CHAPTER-2

Review of Related Literature

2.1 Introduction-

This chapter furnishes the review of the studies to consulted. For any worthwhile study in any field of knowledge, the researcher needs an adequate familiarity with the work which have already been done in the area of his\ her choice. The base for new knowledge is always the existing knowledge. The review of related literature is an essential aspect of starting any research. Therefore, the purpose of reviewing of literature is to build up the context, relevance and background of the research. It helps the researcher to set objectives, define his\her problem and to avoid duplication of well established findings.

2.2 Importance of Review of Related Literature-

Review of related literature provides a clear picture to the researcher to determine what others have learnt from somewhat similar research work. It serves multiple purposes and prerequisite for research designed. The survey of related literature is mandatory for the planning of the study and the time spent in such a survey is a wise investment for a good research studies. The reviewed studies are helpful in understanding the problem thoroughly. Review of related literature explores the literatures that are relevant to this study.

2.3 Review of Related Literature-

The review of related literature lays down the grounding for any research study. For the present study researches related to Blood Group types, Adversity Quotient, Defense mechanism and their relation to Academic Achievement have been surveyed and are presented in a systematic form.
2.3.1 Studies related to Blood Group-

Masters (2018) studied the distribution of blood groups in Psychiatric Illness. The study found that association between a blood group and a disease is that of the increased frequency of group O in patients with duodenal ulcer (Aird et al., 1954), and also an increased frequency of non-secretion in the same disorder (Clarke et al., 1956).

Senthamil et. al (2017) studied the relationship between blood group and mood changes. Four hundred students were selected by random sampling. The students were asked to answer the DASS42 questionnaire from which their anxiety, depression and stress scales were calculated. The study found that three psychological parameters anxiety, depression and stress related to mood changes are not related to blood type of a person. But among the three parameters, type A and type O students were found to have statistically significant higher scores in anxiety.

Srivastava and Yadav (2017) conducted a comparative study of blood groups with relation to academic achievement among medical students in North India. Study was conducted on 247 medical students both males and females of age group 18-20 years. Blood groups were collected from past medical records during the time of admission and Confirmation was done during the blood grouping practical classes. Out of 247 students 98 students were B group, 76 students were O group, 57 students were A group and 16 students were AB group. Total number of Blood group B students (N=22) who scored high marks were more than the other blood group students. While the %age of students of A blood group (29.8%) were more than other blood groups. Though our study showed that there was a variation in the academic scores between the blood groups A, B, O and AB, there was no significant association (p < 0.05) found between any blood group and academic scores. So, the conclusion of our study was that there was no real correlation between blood groups and academic scoring.

Gupta (2017) studied on blood groups and emotional intelligence. The study aimed to investigate is to explore the emotional intelligence of different blood groups (A+,
AB+, B+, and O+). Data were analyzed with ANOVA. Finding of ANOVA reveals that there is significant difference among blood groups and emotional intelligence. Students who have B+ blood group scored higher on value orientation and who have AB+ blood group scored higher on empathy and emotional stability.

**Kohli and Sharma (2016)** establishing relationship between blood groups and IQ in population of rural and urban areas of Punjab. In this study survey was done of 263 people of Rural Punjab (including males and females) and 367 people of Urban Punjab (including males and females). All the individuals were made to solve a — Standard Progressive Matrices by Raven et. al. According to the score they were categorized. It was found that in rural area, males with blood group O show high IQ level. These are intellectually superior. The average and below average individuals are found to be having predominantly blood group B and females of rural areas with high IQ are found to be having blood group O. The females with average IQ are found to be having blood group B. In urban areas , males with high, average and below average IQ are found to be having blood group O followed by blood group B. Whereas, females of urban area with high and low IQ level are found to be having blood group B.

**Yadav, Sankhla, Gaur, Gupta (2016)** studied on association of psycho-wellness with various blood types in young medical students. This study aimed to find out association of blood group with depression so early detection of depression and stress by blood types helps to reduce the overall burden of illness of young students thus improve their academic performance and social life. Data were analyzed with Primer version 6 and Chi-square. The study found that blood type 'A' and 'Rh+' were more prone to psycho morbidity and ‘B’ for suicidal tendency, while 'O' had least suicidal tendency but this variation was not found significant. So it can be concluded that there is no association between blood type and psycho wellness of individual.

**Ibraheem (2016)** studied the comparison between Blood Group Types between Students of College of Medicine and College of Education in University of KirKuk. The results showed that there is significant difference in blood group type
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distributions between the two colleges $X^2=12.944$ df=3 P value =0.00475, where by using 2X2 Chi square test blood group type AB were significantly higher in college of medicine than college of education, regarding blood group % distribution in both colleges were 42%, 28.2%, 20.8%, 84% for O,A,B,AB respectively which is close to distribution of blood group type in Kurdistan region and Turkey where blood group type A is more prevalence than blood group type B like in the south of Iraq and this is may be due to ethnicities causations.

Abakah (2015) studied on depression and its relation with blood group according differences (sex). Study was conducted on 1200 males and females. Data were analyzed with Pearson correlation coefficient (Person Correlation Coefficient), Spearman - Brown (Spearman - Brown Coefficient). The results showed that there is significant difference in adult female & male in center of Babylon varieties blood ((B, AB, O) have a sensitivity strong blues and the adult female in center of Babylon blood type (A) No to have depression.

Atoom (2014) studied on Blood Groups and their Relation with Intelligence among a Sample of Jordanian Universities students. This study aimed to know the relation between the four blood groups (A, B, AB, O) and intelligence for universities’ students who reached (194420) students and it was tested on (364) students intentionally distributed to four equal groups; (91) for each group according to their blood group of six Jordanian Universities. The study found that the blood group (AB) received the highest average in the Intelligence Quotient (IQ) test which is also the highest in the GPA. And that the blood type (B) was the lowest in the GPA and in test results.

Sani (2014) studied on ABO Blood Groups Study among Students of Hassan Usman Katsina Polytechnic, Katsina, Nigeria. A total of 228 students were selected randomly irrespective of age or sex, and have their blood groups determined using the slide method test using a clean white tile and blood sera. Three types of sera were employed anti-A serum for blood group A, anti-B serum for blood group B and anti-D serum for rhesus factor determination. All that is required is three drops of blood
obtained from middle ring finger of the left hand using a serile lancet and alcohol swab. Agglutination or clumping of blood cells in anti A indicates blood group A, and in anti-B indicates blood group B and no clumping of blood cells in both sera (A & B) indicates blood group O. Clumping of cells in both sera indicates blood group AB. Clumping in anti D serum for any blood indicates rhesus positive and no clumping in anti D serum indicates rhesus negative. The result of this study shows that 109 students have blood group O+, 49 have A+, 46 have B+, 18 have AB+, 2 have O- and 4 B-. Group O+ individuals account for 97% of the individuals examined. Blood groups A- and AB- were not encountered in the study.

2.3.2 Studies related to Defense Mechanism

Mohammadiou, Elahi and Morovati (2016) studied the role of personality traits in predicting defense mechanisms with mediating role of attribution styles in university students. The purpose of the present study was examining the role of personality traits in predicting defense mechanisms with mediating Role of Attribution Styles in University Students. The study sample consisted of 300 students of Islamic Azad University of Zanjan who were selected through a random stratified method. The research instruments were, NEO-Personality Inventory-Revised (NEOFFI- R), Defense Mechanisms Questionnaire (DSQ-40), and Attributional Style Questionnaires (ASQ-48). Data analysis was carried out through Pearson Correlation Coefficient and Structural Equation Modeling (LISREL). The results showed that significant positive relationship among personality dimensions, i.e. extraversion, openness to experience, and conscientiousness with mature defense mechanisms, among personality dimensions, i.e. extraversion, conscientiousness and agreeableness with neurotic defense mechanisms, and among positive attribution style with mature and neurotic defense mechanisms. There was a negative significant relationship among neuroticism with mature defense mechanism and positive attribution style. Modeling and structural equation analysis proved the significant mediation of attribution styles in relationship between personality traits and defense mechanisms. According to the
results of the present study, personality traits indirectly determined the type of defense mechanisms employed by the individuals through their attribution styles.

Ozoh (2015) studied the use of psychological defense mechanisms in academic activities among student teachers in Nigerian educational system. Three hypotheses were formulated to carry out the study, and they were all tested at 0.05 level of significance. The study involved the use of a structured questionnaire in eliciting information that aided data collection. A Sample size of two hundred (200) NCE 2 students was randomly selected for the study. Data were analyzed using Pearson Product Moment Correlation Coefficient. The result revealed that a significant relationship exists between projection and denial defenses. In same vein, denial and identification correlated significantly despite the fact that mean scores showed that students use more of identification than denial A significant correlation was as well found between projection and identification. It was therefore recommended that students who have developed the habit of using primitive defense mechanism should be considered for special psychological needs to help them develop positive personality profile and obtain better success in their academics.

Waquus et. al (2015) studied the association of Ego Defense Mechanisms with Academic Performance, Anxiety and Depression in Medical Students. A total of 409 medical students participated, of whom 286 (70%) were females and 123 (30%) were males. Mean percentage score on the most recent exams was 75.6% in medical students. Bivariate correlation revealed a direct association between mature and neurotic ego defense mechanisms and academic performance, and an indirect association between immature mechanisms and academic performance. One-way ANOVA showed that moderate levels of anxiety (P < .05) and low levels of depression (P < .05) were associated with higher academic performance. There was a significant association between academic performance and ego defense mechanisms, anxiety, and depression levels.

Huh, Keun and Shin, Myeong Hee (2015) studied the relationship between the level of stress included in elementary school children as a result of learning English
and their resulting defense mechanisms. This study investigates the relation between the types of defense mechanisms and the English achievement of those same children. The subjects were 106 fifth grade students in a metropolitan area in Korea, and a survey was employed to collect data. A Multivariate Analysis of Variance (MANOVA) was conducted in order to test the differences across the four types of defense mechanisms that were observed between low and high levels of stress of the students. In addition, a $t$-test was conducted in order to compare the English achievement of the two groups of students. The results indicate a strong relationship between the level of stress from learning English and the particular type of defense mechanism. The findings imply that there is a need to consider elementary students’ stress from learning English and helping them to control stress in appropriate ways.

Gökdag Rüçhan (2015) studied the defense mechanisms used by university students to cope with stress. The research was conducted with the students taking the course of “psychology” thought by the researcher. After the researcher taught the subject of “defense mechanisms” found in the scope of this course, the students were asked to note down the defense mechanisms they “constantly”, “occasionally” and “never” used. In order to help the students remember the 10 defense mechanisms investigated, they were provided with an informative booklet explaining these defense mechanisms briefly. A total of 587 students participated in the study. The mechanisms the most frequently used especially by the female participants were “repression”, “denial” and “displacement”. The male participants’ use of the mechanism of “projection” was twice higher than the female participants’ use of the same mechanism. As for the mechanism of “sublimation”, the female participants used this mechanism with rate twice higher than the male participants. With respect to the mechanisms most frequently used, the difference between the female and male participants was found significant only for the mechanisms of “projection” and “regression”.

Hong, Eun-Joo, Kim, Hyo-Eun and Kim, Jin-Kyung (2014) conducted a study on Defense Mechanism and Optimism in Korean College Students. The objective of this study was to illustrate the relationship between optimism and defense mechanism in
Korean college students. 332 student participants from “A” University in Korea completed questionnaires from the Ewah defense mechanism and optimism measurement tool. This study analyzed the culled data and revealed general patterns of optimism and defense mechanism, as well as patterns based on gender. In addition, the study analyzed differences in defense mechanism, dictated by one’s optimism level. Frequency, percentage, mean, standard deviation, and t-test were analyzed using SPSS 21.0. The results demonstrated that the operating defense mechanism in Korean college students were different for males and females in the categories of show-off, passive aggressive, denial, and identification. However, the level of optimism was identical for both genders. Defensive mechanisms based on optimism levels also varied significantly in controlling, distortion, altruism, humor, sublimation, and rationalization categories.

**Negrii, Varvara (2014)** conducted a study on Psychological defense and school students academic performance. This article investigates the problem of connection between the academic performance of schoolchildren and their defense mechanisms. The article describes the author’s diagnostic method of defense mechanisms and shows the sphere of its application, which is the diagnostics of high schoolchildren's defense mechanisms. The author analyzes the connection between schoolchildren’s academic performance and their defense mechanisms. Defense mechanisms originate and develop in early childhood; therefore the problem requires further investigation.

**Dakhili , Manavipour and Golshani , (2013)** studied the Prediction of Mental Health by the Mechanisms of Immature Defense Style This research aims to study the relation between defense mechanisms and the quality of life of the students studying at the universities of Tehran. For this purpose, a group of 428 students (including 202 male and 226 female one) is sampled by multistage random sampling method to answer the questions of the quality of life and defense mechanisms scales. The results show that there is a significant positive relation between mental health and the mechanisms of immature defense style including rationalization, projection, omnipotence, acting out, somatization, autistic fantasy, passive aggression, and
displacement at the level of 0.001. No relation was found between mental health and other mechanisms. The results of the analysis of multivariate regression show that only projection, rationalization, and omnipotence are able to predict mental health, and other immature defense style mechanisms lack such predictability.

Drapeau, Thompson, Petraglia, Thygesen and Lecours, (2011) studied the Defense Mechanisms and Gender: An Examination of Two Models of Defensive Functioning Derived from the Defense Style Questionnaire . This study aimed to examine the extent to which a proxy of the DFS model of defence mechanisms, and the model underlying the Defense Style Questionnaire, can be adequately applied to men and women. Confirmatory factor analyses indicated that neither model accurately reflects men or women’s defensive functioning. Researchers had developed a model for studying the defense mechanism using samples of 517 women and 124 men.

Graovac, Mirjana et. al. (2006) conducted a study on Changes of Adolescents’ Defence Mechanisms during the First Year of High School Education. The goal of this study was to analyse the defence mechanisms's changes during adolescent_s adaptation to the new schooling terms at the first year in high school. Sample of 266 students, mean age 15, have been included in the research. Kellerman_s Life Style Questionnaire (LSQ) was administred for measuring defence mechanisms at the beginning and at the end of the scoo year. Results show that regression and reactive formation are changing at most; regression raises (p<0.005) while reactive formation decreases (p<0.000). Boys used repression, while girls reactive formation more frequently in both measuring. Displacement was »male» defence in the first measuring; but at repeated measuring this difference in sex vanished. The sources of anxiety can be found partly in new school environment and in adolescent_s effort to solve the problem with sexual impulses and aggression using different sets of defences.

Haan (1963, 1964, 1965) has done considerable research with defense mechanisms and certain aspects of personality. He studied the relationship of coping and defense mechanisms to I.Q. change. Defenses of adult subjects were assessed in interviews in
accordance with a schedule that covered their memories of adolescent self and social-
family interaction and the assessment of their present status of self, occupation,
family, et cetera. The mean number of interviewing hours was 12.4. The Terman
Group Test was administered for the I.Q. rating. The comparison of these two
measures indicated that coping mechanisms were related to I.Q. acceleration and
defense mechanisms were related to I.Q. deceleration. Haan's findings are supportive
of the premise stated at the beginning of this chapter; namely, that individuals whose
behavior patterns can be identified as coping mechanisms seem to have more
cognitive facility available to them for the solutions of conflicts and problems. It
therefore follows that the ability to -use one's intelligence is accelerated. Conversely,
those Individuals whose behavior patterns are identified as defense mechanisms seem
to be so emotionally involved in defending against the conflict situation rather than
facing it directly that the 23 cognitive facilities available to them are affected. Haan
(1964) also investigated the relationship of Rorschach scores, Rorschach patterns, and
Rorschach behavior to coping and defense mechanisms.

Kroeber (1963) proposed a model of ego functioning which included both coping and
defense mechanisms. He hypothesized that coping mechanisms were used by the
more well-adjusted persons, and the defense mechanisms were used more by the less
well-adjusted.

Miller and Swanson (1960) distinguished between defense mechanisms and
expressive styles. They defined expressive styles as the Individual's variations in the
manner in which he performed adaptive tasks. Since expressive styles are also
restrictive, they create a predisposition to form certain types of behavior pattern (i.e.,
displacement). It seems clear that the above definition of "expressive style" is very
similar to that usually accepted as defense mechanisms.

Goldstein (1952) made a projective study of psychoanalytic methods of defense. The
particular aspect investigated was the consistency of defense preferences in "normal"
subjects. He obtained the preferred defenses for 104 male and female college students
by modifying the Blacky Picture technique to include a defense preference inquiry.
The defenses preferred were those of repression, projection, reaction formation and regression. His findings revealed two types of defenders in the "normal" population, specific defenders and general defenders. A majority, who were designated as specific defenders, made specific choices of defense for each conflict area. Those designated as general defenders tended to use the same defenses regardless of the conflict situation. The results offered supportive evidence that the students who had been designated as general defenders were less stable than those designated as specific defenders.

2.3.3. Studies related to Adversity Quotient-

Hema and Gupta (2015) conducted a study of Adversity Quotient for Prospective Higher Education. Result revealed that there is no significant difference in the mean scores of AQ on the basis of gender, stream of education i.e. Commerce, Science and Arts, and various family variables like nature of the family, size of the family, qualification of parents, parents’ working status and parents’ occupation. Result also revealed that a significant difference is found in the mean scores of AQ of students on the basis of board of School i.e. GSEB and CBSE.

Parvathy, Usha and Praseeda M.(2014) studied relationship between Adversity Quotient and Academic Problems among Student Teachers. This study is conducted to find out the level of academic problems and adversity quotient among student teachers. The study also analyses the relationship between adversity quotient and academic problems among student teachers. A teacher can transfer his/her ability to the next generation and inculcate such qualities in the students. The method used was survey and the sample was a random sample of 300 student teachers from Kerala state in India. The value of correlation co-efficient obtained for adversity quotient and academic problems (r = -0.52, significant at 0,01 level) shows that the two variables are closely related.

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.

**Nikam, Vibhawari and Uplane, Megha (2013)** had conducted a study to explore the relationship between Adversity Quotient (AQ) and Defense Mechanism (DM) of secondary school students. The aim of the study was to ascertain relationship between Adversity Quotient and Defense mechanism i.e. Turning against object (TAO), Projection (PRO), Turning against self (TAS), Principalisation (PRN) and Reversal (REV). Another aim of the study was to find out whether there exist any difference between the level of AQ and DM of boys and girls. The sample included 156 girls and 152 boys (aged from 13 years to 15 years) selected randomly from Uran region of Raigad District, Maharashtra State, India. Data analysis revealed that there is no correlation between Adversity Quotient and Defense Mechanism of secondary school students. Data analysis also revealed that there are no significant differences in the level of AQ and Defense mechanism of boys and girls.

**Praditsang and Hanafi (2013)** examined the relationship between adversity quotient and learning behaviors while Cornista and Macasaet (2013) investigated the relationship between adversity quotient and achievement motivation. Both studies examined the adversity quotients of the participants and other factors, such as age and gender, which they assumed to have significant relationship with adversity quotient but was proven to be of no effect. Majority of Praditsang and Hanafi’s participants have high AQ scores while Cornista and Macasaet’s had low AQ scores in majority.
Both studies used fourth year students as participants. When comparing the CORE dimension scores of both studies, Praditsang and Hanafi’s participants scored high on most dimensions except on Control while Cornista and Macasaet’s participants scored average on Control while having below average scores on the rest, thus marking their difference in AQ scores. Praditsang and Hanafi (2013) aimed at examining the significant relationship between adversity quotient and learning behavior which the study have proven to be significant. On the other hand, Cornista and Macasaet aimed at investigating the achievement motivation of students in relation to their adversity quotient. This study yielded a positive relationship between the two factors. Looking at their results and the two studies on adversity quotient and academic performance, AQ can predict academic performance and other factors that could also affect it like learning behavior and achievement motivation.

Patdo, V.C (2011) did a correlational study of the adversity quotient of parents with special children and adversity quotient of parents with normal children in Manila, Tondo, Espana. The study brought to light that the adversity quotient of the parents were moderate and that the mean scores of parents with normal children was higher than parents with special children. The study also brought to light that the adversity quotient of the respondents were not influenced by their age and gender.

Devakumar, M.(2012) studied adversity quotient of secondary school students in relation to their Academic self concept and Achievement Motivation. The researcher compared the adversity quotient of secondary school students on the basis of school types and gender. The study also tried to compare the relationship between adversity quotient and student’s academic self concept and also compared the relationship between adversity quotient and student’s achievement motivation. The findings showed that adversity quotient correlates positively with these variables.

Sachdeva, P (2009) conducted an experimental study to enhance the adversity quotient of potential leaders. The objectives of the program was to prepare an appropriate intervention programme to enhance adversity quotient and to test the effectiveness of the intervention program. The study was carried out on 1053 potential
leaders. The programme has been content validated in two steps i.e with subject and methodology experts and by trial runs on ‘typical’ potential leaders. Data collected at the experimental stage was analyzed quantitatively and qualitatively to assess the effectiveness of the intervention program on the whole as well as differentially for the separate demographic groups. The study revealed that the intervention program was effective in increasing the adversity quotient level of potential leaders (the participants) as compared to a control group taken from the same population.

**Almeida, A (2009)** developed a program for enhancing the adversity quotient of Junior college students. The researcher carried out numerous activities to enhance adversity quotient. The findings revealed that there was a significant difference in the post-test means of AQ®, of junior college.

**HuiJuan’s (2009)** study aimed to know the adversity quotients of their participants. They aimed at finding if there is a significant relationship between adversity quotient and academic performance. The two studies both included age and gender as other factors that affect adversity quotient which was proven to be of no effect. In HuiJuan’s study, most participants had low AQ while with Bakare, most had moderate AQ scores. They may have different outcomes with regards to the adversity quotient of their participants; still they both have come up with the same results. They both have shown that adversity quotient has a significant relationship with academic performance. As AQ increases, the academic performance of an individual also increases.

**Ferrer, Marrisa B. (2009)** carried out a study on “Relationship of Personal Characteristics, Leadership Styles and Job Satisfaction to AQ®”. This study was focused on the investigation to show an association between the school principals’ adversity, style of leadership, school performance and best practices among 47 schools. The study concluded suggesting that there was no significant correlation between the principals’ adversity quotient® and the principal’s leadership styles with their demographic profile.
Diana and Nida (2008) investigated 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 a 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.

Le thi (2007) conducted a study about adversity quotient in relation to job performance the aim of the study was 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.

Souza (2006) studied adversity quotient of secondary school students in relation to their school performance and school climate. The researcher compared the adversity quotient of secondary school students on the basis of school types. The study also tried to compare the relationship between adversity quotient and perceived school climate and also compared the relationship between adversity quotient and school performance. The findings showed that adversity quotient correlates positively with school performance. Also adversity quotient correlates positively with school climate.
Students of CBSE Board showed better adversity quotient than students of State Board schools.

**Villaver, E (2005)** had attempted to study Adversity Quotient levels of female grade school teachers of a public and private school in Rizal Private province. The results indicated that there was no significant difference between adversity quotient of public and private school teachers. Teachers belonging to low socio economic class had moderate adversity quotient level than teachers belonging to middle socio economic class. Both public and private school teachers were found to have moderate quotient levels.

**Johnson, Monica Brannon (2005)** had attempted to study Optimism, Adversity and Performance: Comparing Explanatory Style and AQ. In this study, the Researcher’s purpose was to determine the relationship between Explanatory Style and AQ and examine the existence of correlations between each of the constructs and performance in a high-adversity occupation, sales. The study involved 112 western area sales regions of a leading Fortune 500 company in the computer hardware industry. The researcher employed the ‘Attributional Style Questionnaire’ (Peterson, et, al), ARP (Stoltz) and a demographic data sheet to collect data. The findings revealed that there was a significant relationship between AQ and performance for short term employees. The findings of this research are important for the present study as they provide evidence for this relationship among working professionals like sales personnel who work in a very demanding environment.

**Haller (2005)** conducted a hermeneutic phenomenological study investigating the possible relationship or impact that adversity, obstacle and challenges had on shaping and development of prominent leaders was conducted by He discovered that prior to becoming prominent leaders of the nine chosen primary respondents; they have experienced various degrees of adversities in their youth and adult lives. The study revealed that adversity in the early lives of the participants was not the most important factor in shaping a leader but how they viewed obstacles or events in adult lives as opportunities disguised as challenges. Several qualities of a leader emerged relative to
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what most shaped the participants as leaders and becoming successful and these were: the adversity in the participants early lives was not the most important influence, they viewed the obstacles in their adult lives as disguised challenges, overcoming these challenges strengthens leaders, mentors were very important in their lives and help become a better leader, religious faith and families were key to success and share concepts of leadership including honesty, integrity, caring deeply about people, communicating clearly, knowing the business well and being humble servant-leader.

Williams, Mark (2003) studied the relationship between Principal’s response to adversity and student’s achievement. The study examined the principal’s self perception of how they responded to adversity and the influence it had on the student’s achievement. The results revealed that students with moderately high adversity quotient principals outperformed students with moderately low adversity quotient principals.

Abejo (2002) studied adversity quotient profile of 39 employees of the College of Arts and Sciences of St. Joseph’s College in Quezon City for the school year 2001-2002 as an indicator of their effectiveness as leaders. Based on the results, 58.94% of the employees of St. Joseph’s College of Arts and Sciences fall within the moderate level of adversity quotient, however, there was no significant difference between male and female respondents in their adversity quotient, but the results showed that older employees had higher adversity quotient than the younger employees. Moreover, there was no significant difference in the adversity quotient of the workers in relation to their respective job description; viz., teaching, (17) non-teaching (10) and administration (12).

Wayman, J.C.(2002) studied the utility of educational resilience in school drop outs for degree attainment. The present study examined the factors associated with degree attainment in drop outs. The findings indicated that viewing the returning dropouts as a resilient students did provide a more useful set of factors associated with degree attainment.
Ollendick, T.H et al (2001) explored the relationship among negative life events, negative attributional style, avoidant coping and level of fear in children and adolescents, who survived residential fires. It was found that negative life events, negative attributional style and avoidant coping were found to be predictive of levels of fear. However the relation between negative life events and fear were moderated by mother’s level of education, In addition, negative attributional style and avoidant coping were related to levels of fear in those children, whose mothers were high in educational levels but not those, whose mothers were low in educational level.

Dela Fuente and Lee (1999) made an exploratory study on the adversity quotient profile of the graduating students of Assumption College. Based on the results, the graduating batch 1999 has a moderate adversity quotient and CO2RE profile; with their average mean scores for all the four dimensions of Control (C), Origin and Ownership (O2), Reach (R), and Endurance (E) falling within the mid-range. This could mean that most times, the students are able to handle adversity pretty well, depending on the degree and duration of the adverse event.

Fergusson, D; Lynskey, M (1996) conducted a 16 year longitudinal study of birth cohort of New Zealand children, to examine adolescent resiliency to family adversity. The findings clearly indicated that children from high risk family showing resilience to development of externalizing behavior, were characterized by a combination of at least average intelligence, low tendencies to novelty seeking and avoidance of affiliation with delinquent peers in adolescence.

Verma, S (1995) focused on effective coping strategies prevalent in college students. The findings revealed that students tried to face difficult situations in a mature manner yet they did withdraw from problems they encountered in life. Male students withdrew to drugs, alcohol while female became emotionally upset.

2.4 Synthesis

This chapter looks into the relationship of blood group, adversity quotient and defense mechanism on academic achievement. From the above related literature, we
can see that most of the studies tried to explain and discover the significance of blood group, Adversity Quotient and defense mechanism to a person’s academic achievement. Many of the researches used are foreign related studies as only a few local studies have been made relating to the topics used for this research.

However, for the present study, the researcher has chosen to study by integrating all the variables presented above i.e. studying the influence of blood group, adversity quotient and defense mechanism to academic achievement and if one of them can be the better predictor. This study could unlock some new knowledge that can be helpful not just to the students but also for the parents, teachers and academic institutions.