of the institutions, examiners, counsellors and employers.

1.5 STATEMENT OF THE PROBLEM

In present study, 'COGNITIVE STYLE OF SECONDARY SCHOOL STUDENTS IN RELATION TO ADVERSITY QUOTIENT' investigator have found out the cognitive style among secondary school students and how adversity

quotient influence it. Cognitive style was studied as dependent variable, whereas adversity quotient was treated as independent variables.

1.6 OPERATIONAL DEFINITION OF TERMS

COGNITIVE STYLE

Cognitive style is the process of mediation between stimulus and response. The term cognitive style refers to the characteristic ways in which an individual conceptually organizes the environment.

In its operational terms, it refers two dimensions (namely Systematic and Intuitive) of cognitive style as measured by Cognitive Style Inventory developed by Dr. Praveen Kumar Jha (2001).

ADVERSITY QUOTIENT

Adversity quotient measures our ability to face the adversities. Adversity is a state of hardship, troubles, person can loss the hope. It deals with: motivation, empowerment, creativity, productivity, learning, energy, hope, attitude, response to changes. Adversity is a difficult or unpleasant situation.

In its operational terms, adversity quotient refers to measuring high and low adversity quotient using Adversity Quotient Profile developed by the investigator.

SECONDARY SCHOOL STUDENTS

The term 'secondary school students' means the students studying in 9^{th} and 10^{th} class of various schools. In the present study, it refers to students studying in 10^{th}class.

1.7 OBJECTIVES:

Objectives: Following objectives were realized in the present study:

1. To study levels of cognitive style among secondary school students.
2. To study levels of adversity quotient among secondary school students.
3. To analyse the difference between male and female secondary school students in their cognitive style.

4. To explore the difference between rural and urban secondary school students in their cognitive style.
5. To analyse the difference between male and female secondary school students in their adversity quotient.
6. To explore the difference between rural and urban secondary school students in their adversity quotient.
7. To analyse the difference in cognitive style of secondary school students having high and low adversity quotient.
8. To explore the relationship between cognitive style and adversity quotient of secondary school students.

1.8 HYPOTHESES

Hypotheses: Following hypotheses were tested in the present study.

1. There exists significant difference between male and female secondary school students in their cognitive style.
2. There exists significant difference between rural and urban secondary school students in their cognitive style.
3. There exists significant difference between male and female secondary school students in their adversity quotient.
4. There exists significant difference between rural and urban secondary school students in their adversity quotient.
5. There exists significant difference in cognitive style of secondary school students having high and low adversity quotient.
6. There exists significant relationship between cognitive style and adversity quotient of secondary school students.

1.9 DELIMITATIONS OF STUDY

1. The study was delimited to Jalandhar district of Punjab.
2. The study was conducted on secondary school students only.

CHAPTER -II

METHODOLOGY

CHAPTER-II

METHODOLOGY

Methodology of research plays a very important role in field of research. It describes various steps to be adopted by a researcher in solving a research problem, in such a manner in which the problem is formulated, the definition of the terms, the choice of the subjects for investigation, the validation of data, gathering tools, collection, analysis and interpretation of data and the process of conducting research. In methodology part a researcher describes method and procedure which an investigator will adopt for conducting research. It refers to a way, logical plan of solving a problem. Research methodology is a way to systematically solve the research problem. It may be understood as a science of studying how research is done scientifically. For any researcher there is a need of proper planning and preparation of appropriate research design. Research design is the blue print of 'What is to be done' and 'How is to be done'. It is the path which is to be followed by the researcher to reach the target. In a simple language a research design is started as a plan of action, a plan of collecting and analysing data in an efficient and relative manner. The ultimate success of a research project greatly depends upon the design of the study. It avoids aimless wondering, saves time and economize the efforts of researcher.

2.1 RESEARCH METHOD

For the present study, descriptive survey method was used by the investigator. This scientific research method involves observation and description of the behaviour of a subjects without any influence. The method is primarily concerned with describing the nature or conditions and degree in detail of the present situation and whenever possible, to draw valid general conclusions from the facts discovered. This type of research design is used to prepare quantitative researches in order to generate general overviews for variables worth testing quantitatively.

Sampling

The selected respondents from the population which is technically called a sample and the process is called sampling technique. Sampling is a process of obtaining information about entire population by examining only a part of it. Sample should be truly representative of the population characteristics without any biasness, so that it may result in valid and reliable conclusions. The study was conducted on 400 secondary school students of Jalandhar district of Punjab.

Table 2.1 Distribution of Sample

GENDER/LOCALITY	MALE	FEMALE	TOTAL
RURAL	100	100	200
URBAN	100	100	200
TOTAL	200	200	400

Sample Area

A sample refers to any collection of specified group of human being or non – human entities such as objects, educational institutions, time units and geographical areas. The present study was confined to secondary school students of Jalandhar district of Punjab.

Method and Procedure

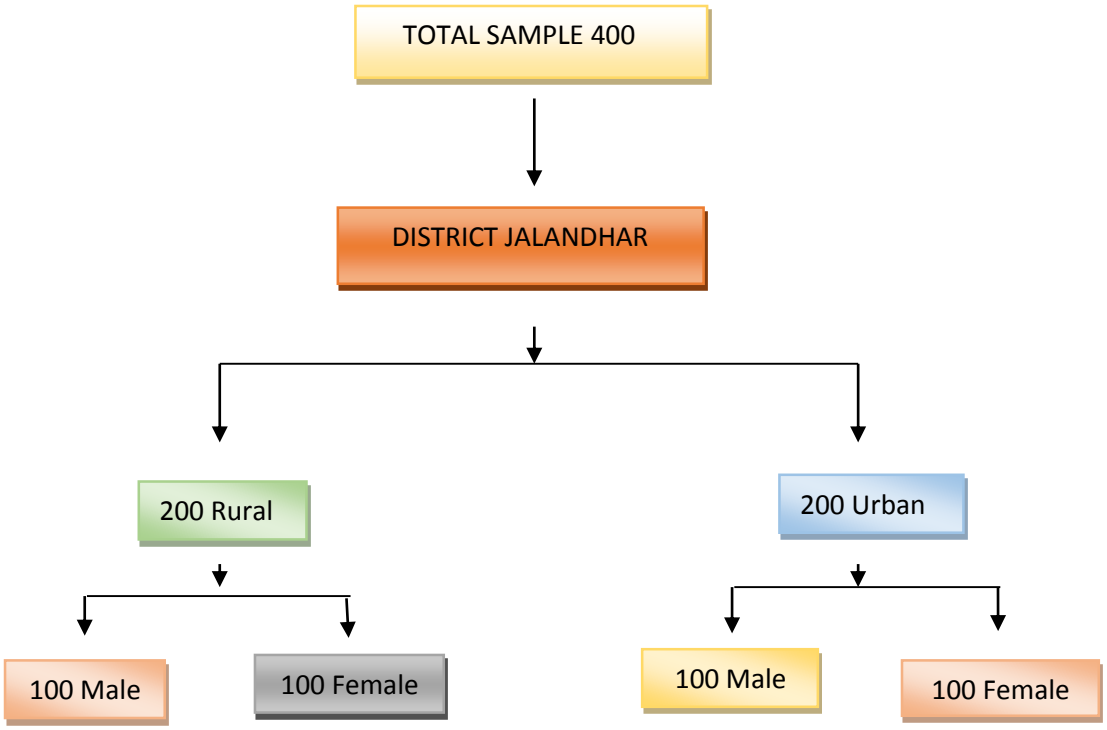
The present study is descriptive in its nature. Keeping in view the research evidences, objectives, hypotheses the investigator found it appropriate to use descriptive survey method in the study. Descriptive research is a type of research that is primarily concerned with describing the nature or conditions and degree in detail of the present situation and whenever possible, to draw general reliable conclusions.

2.2 SAMPLING TECHNIQUE

By keeping in mind the nature of the problem, stratified sampling technique was used because data was divided into strata. Thus, stratified random sampling technique was used to draw a sample of 400 secondary school students.

2.3 SAMPLING DESIGN

Following sampling design was used in the present study:



2.4 TOOLS USED

Tools are nothing but the instruments that help the researcher to gather data. Tools are the ways and means to conduct research and it could only be justified through methods and techniques meant for it. The collected evident is called data and tools used for collection of data are called tools or data collecting devices. These tools help to analyse the responses of a sample related variables. In order to collect data following tools were used:

- Cognitive Style Inventory (CSI) developed by Dr. Praveen Kumar Jha (2001).

- Adversity Quotient Profile developed by Investigator

Description of Tools

1. **Cognitive Style Inventory (CSI):**

Cognitive Style Inventory (CSI) is a self-report measure of the ways of thinking, judging, remembering, storing information, decision making and believing in interpersonal relationship. Cognition is a mediating process that is the centre of a resurgence of interest. The current cognitive learning perspective is that the organism responds to its cognitive construction of the environment rather than to the objective reality. Several common characteristics among the cognitive approaches to personality that have become popular during the last twenty years; were described as; (1) Individual differences in style of thinking as a starting point; (2) An emphasis on style over contact; (3) The assumption that cognitive styles are related to other personality characteristics of individuals"; and (4) The treatment of cognitive styles as traits (i.e.; the characteristics are dependent of situational influences, a position leading to an emphasis on the consistency of the style).

Dimensions of Cognitive Style

Theories of cognitive styles were developed as a result of early studies conducted by Witkin, et el; (1954; 1962). These studies resulted in theories that generally assumed a single dimension of cognitive style with two extremes. The two extremes were described in general terms by Keen (1973); Mikenney & Keen (1974) and Botkin (1974) as; Systematic Style and Intuitive Style. The systematic style is associated with logical, rational behaviour 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. These two styles however did not reflect the entire spectrum of people's behaviour with regard to thinking, learning and especially problem solving and decision- making. Therefore, a multi-dimensional model intended to reflect the entire spectrum was postulated (Martin, 1983). This model consisted of two continuum; i.e.; (1) High systematic to low systematic and (2) High intuitive to low intuitive. Ongoing observational studies,

along with effects to develop measurement devices for assessing cognitive behaviour, have resulted in an expanded version of the original model. which led to the development of five following styles:

Systematic Style: An individual who typically operates with a systematic style uses a well-defined step-by-step approach when solving a problem; looks for an overall method or pragmatic approach; and then makes an overall plan for solving the problem.

Intuitive Style: The individual whose style is intuitive, uses an unpredictable ordering of analytical steps when solving a problem, relies on experience patterns characterized by universalized areas or hunches and explores and abandons alternatives quickly.

Integrated Style: A person with an integrated style is able to change styles quickly and easily. Such style changes seem to be unconscious and take place in a matter of seconds. The result of this "rapid fire" ability is that it appears to generate an energy and a proactive approach to problem solving. In far, integrated people are often referred to as "problem-seekers" because they consistently attempt to identify potential problems as well as opportunities in order to find better ways of doing things.

Undifferentiated Style: A person with such a style appears not distinguish or differentiate between the two style extremes; i.e.; systematic and intuitive, and therefore; appears not to display a style. In a problem solving situation, he will exhibit a receptivity to instructions or guidelines from outside sources. Undifferentiated individuals tend to be withdrawn, passive and reflective and often look to others for problem-solving strategies.

Split-style: An individual with split style shows fairly equal degrees of systematic and intuitive specialization. However, people with a split style do possess an integrated behavioural response; instead, they exhibit each separate dimension in completely different settings; using only one style at a time base on nature of their

tasks. In other words, they consciously respond to problem-solving by selecting the most appropriate style.

RELIABILITY

Reliability of test was determined by two method-(i) Split- half method (ii) Test-retest method.

(i) The product-moment co-efficient of correlation between two halves i.e., Split-half was calculated for the whole scale and for each of the five sub-scales (Systematic Style; intuitive style; integrated style; undifferentiated style and split-style) of CSI. The Spearman-Brown Prophecy formula was used to estimate full/length reliability. The full/length split-half reliability of CSI was found .653($P < .01$).

Table 2.3 Internal Consistency of CSI

S. No.	Sub-Scale	R	Full Length Reliability
1.	Systematic Style	.70*	.83*
2.	Intuitive Style	.67*	.78*
3.	Integrated Style	.56*	.73*
4.	Undifferentiated Style	.59*	.76*
5.	Split Style	.54*	.70*

df=98 *P<.01 level of confidence

From an inspection of Table, it is evident that the Pearson ranges from .54 to .70 and full length reliabilities from .70 to .83 and all are highly significant beyond .01 level of confidence. These internal consistency values reveal that all the scales of CSI are consistent with regard to the dimensions measured.

(ii) To test the temporal stability, the CSI was administered to 50 retired persons residing at Saharsa town of Bihar State so that they were available

for retest after a lapse of 3 weeks and the test-retest reliabilities co-efficients were calculated on tile basis of the data obtained from them. The test-retest reliability of the whole test was calculated .39 (P < .01) and the temporal stability of different sub-scales of CSI were found as follows:

Table 2.4 Temporal Stability of Different Sub Scales (N=50)

S. No.	S ub-Scales	Test-retest correlations
1.	Systematic Style	.58*
2.	Intuitive Style	.56*
3.	Integrated Style	.53*
4.	Undifferentiated Style	.48*
5.	Split Style	.55*

df= 48 * P < .01 level of confidence

From Table, it is evident that all test-retest correlations are highly significant beyond .01 level of confidence. This indicates the temporal stability of CSI.

Thus, a perusal of Table 1 and Table 2 reveal that the split-half and test-retest reliabilities of the CSI are significant beyond .01 level of confidence. So the CSI can be taken to be a reliable test to measure cognitive style of college and university students as well as the other sample of Indian Population.

VALIDITY

The validity of a test is examined in different ways. Here the validity was examined by three ways; i.e., judge's validity, concurrent validity and internal validity.

Judges Validity

The judge's validity is considered to be the simplest method of examining validity of a test. Here this method has been used to examine the validity of the CSI. This method implies expert's evaluation whether the test items adequately reflect the objectives

and content areas. Before subjecting the items to item-analysis, they were given to six judges for evaluation. The judges examined the items of the scale independently. Only those items which were agreed upon by majority of judges were included in preliminary form of the scale. Such items were expected to be related to particular dimension of the scale. A glance at the item content made it clear.

Concurrent Validity

A test has concurrent validity when it gives an estimate of certain performance. Concurrent validity of a new test may be calculated by finding its correlation with an established test. When a new test is validated against previous test, the previous or established test is known as criterion. Here the Hindi version of CSI was correlated with Martin's Scale by administering the scale on the 100 college teacher. As the criterion of validating was an English version test, therefore, it was thought that the students may not be appropriate sample. Hence, College teacher were selected as the sample for concurrent validity. Product- moment correlation was calculated between the obtained scores of Martin's CSI and Hindi version of CSI as developed by the author. A correlation coefficient of .262 ($P < .01$, $df = 98$) was obtained which was satisfactorily significant beyond .01 level of confidence. In this way CSI bears concurrent validity also.

Internal Validity

Internal validity stands for care taken in test-construction itself. Here, the internal validity was determined by calculating discriminative power of each item in terms of Phi-coefficient correlation and Chi-square as shown in Table-1.

Table showing split-half, test-retest reliabilities and evidence of judges validity, concurrent validity and internal validity indicated that the inventory; thus developed could be used to measure the cognitive style in college and university students and other areas to determine the nature and extent of cognitive style in Indian population.

SCORING

Cognitive Style Inventory (CSI) is a self-report research tool which gives an estimate of cognitive style of an individual in a five-point-Likert format. Five response categories are: Strongly Disagree, Disagree, Undecided, Agree, Strongly Agree. To avoid monotony on the part of respondents due to repetition of response categories in words and number against each item and to shorten the length of the questionnaire five response categories in words and their corresponding number from 1 to 5 have been given only on the top For each statement, the respondent has to refer to the above scale and decide which number corresponds to his/her level of agreement with the statement and write that number in the blank space provided on the left of each statement. The responses are scored by adding all the response numbers as indicated in left of each item which yield a systematic score and an intuitive score. These scores are interpreted; which helps to determine to what degree they specialize in systematic and intuitive styles and identify the specific cognitive style to which they might belong.

INTERPRETATION

Respondents are classified according to the following interpretation.

- A respondent who rates high on the systematic scale and low on the intuitive scale is identified as having a **Systematics Style.**
- Respondent who rates low on systematic scale and high on Intuitive scale is designated as a person having an **Intuitive Style.**
- A testee with an **integrated style** rates high on both scales (i.e., Systematic and intuitive) and is able to change styles quickly.
- An individual rating low on both the systematic and intuitive scale is described as having **Undifferentiated Cognitive Style.**
- The person rating in the middle range on both the systematic and the intuitive scale is considered to have a **Split Style.**

As the CSI is a bi-dimensional measure of systematic style and intuitive style consisting of 20 items each, the minimum and maximum score on both dimensions

ranges between 20-100. Thus, interpretation of Scores must follow the norms accordingly.

NORMS

Percentile norms have been prepared on the basis of Cognitive Style Inventory scores obtained from 425 boys and 300 girls of post-graduate and under-graduate classes separately as presented in Table 2.5. The boys have scored a bit higher than girls, although the difference is statistically not significant. The distributions of scores in both groups are slightly positively skewed.

Table 2.5 Percentile Norms for CSI

Percentiles	Scores		Interpretation
	Boys	Girls	
95th	89.77	88.06	
90th	87.25	85.70	**HIGH**
80th	84.72	83.33	
75th	82.19	80.97	
70th	79.67	78.07	
60th	77.15	76.24	**MEDIUM HIGH**
50th	74.62	73.88	
40th	72.09	71.51	
30th	69.57	69.15	**MEDIUM LOW**
25th	64.78	64.52	
20th	61.99	62.06	
10th	59.94	59.69	**LOW**
	Boys	**Girls**	
Mean	73.66	73.00	
Median	47.62	73.87	
S. D.	10.02	9.96	
N	**425**	**300**	

Thus, in the light of above percentile norm a respondent scores above 81 on systematic style and below 61 on intuitive style would be classified as a person having systematic cognitive style. Conversely a respondent scores below 61 on systematic style scale and above 81 on intuitive style would be identified as a person possessing intuitive cognitive style.

A person who scores above 81 on both the styles; i.e. systematic and intuitive, would be kept under integrated cognitive style. In opposition to integrated cognitive style; if a person obtains below 61 on systematic and intuitive scales would be called a person having undifferentiated cognitive style and lastly a respondent who is on medium high score on systematic and intuitive style would categorized as a person with split-cognitive style.

ADVERSITY QUOTIENT PROFILE

Adversity Quotient Profile measures the Adversity Quotient of an individual. It is the most robust instrument in existence for assessing resilience – the capacity to respond constructively to adversity and challenges of all sorts. Adversity Quotient is about how one responds to life's challenges. It is a gauge or a measure to respond and deal with everything, from everyday hassles to the big adversities that life can spring up.

The Adversity Quotient Profile is a tool with 16 scenarios. Each scenario is a self-rating questionnaire, to be responded on a 5 point scale. The respondent has to imagine that the event is happening in real and after there, fill the profile. The sum of the score gives a person's Adversity Quotient. The total AQ scores can range from 16 to 80.

RELIABILITY AND VALIDITY

Adversity Quotient Profile was developed by the investigator. Initially 30 items were framed. Initial draft of Adversity Quotient Profile was then given to research experts and language experts to draw face validity and content validity. Dr. Sushil Kumar Singh, Dr. Shasmita Kar, Dr. Ramandeep Kaur, Dr. Aneet Kumar, Dr. Nimisha Beri and Mrs. Chanmeet Dhillon, Dr. Ranjan Bala. They gave valuable

suggestions on the dimensions and format of the profile. Finally, on the basis of suggestions of the experts 16 items were retained. List of experts is given in table 2.6

Table 2.6 List of Experts

Sr. No.	Expert	Area
1	Dr. Sushil Kumar Singh	Research Expert
2	Dr. Shasmita Kar	Research Expert
3	Dr. Ramandeep Kaur	Research Expert
4	Dr. Dr.Aneet Kumar	Research Expert
5	Dr. Nimisha Beri	Research Expert
6	Mrs. Chanmeet Dhillon	Language Expert
7.	Dr. Ranjan Bala	Language Expert

ADMINISTRATION OF ADVERSITY QUOTIENT PROFILE:

During administration of tool, a harmonious relationship between the researcher and subjects is essential. A good rapport helps the subject to feel at ease and express him willingly. In order to establish a good rapport, the researcher should greet the subject in a friendly manner so as to get him settled in the new situation in a relaxed manner. Before administration complete instructions were given to the subjects. There was no specific time limit. Students had to select one option from the given five options. Subjects were told that their responses would be kept strictly confidential. Suitable and adequate rapport between the researcher and subjects was maintained for successful use test.

SCORING OF ADVERSITY QUOTIENT PROFILE

Adversity Quotient Profile is a self -report research, tool which gives an idea of adversity level of an individual. Five levels of response having marks in increasing order in marks 1, 2, 3, 4 and 5.

PROCEDURE OF DATA COLLECTION

The investigator took a list of secondary schools in Jalandhar district. Eight schools were selected randomly using lottery method. A sample of 400 secondary school students were chosen by using stratified random sampling technique. The sample includes students of both the genders (male and female) and locality (rural and urban).

Table 2.7 List of Selected Schools

S. No.	District	Name of School
1.	Jalandhar	Govt. Sen. Sec School, Mand,
2.	Jalandhar	Suman Day-Boarding Sen. Sec. School, Ladhewali
3.	Jalandhar	Cantt. Board Girls Sen. Sec School, Jal.Cantt.
4.	Jalandhar	Tyagmurti Vishwa Nath Acharya Vidya Mandir
5.	Jalandhar	Victor Model Sen. Sec. School, Jal. Cantt.
6.	Jalandhar	Devi Sahai S.D. Girls Sen. Sec. School
7.	Jalandhar	N.D. Victor Sen.Sec. School, Jal. Cantt.
8.	Jalandhar	Cantt. Board Boys Sen. Sec School, Jal. Cantt.

2.6 DATA ANALYSIS TECHNIQUES

In the present study, following data analysis techniques were used to analyse the data:

- Mean,
- Standard Deviation (S. D.),
- t-test,
- Co-efficient of Correlation
- Percentage

CHAPTER-III

ANALYSIS AND INTERPRETATION

CHAPTER –III

ANALYSIS AND INTERPRETATION

The present chapter includes statistical analysis of data, description and interpretation of the results in accordance with objectives of the study. Analysis and interpretation represents the application of inductive and deductive logic to the research process. Analysis of data is most important and crucial step in research process. The results and their interpretation is considered as the most important part of research work as it verifies the hypotheses and eventually leads to conclusions of study.

Analysis of data means studying the tabulated data in order to determine the inherent facts. It involves breaking up of the complex factors into simpler parts and putting them in new arrangement for the purpose of interpretation. To quote F. N. Kerlinger "Analysis of data means categorizing, ordering, manipulating and summarizing of data to obtain answer to research questions". The data analysis and interpretation have been presented under the following heads:

3.1 Results pertaining to level of cognitive style of secondary school students.

3.2 Results pertaining to level of adversity quotient of secondary school students.

3.3 Results pertaining to difference between male and female secondary school students in their cognitive style.

3.4 Results pertaining to difference between rural and urban secondary school students in their cognitive style.

3.5 Results pertaining to difference between male and female secondary school students in their adversity quotient.

3.6 Results pertaining to difference between rural and urban secondary school students in their adversity quotient.

3.7 Results pertaining to difference in cognitive style of secondary school students having high and low adversity quotient.

3.8 Results pertaining to relationship between cognitive style and adversity quotient

of secondary school students.

3.1 Resulting Pertaining to Levels of Cognitive Style of Secondary School Students:

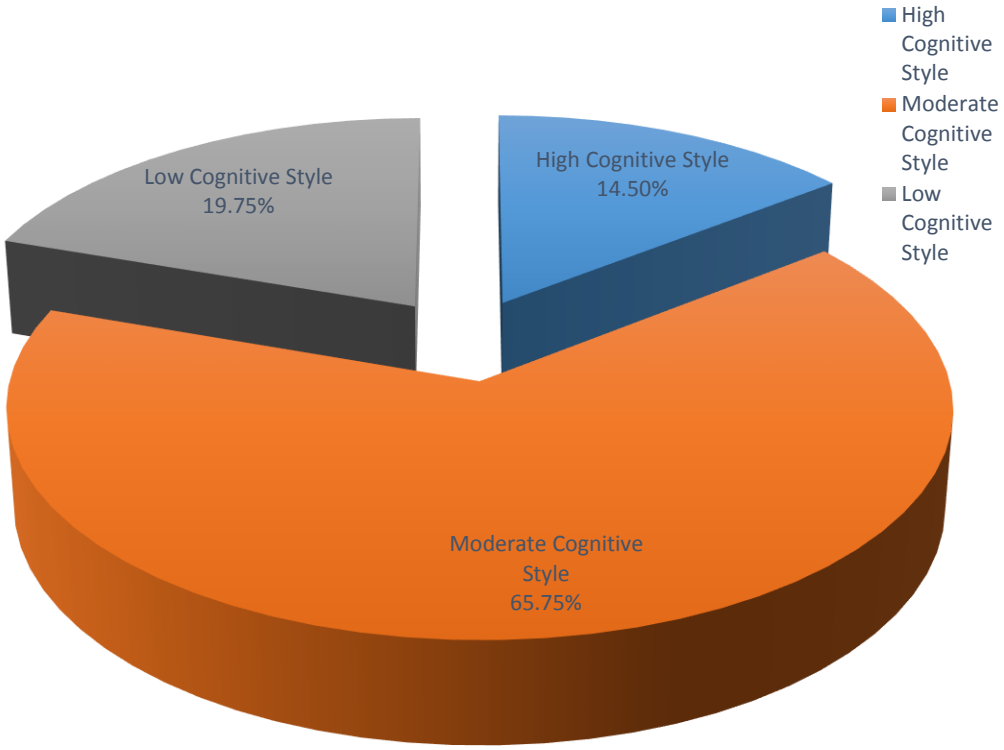
First objective of the present study was to analyze levels of cognitive style of secondary school students. This section deals with exploring the levels of cognitive style of secondary school students. In order to explore the levels of cognitive style of secondary school students, data were subjected to analysis and the results so obtained were organized in the table 3.1.

Table 3.1 Percentage Wise Levels of Cognitive Style Among Secondary School Students

	Level	No. of Students	Percentage
Cognitive Style	High	58	14.50%
	Moderate	263	65.75%
	Low	79	19.75%
	TOTAL	400	100.00%

To calculate low, moderate and high level of cognitive style, mean score (M) and standard deviation (SD) for cognitive style were computed. For dividing the students into categories of low, moderate and high levels of cognitive style, M-1SD and M+1SD were computed. Students having scored less than M-1SD were considered as possessing low level of cognitive style whereas students having score greater than M+1SD were considered as possessing high level of cognitive style. The students having score greater than M-1SD and less than M+1SD were considered as possessing moderate level of cognitive style.

It is clear from table 3.1 that 19.75% secondary school students possess low level of cognitive style, 65.75% secondary school students possess moderate level of cognitive style whereas 14.50% secondary school students possess high level of cognitive style. Graph 3.1 shows percentage wise levels of cognitive style among secondary school students.



Graph 3.2 Percentage Wise Levels of Cognitive Style among Secondary School Students

3.2 Resulting Pertaining to Levels of Adversity Quotient of Secondary School Students:

One of the objectives of the present study was to explore the levels of adversity quotient of secondary school students. This section deals with exploring the levels of adversity quotient of secondary school students. In order to explore the levels of adversity quotient of secondary school students, data were subjected to

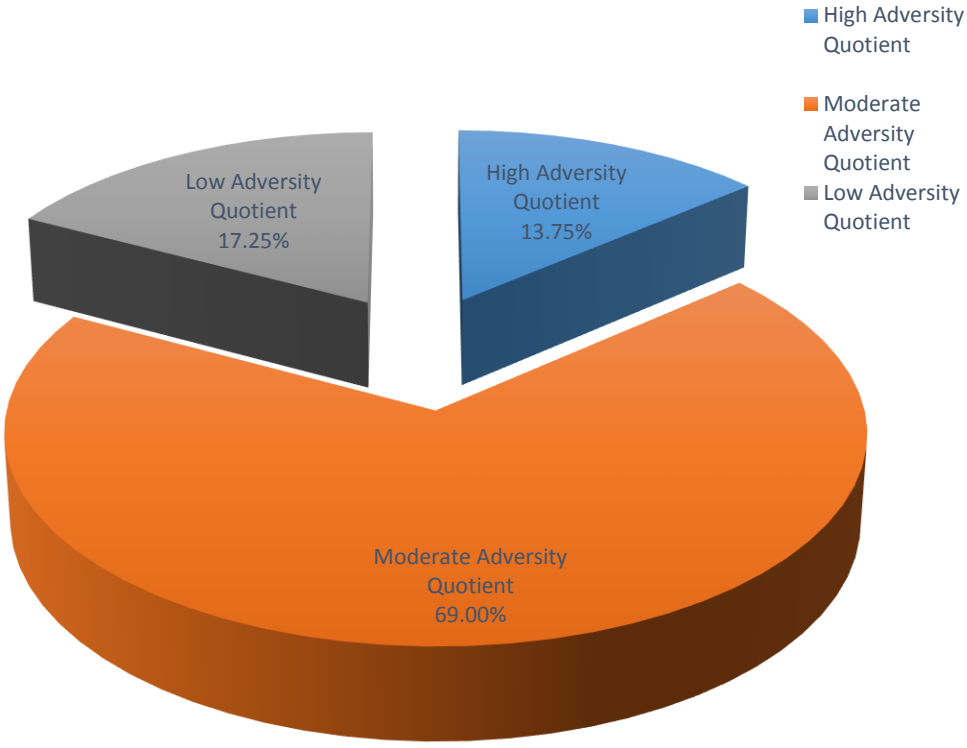
analysis and the results so obtained were organized in the table 3.2

Table 3.2 Percentage Wise Levels of Adversity Quotient Among Secondary School Students

	Level	No. of Students	Percentage
Adversity Quotient	High	55	13.75%
	Moderate	276	69.00%
	Low	69	17.25%
	TOTAL	400	100.00%

To calculate low, moderate and high level of adversity quotient, mean score (M) and standard deviation (SD) for adversity quotient were computed. For dividing the students into categories of low, moderate and high levels of adversity quotient, M-1SD and M+1SD were computed. Students who scored less than M-1SD were considered as possessing low level of adversity quotient whereas students having score greater than M+1SD were considered as possessing high level of adversity quotient. The students having score greater than M-1SD and less than M+1SD were considered as possessing moderate level of adversity quotient.

It is clear from table 3.2 that 17.25% secondary school students possess low level of adversity quotient, 69.00% secondary school students possess moderate level of adversity quotient whereas 13.75% secondary school students possess high level of adversity quotient. Graph 3.2 shows percentage wise levels of adversity quotient among secondary school students.



Graph 3.2 Percentage Wise Levels of Adversity Quotient among Secondary School Students

3.3 Results Pertaining to Difference between Male and Female Secondary School Students in their Cognitive style:

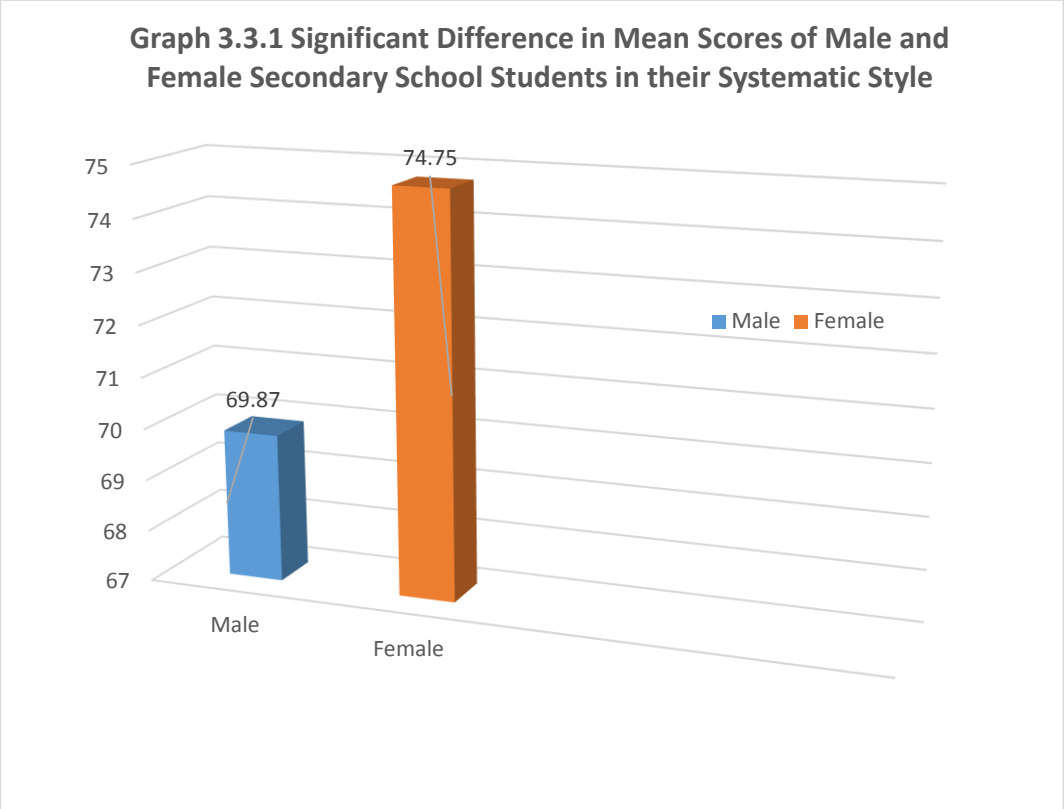
One of the objectives of the present study was to find out difference between male and female secondary school students in their cognitive style. Mean scores, SDs, df, N, and t-value was calculated and results has been shown in table 3.3

Table 3.3 Mean Scores, SDs, N, df and t- value for Male and Female Secondary School Students in their Cognitive Style

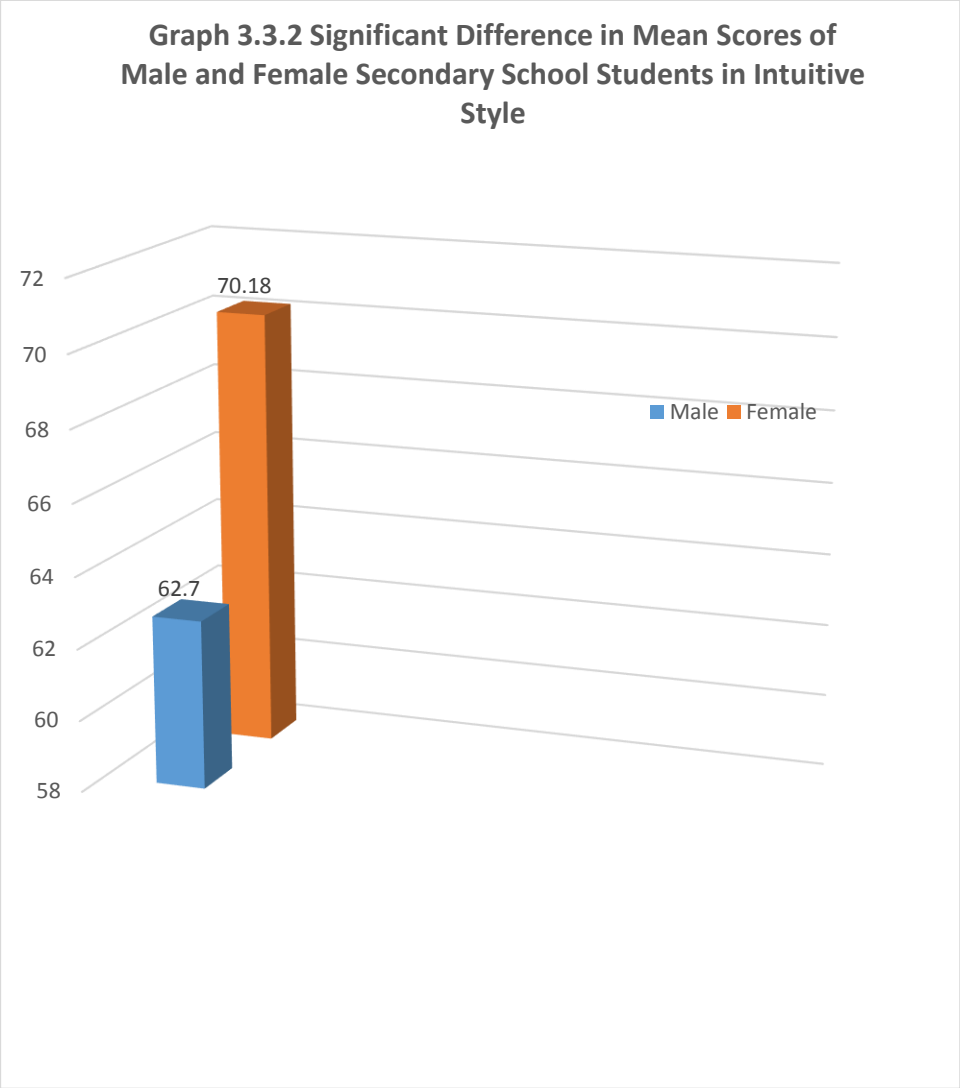
	Gender	No. of Students	Mean Score	SD	df	t-value
Systematic Style	Male	200	69.87	11.80	398	4.48**
	Female	200	74.75	9.90		
Intuitive Style	Male	200	62.70	11.78	398	6.45**
	Female	200	70.18	11.36		
Overall Cognitive Style	Male	200	132.57	21.27	398	6.09**
	Female	200	144.93	19.32		

NS= Not significant *= Significant at 0.05 level **= Significant at 0.01 level

It is clear from table 3.3 that the mean score of the male and female secondary school students in their systematic style are 69.87 and 74.75 respectively. The SD for male secondary school students is 11.80 and for female secondary school students 9.90. The t-value is 4.48, which is significant at 0.01 level. Therefore, it can be interpreted that there exists significant difference between male and female secondary school students in their systematic style. Therefore, it may be interpreted that female secondary school students are more systematic as compared to their counterparts' male secondary school students. Thus, the hypothesis that there exists significant difference between male and female secondary school students in their systematic style was accepted. Graph 3.3.1 shows difference between mean scores of male and female secondary school students in their systematic style.

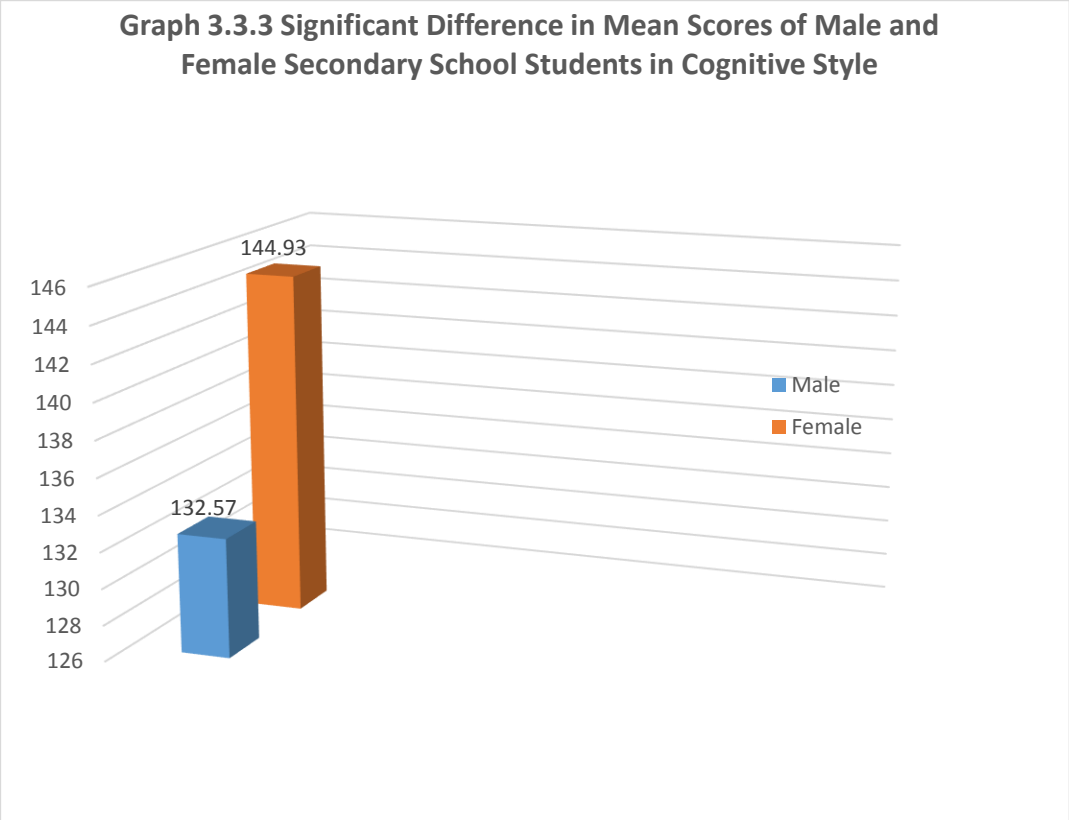


Further, it is clear from table 3.3 that the mean score of the male and female secondary school students in their intuitive style is 62.70 and 70.18 respectively. The SD for male secondary school students is 11.78 and for female secondary school students is 11.36. The t-value is 6.45, which is significant at 0.01 level. Therefore, it can be interpreted that there exists significant difference between male and female secondary school students in intuitive style. Further, it is obvious from table 3.3 that mean score (70.18) of female secondary school students is greater than mean score (62.70) of male secondary school students. Therefore, it may be interpreted that female secondary school students possess greater intuitive style as compared to their counterparts' male secondary school students. Thus, the hypothesis that there exists significant difference between male and female secondary school students in their intuitive style was accepted. Graph 3.3.2 shows difference between mean scores of male and female secondary school students in their intuitive style.



Further, it is clear from table 3.3 that the mean score of the male and female secondary school students in their overall cognitive style are 132.57 and 144.93 respectively. The SD for male secondary school students is 21.27 and for female secondary school students is 19.32. The t-value is 6.09, which is significant at 0.01 level. Therefore, it can be interpreted that there exists significant difference between male and female secondary school students in their cognitive style. Further, it is obvious from table 3.3 that mean score (144.93) of female secondary school students is greater than mean score (132.57) of male secondary school students in their cognitive style. Therefore, it may be interpreted that female secondary school students possess greater cognitive style as compared to their counterparts' male secondary

school students. Thus, the hypothesis that there exists significant difference between male and female secondary school students in their cognitive style was accepted. Kumar, S. (2014) support our finding as he found that there exists highly significant differences between arts male and arts female J.B.T. trainees in their cognitive style (Innovation/Adaptation). Arts female students possess higher cognitive style as compared to arts male J.B.T. trainees. Graph 3.3.3 shows difference between mean scores of male and female secondary school students in their overall cognitive style.



3.4 Results Pertaining to Difference between Rural and Urban Secondary School Students in their Cognitive Style:

One of the objectives of the present study was to find out difference in the systematic style among rural and urban secondary school students. Mean scores, SDs, df, N, and t-value was calculated and result has been shown in table.3.4.

Table 3.4 Mean Scores, SD, N, df and t- value for Rural and Urban Secondary School Students in their Cognitive Style

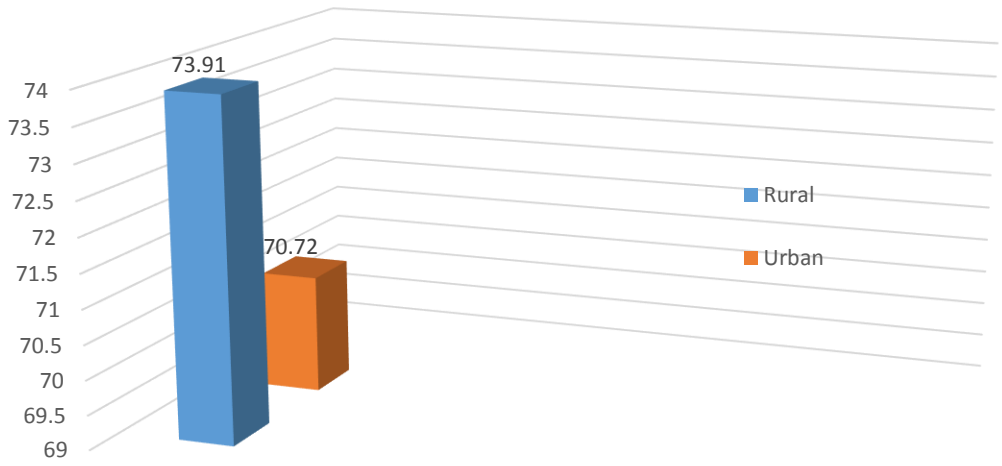
	Locality	No. of Students	Mean Score	SD	df	t-value
Systematic Style	Rural	200	73.91	10.12	398	2.68**
	Urban	200	70.72	11.88		
Intuitive Style	Rural	200	66.53	11.64	398	0.16NS
	Urban	200	66.34	12.67		
Overall Cognitive Style	Rural	200	140.44	19.84	398	1.59NS
	Urban	200	137.06	22.43		

NS= Not significant *= Significant at 0.05 level **= Significant at 0.01 level

It is clear from table 3.4 that the mean score of the rural and urban secondary school students are 73.91 and 70.72 respectively. The SD for rural secondary school students is 10.12 and for urban secondary school students 11.88. The t-value is 2.68, which is significant at 0.01 level. Therefore, it can be interpreted that there exists significant difference between rural and urban secondary school students in their systematic style. Further, it is obvious from table 3.4 that mean score (73.91) of rural secondary school students is greater than mean score (70.72) of urban secondary school students. Therefore, it may be interpreted that rural secondary school students

are more systematic as compared to their counterparts' urban secondary school students. Thus, the hypothesis that there exists significant difference between rural and urban secondary school students in their systematic style was accepted. Graph 3.4.1 shows significant difference in mean scores of rural and urban secondary school students in their systematic style.

Graph 3.4.1 Significant Difference in Mean Scores of Rural and Urban Secondary School Students in Systematic Style



It is clear from table 3.4 that the mean score of the rural and urban secondary school students is 66.53 and 66.34 respectively. The SD for rural secondary school students is 11.64 and for urban secondary school students 12.67. The t-value is 0.16 which is not significant at 0.05 level. Therefore, it can be interpreted that there exists no significant difference between rural and urban secondary school students in their intuitive style. Thus, the hypothesis that there exists significant difference between rural and urban secondary school students in their intuitive style was rejected.

Further, it is clear from table 3.4 that the mean score of the rural and urban secondary school students in their cognitive style is 140.44 and 137.06 respectively.

The SD for rural secondary school students is 19.84 and for urban secondary school students 22.43. The t-value is 1.59, which is not significant at 0.05 level. Therefore, it can be interpreted that there exists no significant difference between rural and urban secondary school students in cognitive style. Thus, the hypothesis that there exists significant difference between rural and urban secondary school students in their cognitive style was rejected. Kenth, B. (2011) support our finding as she found that there exists no significant differences between urban and rural B.Ed. students in their cognitive style.

3.5 Results Pertaining to Difference between Male and Female Secondary School Students in their Adversity Quotient:

One of the objectives of the present study was to find out difference in the adversity quotient among male and female secondary school students. For this, mean score, SDs, df, N, and t-value was calculated and result has been shown in this table.3.5.

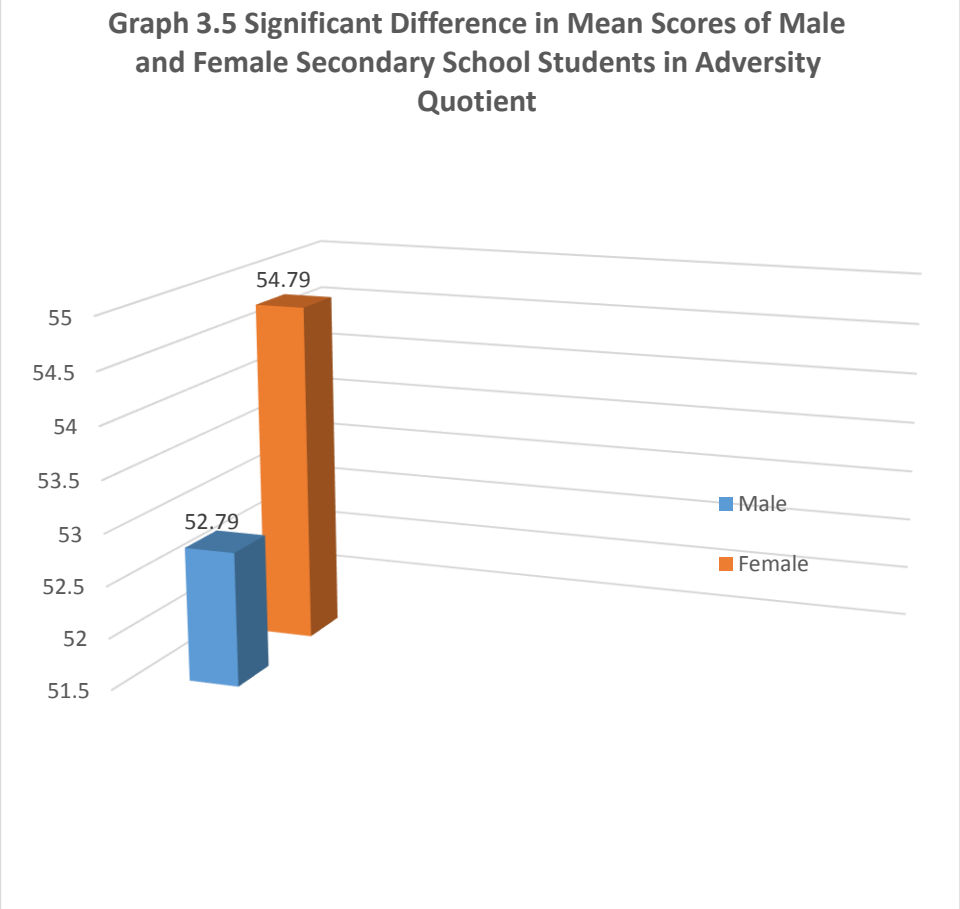
Table 3.5 Mean Scores, SD, N, df and t- value for Male and Female Secondary School Students in their Adversity Quotient

	Gender	No. of Students	Mean	SD	df	t-value
Adversity Quotient	Male	200	52.79	6.79	398	3.03**
	Female	200	54.79	6.44		

NS= Not significant *= Significant at 0.05 level **= Significant at 0.01 level

It is clear from table 3.5 that the mean score of the male and female secondary school students is 52.79 and 54.79 respectively. The SD for male secondary school students is 6.79 and for female secondary school students is 6.44. The t-value is 3.03 which is significant at 0.01 level. Therefore, it can be interpreted that there exists

significant difference between male and female secondary school students in adversity quotient. Further, it is obvious from table 3.5 that mean score (54.79) of female secondary school students was greater than mean score (52.79) of male secondary school students. Therefore, it may be interpreted that female secondary school students possess greater adversity quotient as compared to their counterparts' male secondary school students. Thus, the hypothesis that there exists significant difference between male and female secondary school students in their adversity quotient was accepted. Graph 3.5.1 Significant Difference in Mean Scores of Male and Female Secondary school Students in Adversity Quotient.



3.6 Results Pertaining to Difference between Rural and Urban Secondary School Students in their Adversity Quotient:

One of the objectives of the present study was to find out difference in the adversity quotient among rural and urban secondary school students. For mean score, SDs, df, N, and t-value was calculated and result has been shown in table 3.6.

Table 3.6 Mean Scores, SDs, N, df and t- value for Rural and Urban Secondary School Students in their Adversity Quotient

	Locality	No. of Students	Mean	SD	df	t-value
Adversity Quotient	Rural	200	53.55	7.53	398	0.7 NS
	Urban	200	54.02	5.72		

NS= Not significant *= Significant at 0.05 level **= Significant at 0.01 level

It is clear from table 3.6 that the mean score of the rural and urban secondary school students are 53.55 and 54.02 respectively. The SD for rural secondary school students is 7.53 and for urban secondary school students 5.72. The t-value is 0.7 which is not significant. Therefore, it can be interpreted that there exists no significant difference between rural and urban secondary school students in adversity quotient. Thus, the hypothesis that there exists significant difference between rural and urban secondary school students in their adversity quotient was rejected.

3.7 Results Pertaining of Secondary School Students in their Cognitive Style Having High and Low Adversity Quotient:

One of the objectives of the present study was to find out the difference in cognitive style of secondary school students having high and low adversity quotient. For this mean scores, SDs, df, N, and t-value was calculated and results are shown in table 3.7.

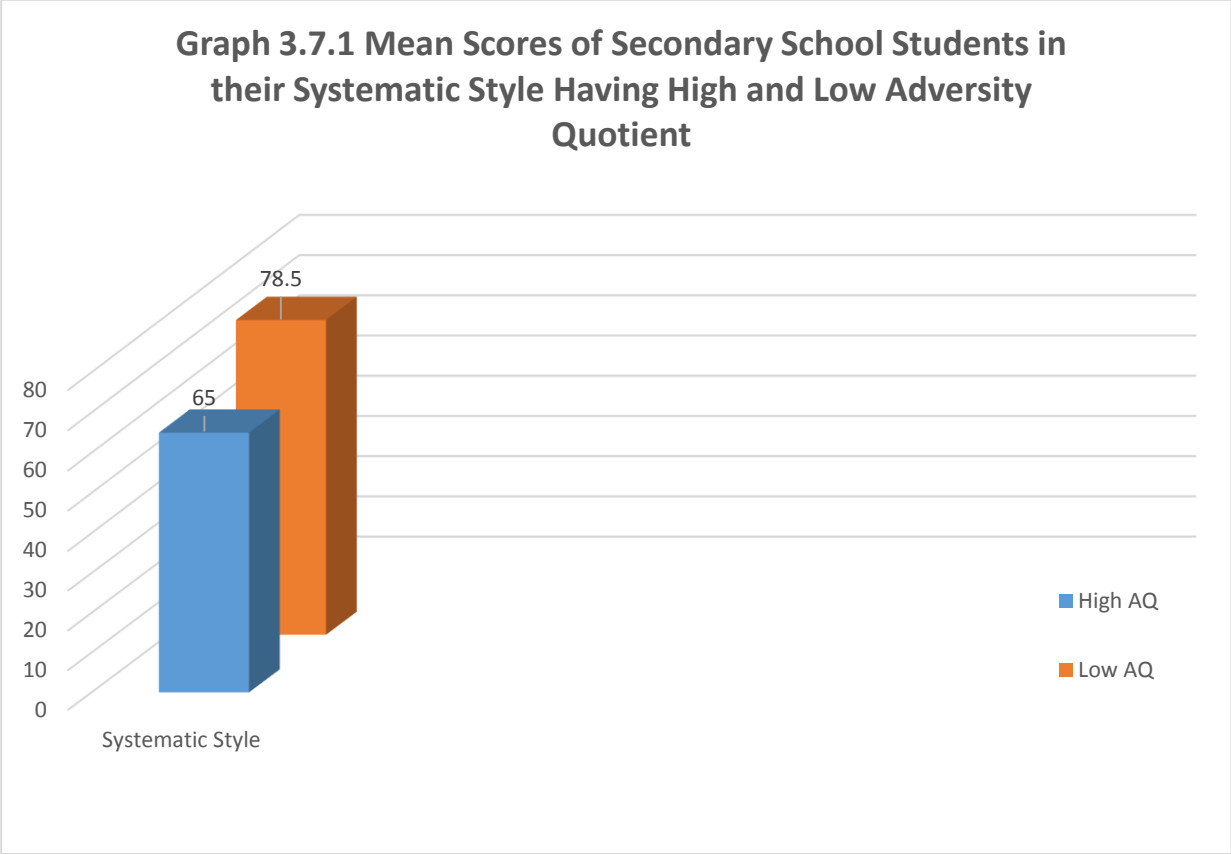
Table 3.7 Mean Scores, SDs, N, df and t- value of Secondary School Students in their Cognitive Style Having High and Low Adversity Quotient

Cognitive Style	Adversity Quotient	No. of Students	Mean Score	SD	df	t-value
Systematic Style	High	55	65.00	8.68	102	2.72**
	Low	49	78.50	11.48		
Intuitive Style	High	55	73.93	11.15	102	5.95**
	Low	49	61.37	10.36		
Overall Cognitive Style	High	55	152.59	17.94	102	5.86**
	Low	49	131.86	18.06		

NS= Not significant *= Significant at 0.05 level **= Significant at 0.01 level

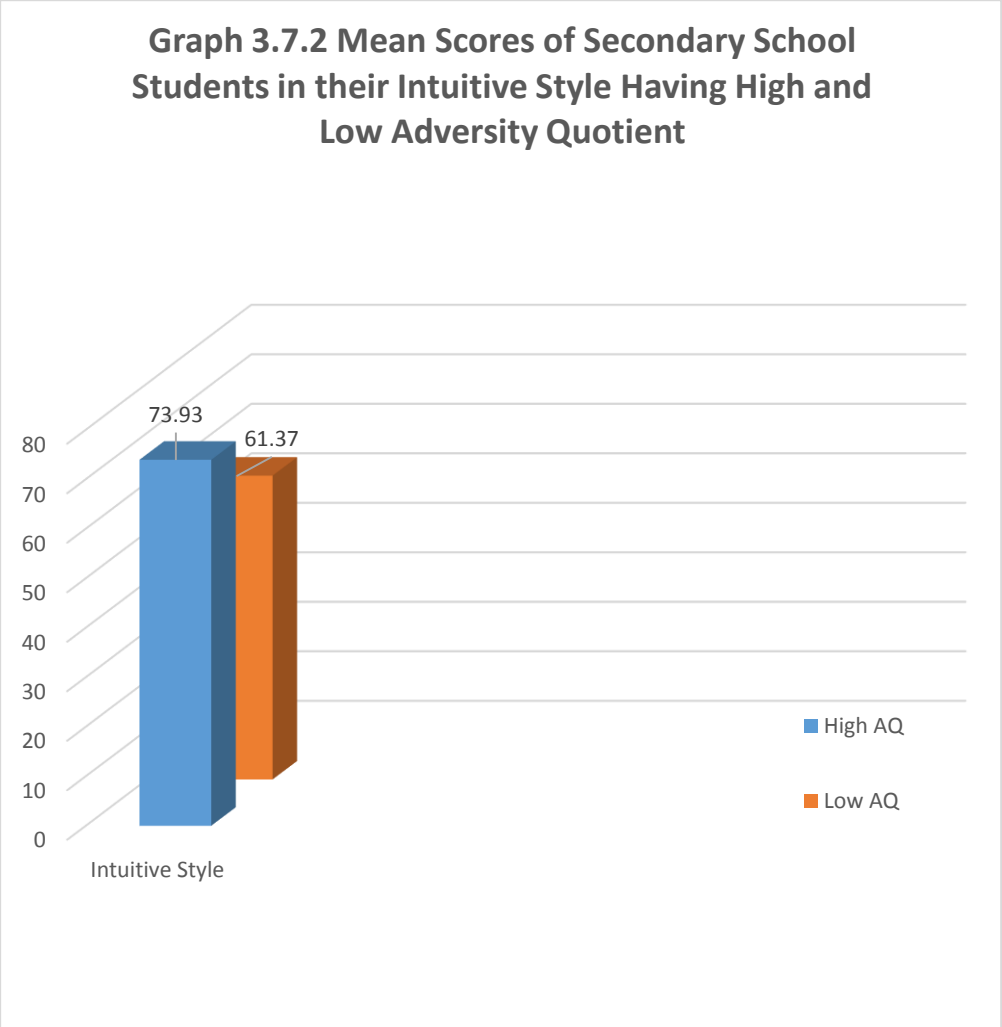
It is clear from table 3.7 that the mean scores of the secondary school students (having high and low adversity quotient) in their systematic style are 65.00 and 78.50 respectively. The SD for secondary school students with high adversity quotient is 8.68 and for secondary school students with low adversity quotient is 11.48. The t-value is 2.72, which is significant at 0.01 level. Therefore, it can be interpreted that there exists significant difference between secondary school students with high and low adversity quotient in their systematic style. Further, it is obvious from table 3.7 that mean score (78.50) of secondary school students having low adversity quotient is greater than mean score (65.00) of secondary school students having high adversity quotient in their systematic style. Therefore, it may be interpreted that secondary school students having low adversity quotient are more systematic as compared to their counterparts' secondary school students having high adversity quotient. Thus,

the hypothesis that there exists significant difference between secondary school students with high and low adversity quotient in their systematic style was accepted. Graph 3.7.1 shows significant difference between mean scores of secondary school students (having high and low adversity quotient) in their systematic style.



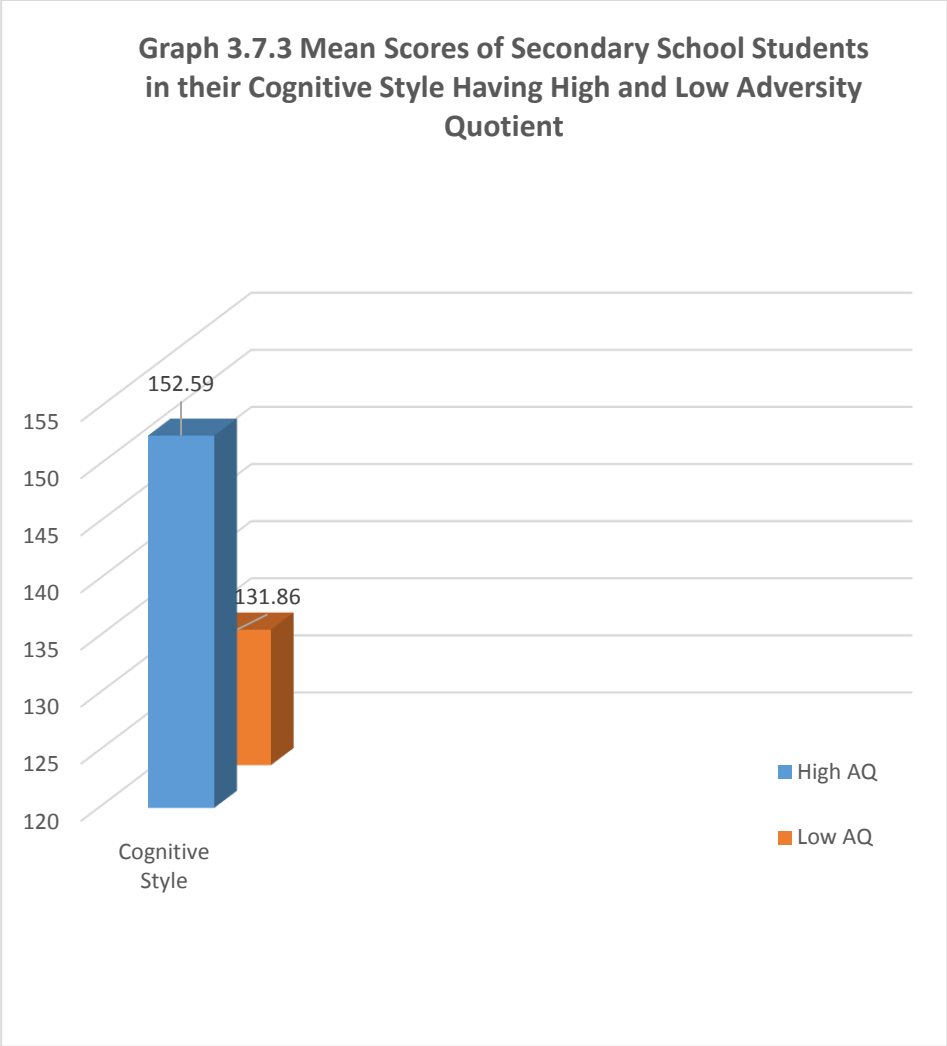
It is clear from table 3.7 that the mean scores of the secondary school students (having high and low adversity quotient) in their intuitive style are 73.93 and 61.37 respectively. The SD for secondary school students with high adversity quotient is 11.15 and for secondary school students with low adversity quotient is 10.36. The t-value is 5.95, which is significant at 0.01 level. Therefore, it can be interpreted that there exists significant difference between secondary school students with high and low adversity quotient in their systematic style. Further, it is obvious from table 3.7 that mean score (73.93) of secondary school students having high adversity quotient is greater than mean score (61.37) of secondary school students having low adversity quotient in their intuitive style. Therefore, it may be interpreted that secondary school

students having high adversity quotient are more intuitive as compared to their counterparts' secondary school students having low adversity quotient. Thus, the hypothesis that there exists significant difference between secondary school students with high and low adversity quotient in their intuitive style was accepted. Graph 3.7.2 shows significant difference between mean scores of secondary school students (having high and low adversity quotient) in their intuitive style.



It is clear from table 3.7 that the mean scores of the secondary school students (having high and low adversity quotient) in their cognitive style are 152.59 and 131.86 respectively. The SD for secondary school students with high adversity quotient is 17.94 and for secondary school students with low adversity quotient is

18.06. The t-value is 5.86, which is significant at 0.01 level. Therefore, it can be interpreted that there exists significant difference between secondary school students with high and low adversity quotient in their cognitive style. Further, it is obvious from table 3.7 that mean score (152.59) of secondary school students having high adversity quotient is greater than mean score (131.86) of secondary school students having low adversity quotient in their cognitive style. Therefore, it may be interpreted that secondary school students having high adversity quotient possess high level of cognitive style as compared to their counterparts' secondary school students having low adversity quotient. Thus, the hypothesis that there exists significant difference between secondary school students with high and low adversity quotient in their cognitive style was accepted. Graph 3.7.3 shows significant difference between mean scores of secondary school students (having high and low adversity quotient) in their cognitive style.



3.8 Results Pertaining to Relationship between Cognitive Style and Adversity Quotient of Secondary School Students:

One of the objectives of the present study was to find out relationship between cognitive style and adversity quotient among secondary school students. For this df, N, and co-efficient of correlation was calculated and results has been shown in table.3.8.

Table 3.8 Co-efficient of Correlation between Cognitive Style and Adversity Quotient in Secondary School Students

Variables	N	df	Co-efficient of Correlation
Cognitive Style	400	398	0.31116**
Adversity Quotient			

NS= Not significant *= Significant at 0.05 level **= Significant at 0.01 level

It is clear from table 3.8 that the co-efficient of correlation between cognitive style and adversity quotient of secondary school students is 0.31116 which is significant at 0.01 level. Therefore, it may be interpreted that there exists significant positive relationship between cognitive style and adversity quotient of secondary school students. In other words, it can be said that an increase in adversity quotient increase the level of cognitive style of secondary school students and vice versa. Thus the hypothesis that there exists significant relationship between cognitive style and adversity quotient of secondary school students was accepted.

CHAPTER- IV

CONCLUSIONS, RECOMMENDATIONS AND SUGGESTIONS

CHAPTER- IV

CONCLUSIONS, RECOMMENDATIONS AND SUGGESTIONS

4.1 CONCLUSIONS

Conclusions are the essential aspects of an investigation. They provide a finishing touch and review to the whole critical work. Conclusions hold significant importance. This part of the study plays an important role in any research work. Results of research show acceptance and rejection of hypotheses. Investigator conducted the study on 'cognitive style among secondary school students in relation to their adversity quotient'. Following conclusions were drawn on the basis of analysis and interpretation of data:

1. 19.75% secondary school students possess low level of cognitive style, 65.75% secondary school students possess moderate level of cognitive style whereas 14.50% secondary school students possess high level of cognitive style.
2. 17.25% secondary school students possess low level of adversity quotient, 69.00% secondary school students possess moderate level of adversity quotient whereas 13.75% secondary school students possess high level of adversity quotient.
3. Female secondary school students are more systematic as compared to their counterparts' male secondary school students.
4. Female secondary school students possess greater intuitive style as compared to their counterparts' male secondary school students.
5. Female secondary school students possess greater cognitive style as compared to their counterparts' male secondary school students.
6. Rural secondary school students are more systematic as compared to their counterparts' urban secondary school students.

7. There exists no significant difference between rural and urban secondary school students in their intuitive style.
8. There exists no significant difference between rural and urban secondary school students in their cognitive style.
9. Female secondary school students possess greater adversity quotient than their counterparts' male secondary school students.
10. There exists no significant difference between rural and urban secondary school students in their adversity quotient.
11. Secondary school students having low adversity quotient are more systematic as compared to their counterparts' secondary school students having high adversity quotient.
12. Secondary school students having high adversity quotient are more intuitive as compared to their counterparts' secondary school students having low adversity quotient.
13. Secondary school students having high adversity quotient possess high level of cognitive style as compared to their counterparts' secondary school students having low adversity quotient.
14. There exists significant positive relationship between cognitive style and adversity quotient of secondary school students.

4.2 RECOMMENDATIONS

The present study is beneficial for the students studying at secondary level. This study would help to provide information for curriculum designers and classroom teachers in order to utilize relevant approaches to enhance cognitive style and adversity quotient of secondary school students. Based on conclusions of the present study, the following recommendations are given:

1. Since female secondary school students possess greater cognitive style as compared to their counterparts' male secondary school students, hence male secondary school students should be provided with more opportunities to develop their cognitive style. They should be provided with opportunities to

participate in various curricular and co-curricular activities to improve their cognitive style.

2. Since rural secondary school students are more systematic as compared to their counterparts' urban secondary school students, hence there is a need to make urban students systematic. Thus, it is recommended that teachers, parents, administrators and heads of the institution should take care of this finding and treat the urban and rural students accordingly. Urban students should be provided with more opportunities to make them systematic.
3. Since there exists no significant difference between rural and urban secondary school students in their intuitive style and overall cognitive style, hence it is recommended that there should be no discrimination on the basis of locality among secondary school students in order to develop their intuitive style and cognitive style.
4. As female secondary school students possess greater adversity quotient than their counterparts' male secondary school students, so it should be kept in mind that females secondary students possess more adversity quotient. It is recommended to provide a wide range of opportunities to the male students also so that they can develop their adversity quotient.
5. Since, there exists no significant difference between rural and urban secondary school students in their adversity quotient hence no discrimination should be done to allocate tasks to rural and urban students. Teachers, parents, administrators, evaluators and curriculum framers should keep this finding in their mind while performing their respective duties.
6. Since secondary school students having low adversity quotient are more inclined to systematic style as compared to their counterparts' secondary school students having high adversity quotient, hence it is recommended to parents, teachers, heads of institutions and administrators that students with low adversity quotient should be given opportunities to organize various co-curricular activities, seminars, role plays and conferences.
7. Since secondary school students having high adversity quotient are more inclined towards intuitive style as compared to their counterparts' secondary

school students having low adversity quotient, hence it is recommended to the concerned personals that students with high adversity quotient should be engaged in creative activities such as painting, poetry, music and drawing etc.

8. Since secondary school students having high adversity quotient show more inclination towards cognitive style as compared to their counterparts' secondary school students having low adversity quotient, hence it is recommended that students with high adversity quotient should be encouraged to participate in various co-curricular activities. They should be provided with ample opportunities to develop themselves.
9. As there exists significant positive relationship between cognitive style and adversity quotient of secondary school students so secondary school students should be provided training to handle adverse situations so that their cognitive style may be developed.

4.3 SUGGESTIONS

Every investigator after completing his piece of research becomes aware of area in which further research in needed. The researcher by virtue of his experience in the field of study humbly offers the following suggestions for further research that could be undertaken by prospective researchers:

1. Cognitive style of secondary school students may be investigated in relation to their emotional maturity.
2. Cognitive style of secondary school students may be investigated in relation to their self-acceptance.
3. Cognitive style of secondary school students may be investigated in relation to their self-esteem.
4. Cognitive style of secondary school students may be investigated in relation to their mental health.
5. Cognitive style of secondary school students may be investigated in relation to their creative problem solving ability.
6. Similar study may be replicated on larger data to ensure wider generalizations and recommendations.

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