CHAPTER TWO

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A review of literature helps us to understand the problem clearly. The present review of literature examines the studies which led to the formulation of the problem of the present study. This chapter attempts to present a brief resume of research findings related to “Spiritual Intelligence, Achievement Motivation and Grit among Students of Professional and Non-Professional Courses”. In this regard, it will be fitness of things to present a brief research outputs related to the main variables of present research such as Spiritual Intelligence, Achievement Motivation and Grit.

**Spiritual Intelligence**

In recent years, psychologists have been increasingly attracted to a new concept which is called spiritual intelligence. Zohar and Marshall (2000) introduced the concept of spiritual intelligence to the psychology with the publication of a book entitled "Spiritual intelligence: the ultimate intelligence". Spirituality is often related to a person's belief system. The spiritual power of a person guarantees his/her positive attitude to the problems and his interest in helping the people around him/her.

Spiritual intelligence was relatively new construct that is why comparatively fewer researches were found in this field. But many related spiritual variables such as spiritual well-being, equanimity, self-actualization, intuition power, love, quality of life, punitive states of consciousness, awareness of God's presence and love in all things, self-
awareness, awareness of interconnectedness, social service, compassion, super-ego, sense of inner experience and transcendence were examined.

Most of studies reported influence of gender on spiritual intelligence indicating that females were more spiritual than males. But specifically, Nodehi and Nehardani (2013) explored that the gender has significant effect on spiritual intelligence.

Spence (1983) believed that those people who have a strong need to progress are usually successful in activities and assess their performance against internally or externally posed criteria which are usually higher than that of ordinary people. Zohar and Marshall (2000) investigated the effect of these characteristics on other personal states of individuals which proved that at least in some characteristics such as implementing experiences and getting help from spirituality in resolving life’s problems and attaining high spirit that result a relation between factors of motivation for progress and spirituality. Steward (1998) in his research on the effects of spiritual characteristics on African-American students’ academic improvement concluded that the more a student possesses these characteristics, the higher his academic improvement would be.

Walker (2001) conducted a study to examine the spirituality based on Howard Gardner’s theory of multiple intelligence. Using Gardner’s guidelines, an examination of a candidate spiritual intelligence reveals fascinating possibilities. Gardner’s research criteria were used to move toward a knowing beyond the eight intelligence, a knowing of the sacred, a spiritual intelligence. Intellect can and should go beyond cognition, to the affective and spiritual level of knowing. Thus, this dissertation seeks to ratify a ninth intelligence, a spiritual intelligence.
Spiritual intelligence enhances the reasoning capacity before an action is taken and consequently such actions are positively oriented. Wigglesworth (2002) further conceptualized spiritual intelligence to be the ability to behave with companion and wisdom, while maintaining inner and outer piece (equanimity) regardless of the circumstance. Spiritual intelligence is therefore a necessary personal endowment which enables one to maintain both inner and outer piece and display love regardless of the circumstances whether stress or acute conflict. It could therefore a necessary ingredient of school attendance behavior and consequently achievement motivation.

Sisk (2002) expressed spiritual intelligence as the tenth intelligence that integrates all other intelligences. In this article, the author has discussed seven ways to develop spiritual intelligence including: think about goals and identify values; access inner processes and use visualization to see goals fulfilled; integrate personal and universal vision; take responsibility for goals; develop a sense of community; focus on love and compassion and take advantages of coincidences.

Wigglesworth (2004) accepted as true that the achievement of the skills of spiritual intelligence doesn't occur (happen) by itself and automatically when the age increases but the individuals can select and learn the skills of spiritual intelligence when their age increases. On the other hand, over the time and aging, the individuals can achieve higher levels of SQ (spiritual Quotient).

Sally (2006) revealed that females exhibit higher levels of Spiritual Intelligence than males on factors that allude to a sense of connection and relationship with others, the total SQ reveals no difference between the two groups. This makes the researcher to conclude that ultimately males and females will not differ in Spiritual Intelligence.
Similarly, no significant difference was found between age groups (below 40 vs. 40 and above), religion (Catholics vs. non-Catholics), occupations (faculty vs. administration) and civil status (single vs. married).

To explore the relationship of spiritual intelligence and emotional intelligence with science achievement of higher secondary male students, Bansal (2007) has conducted a study among 200 male students of the age group of 15 to 18 years studying in eleventh class of the intermediate colleges of Mathura city. Results showed that high positive correlation \((r = .65)\) was found between science achievement and emotional intelligence whereas very high positive correlation \((r = .73)\) was found between science achievement and spiritual intelligence.

Halama and Strizenec (2004) theoretically examined the nature of ‘higher’ intelligences i.e. spiritual intelligence and existential intelligence. They studied the nature of intelligence related to existential and spiritual dimension of individuals. Authors’ consideration was introduced a review of approach to intelligence in the spiritual area postulated by H. Gardner who suggested it be included under the designation existential intelligence. They further outlined relations between spirituality and thinking and review the most commonly known theories of spiritual intelligence. To conceptualize existential intelligence, authors started from existential psychology. Further, as meaning in life was a central concept of existential psychology, they suggested that existential intelligence could be understood as an ability to find and realize adequate life meaning.

Ahmadi and Kajbaf (2008) found that there is no difference in different educational groups in terms of spiritual intelligence but in an extensive analysis of spiritual intelligence. Hariri and Zarrin-Abadi (2011) found that there is a meaningful
relationship between educational field and spiritual intelligence. Other results of Hosseinzadeh and Ruin (2014) showed that there is no meaningful difference between four educational groups of the compared (studied) staff in terms of spiritual intelligence level. On the other hand, the levels (values) of spiritual intelligence (quotient) among the degrees of diploma, assistant degree, B. A. and M. A. are almost congruity (conformity) with the research results of Raghib, Ahmadi, and Siyadat (2008) and another result by Hariri and Zarrin-Abadi (2011) who expressed that there is no relationship between education level and the spiritual intelligence (quotient) value.

Sisk (2008) studied the spiritual intelligence of gifted students to build global awareness in the classroom spiritual intelligence--using a multisensory approach to access one's inner knowledge to solve global problems--can be an integrating theme to engage gifted students in building global awareness in the classroom. He introduced individuals providing training in higher consciousness and presents examples of strategies to further develop the spiritual intelligence of gifted students such as exploring existential questions, service-learning and moral dilemmas. A residential program for secondary gifted students provided an example of engaging the spiritual intelligence of gifted students to build global awareness.

Animasahun (2009) investigated the possible psycho-demographic variables (gender, age family type, spiritual intelligence, emotional intelligence, creativity, self efficacy, motivation and goal setting) as predictors of school attending behavior among secondary school students. School Attending Behavior Rating Scale, Student’s Academic Achievement Motivation, Goal Setting Scale, Emotional Intelligence Scale, Creativity Scale, Generalized Self- Efficacy Scale and Spiritual Intelligence Questionnaire were
applied. Data analysis involved the use of multiple regression analysis to seek for possible predictive capacity of the nine independent variables on school attending behavior. The results indicated positive correlation among variables and the nine independent variables when taken together, contributed 64.6% while relative contributions revealed motivation as the highest contributor with a beta of 0.541, followed by goal setting (B = 0.248), emotional intelligence, (B = 0.235), creativity (B = 0.189), age (B = 0.080), self efficacy (B = 0.042), family type (B = 0.041), spiritual intelligence (B = 0.023) and gender (B = 0.006) respectfully.

Khairi (2010) investigated using two variables, spiritual intelligence and achievement motivation. The concept of spiritual intelligence was used which concluded that there is a positive relationship between spiritual intelligence with achievement motivation at the boarding school students of Al-Asma'ul Husna, West Central Lombok. Furthermore Madrasah Aliyah showed the following results (r = 0.752, p <0.01), while in Madrasah Tsanawiyah levels showed the following results (r = 0.639, p <0.01).

In order to find out the relationship between spiritual Intelligence and religious coping among the students of Payame Noor University (PNU) of Ardebil a study was carried out among on 8000 students studying in the second semester of current academic year (2009-2010) in Ardabil Payame Noor University and about 400 of them were selected in cluster random method as a statistical sample (Khoshtinat, 2012). The analysis showed that Spiritual Intelligence and its components include the existential status of critical thinking; personal interpretation, divine consciousness and transcendental consciousness are significantly higher than average among male and female students. But spiritual link with among the male students is average meanwhile 5% of those students
had negative cope and 95% had positive concept. In addition, the spiritual intelligence was not a good method for explaining the significant meaningful contrast styles.

Nasruddin, Husain, and Hameed (2011) measured the level of spiritual intelligence among male and female students studying in professional and non-professional courses at the University of Malaya. Spiritual Intelligence Self-Report Inventory (SISRI) was administered to 210 students studying in University of Malaya. Findings of the present study revealed that the SISRI scale was found to be a reliable tool for the measurement of four factors of spiritual intelligence: Critical Existential Thinking (CET), Personal Meaning Production (PMP), Transcendental Awareness (TA) and Conscious State Expansion (CSE). The main effects of gender and vocational stream and their interaction effects were not found to be significant on the overall score and factors of SISRI.

Aishah, Jafar, Aminah, and Maznah (2011) examined whether spiritual intelligence (SI) and emotional intelligence (EI) can be considered as predictor for mental health (MH). This study also explored the moderating effects of gender on the link between SI and EI with MH among high school students. The participants in the study were 247 high school students, (124 male and 123 female, in the age range between 14-17 years old) at the Gorgan City, north of Iran. Three valid and reliable instruments were used to assess SI, EI and MH. Descriptive statistics, multiple and moderated regression analysis were used to analyses the data. The result demonstrated that MH can be influenced by SI and EI. In addition, the moderating effect of gender on the relationship of SI and EI with MH were not established.
Amrai, Farahani, Ebrahimi, and Bagherian (2011) examined the relationship between personality traits and spiritual intelligence among university students. In this correlation research, 205 students of University of Tehran were chosen using multiple cluster sampling. Then they completed personality traits questionnaire NEO-FFI (Costa & McCrae, 1992) and spiritual intelligence scale (King, 2008). Data were analyzed by using Pearson correlation coefficient by means of SPSS version16. Findings showed that there was a negative relation between Neuroticism and spiritual intelligence and positive relation between conscientiousness, agreeableness and extroversion accordingly. Openness had no relation with spiritual intelligence. Also synchronic regression shows that the three personality traits, extroversion, conscientiousness and agreeableness explain 0.52 variance of spiritual intelligence simultaneously.

Beshlideh, Charkhabi, Kalkhoran, and Marashi (2011) expanded the evidence relating to spiritual intelligence by determining whether the big five personality traits can predict spiritual intelligence. Further, goal was to find out the direction of the prediction. Two hundred seventy male graduate students of Shahid Chamran University at Ahvaz were selected using the simple random sampling. NEO-FFI personality questionnaire to assess the personality traits and spiritual intelligence scale (SISRI 24) to measure the spiritual intelligence. Results showed that the three personality traits of extraversion, agreeableness and conscientiousness have statistically significant correlations with spiritual intelligence. It was concluded that the students with extraversion, agreeableness and Conscientiousness features are more likely to have higher spiritual intelligence while people with higher openness necessarily do not have higher spiritual intelligence.
Sood, Bakhshi, and Gupta (2012) explored the relationship between personality traits, spiritual intelligence and well being among university students. Big Five Factor Inventory was employed to assess personality traits, Spiritual Intelligence (SISRI-24) to measure spiritual intelligence and WHO-Five Well-being Index (WHO-5) to measure well being of 120 students doing post graduation in Psychology from the University of Jammu (N=50) and Indira Gandhi National Open University (N=70). Results revealed that differences in personality traits and spiritual intelligence appeared. Further, positive relationship was found between personal meaning production and two factors namely agreeableness and neuroticism including significant relationship between transcendental awareness and openness also appeared. In this regard, regression analysis revealed that transcendental awareness predicted well being.

Spiritual intelligence is a set of adaptive mental capacities based on non-material and transcendent aspects of reality. Thus, the spiritual intelligence is the consequence of the highest level of individual growth in the fields of cognition, meaning attainment, transcendental and moral communication. Farsani, Arofzad, and Hosaini (2013) examined the study of relationship between spiritual intelligence with personality traits among physical education managers in Isfahan province. Results showed that there was a positive meaningful correlation between spiritual intelligence sub-scales with Openness to Experience, conscientiousness, Agreeableness and Extraversion (P<0.05). On the other hand; results indicated that the negative and significant correlation between Neuroticism and spiritual intelligence sub-scales (P<0.05). It was concluded that the spiritual intelligence and personality traits are two important components for physical education managers and there were meaningful role in organization.
Koohbanani, Dastjerdi, Vahidi, and Far (2013) determined the relationship between Spiritual Intelligence (SI) and Emotional Intelligence (EI) with Life Satisfaction (LS) among gifted female high school students in Birjand. For this purpose, 123 students were selected considering the Simple Sampling Method for the study. The results revealed that there is generally no meaningful relation between SI and LS, but a meaningful relation between EI and LS does exist. The results of regression analysis showed that "Moral Virtue" in SI and "Appraisal and Expression of Emotion" and "Regulation of Emotion" in EI are meaningful predictors for LS. Also SI together with EI has a meaningful relationship with LS.

Javaheri, Safarnia, and Mollahosseini (2013) studied the impact of spiritual intelligence on service quality. The results of data analysis indicated that the spiritual intelligence of employees has a significant positive impact on the Service quality. Also the results showed that as elements of spiritual intelligence, “Personal Meaning Production” and “Conscious State Expansion” have more effect on Service Quality.

Siddiqui (2013) studied the effect of achievement motivation and gender on spiritual intelligence. Achievement Motivation Scale (AMS) developed by Deo-Mohan (1985) and Spiritual Intelligence Self Report Inventory (SISRI) developed by King and DeCicco (2007) were administered to 200 male and 200 female students studying in Aligarh Muslim University Aligarh (U.P) India. The data were analyzed by3x2 analysis of variance (ANOVA). Results showed that there was significant effect of achievement motivation on spiritual intelligence and effect of gender was not found on spiritual intelligence.
A comparative study on spiritual intelligence among professional and non-professional students conducted by Hilal and Siddiqui (2013). The findings revealed that professional and non-professional students significantly differed with respect to spiritual intelligence. More specifically, professional students were found to have higher spiritual intelligence than non-professional students. Result also showed that SISRI (Spiritual Intelligence Self-Report Inventory) was found to be reliable tool to measure four factors of spiritual intelligence: Critical Existential Thinking (CET), Personal Meaning Production (PMP), Transcendental Awareness (TA) and Conscious State Expansion (CSE) for the present sample with 0.857 cronbach’s alpha. When the investigators compared on four factors of spiritual intelligence, Critical Existential Thinking (CET), Personal Meaning Production (PMP), Transcendental Awareness (TA) and Conscious State Expansion (CSE) resulted again that two groups differed significantly on these factors.

Azizollah, Maede-Sadat, Shekofe-al-Sadat, and Ali (2013) studied the relationship among emotional intelligence, spiritual intelligence and academic achievement of students in the University of Isfahan. The statistical population of this study includes all of the students in this university. A sample of 250 students was selected through random cluster sampling. The Spiritual Intelligence and Self-report Inventory and Trait Emotional Intelligence Questionnaire had been used for collecting data. The results of present study revealed that there was significant positive relationship between students’ achievement with their emotional and spiritual intelligence. As the results showed growth and promotion of the emotional and spiritual intelligence can considered as methods for improving students’ academic achievement. This can be promoted and revolted through a
rich educational environment and leads to better educational performance in the academic environments.

Different types of intelligence and achievements were investigated among students of university of Isfahan by Azizollah, Maede-Sadat, Shekoofeh-Sadat, and Nazanin (2013). A sample of 250 students was selected from the population by Multi-stage random cluster sampling method. Data-collection instruments were Trait Emotional Intelligence Questionnaire – Short Form (TEIque-SF) and Spiritual Intelligence Self-Report Inventory (SISRI-24) questionnaires. The results indicated that there was significant positive relationship between emotional intelligence and achievement ($r = 0.87$). Therefore, it is concluded that emotional intelligence has explained 75% of achievement variance while the findings showed high effect of emotional intelligence on achievement but spiritual intelligence had more effect on achievement as compared to the effect of emotional intelligence ($r = 0.93$) and also observed that 86% of achievement variance among the students. The earlier studies used emotional and spiritual intelligences as the separated variables for predicting educational performance but the results of Azizollah, Maede-Sadat, Shekoofeh Sadat, and Nazanin (2013) demonstrated that the best model is one that has different types of intelligences simultaneously. It can be said that emotional and spiritual growth includes personal growth and also goes beyond it. The results revealed the possibility to introduce a model for explaining student’s achievement based on the emotional and spiritual intelligences.

Azmi and Fatima (2014) were evaluating levels of spirituality (high, moderate and low) as determinants of achievement motivation among adolescents. Findings revealed that low and moderate level group of subjects did not differ significantly with respect to
achievement motivation while high spiritual group of subjects scored higher than low spiritual group of subjects. This study also concluded that high spiritual subjects hold higher achievement motivation as compared to low spiritual group of subjects.

Hosseinzadeh and Ruin (2014) explored the spiritual intelligence status of the staff and faculty members of Islamic Azad University, Babol branch regarding demographic characteristics. The statistical population of this research includes all staff and faculty members of Islamic Azad University, Babol branch. Among them, 108 employees (staff) and 78 faculty members were selected by randomized category based sampling method. In the present study, the descriptive survey method was used and data collection was performed using of King's spiritual intelligence questionnaire (SISRI-24). The results showed: 1- There was no meaningful correlation between the spiritual intelligence and the age, service history, and the marriage status. 2- There was a meaningful difference between the staff and faculty members in terms of the spiritual intelligence at the level of 0.01 in all dimensions, i.e. (a) personal meaning production, (b) the exalted awareness, (c) expansion of consciousness and (d) the existence thinking which resulted the scores of faculty members found higher than those staff members. 3- Meaningful difference was observed in the spiritual intelligence in terms of scientific rank (degree). 4- There was also a meaningful difference in the spiritual intelligence in terms of the educational fields of faculty members. Lastly, 5- no meaningful difference was found in the spiritual intelligence in terms of educational levels of the staff.

Ghalandari, Ghasemi, Hakimi, & Satari (2014) argued that spiritual intelligence has a direct meaningful relation with success. Furthermore, spiritual intelligence has a positive and direct meaningful relation with educational motivation. Therefore, high level
of spiritual intelligence is an effective forecast for educational motivation and success in the persons. Results of their research may be effective to guide and direct the students in the educational environments.

**Achievement Motivation**

Academic achievement is directly related to students’ growth and development of knowledge in an educational situation where teaching and learning process takes place. Academic achievement is defined as the performance of the students in the subject they study in the school (Pandey, 2008). It determines the student’s status in the class. It also gives children an opportunity to develop their talents, improve their grades and prepare for the future academic challenges. Franken (1994) provides an additional component in his definition: the arousal, direction and persistence.

Many studies have been carried out to discover what motivates students (Atkinson, 1999; Atkinson & Feather, 1966; Spence, 1983). With these studies came ideas on how to predict an individual’s task performance (Atkinson & Feather, 1966; Grabe, 1979; Mukherjee, 1964). Other studies also investigated with regard to increase student’s motivation which has spawned new ideas on motivation (Accordino, Accordino, & Slaney, 2000; Atkinson, 1999; Bar-Tal, Frieze, & Greenberg, 1974; Grabe, 1979; Latta, 1974; Rathvon, 1999; Simons, VanRheenen, & Covington, 1999). In continuation to these, Monte and Lifrieri (1973) found that students may have the desire to achieve and the ability to accomplish the task but feel that the accomplishment has little or no value or doing it no worth or time. Others may fear that they are not capable of completing the required task and feel that it is better to receive a lower overall grade than to prove that they do not have the ability to correctly complete the task that described this
rational as achievement motivation (Atkinson & Feather, 1966). It is typically a non-conscious process in which a decision how to act or not to act is made. Spence (1983) and Woldkowski (1985) stated that achievement can often bring benefits and failure can often bring shame.

Achievement motives include the need for achievement and the fear of failure. These are the more predominant motives that direct our behavior toward positive and negative outcomes. Achievement goals are viewed as more solid cognitive representations pointing individuals toward a specific end. There are three types of achievement goals: a performance-approach goal, a performance avoidance goal and a mastery goal. A performance-approach goal is focused on attaining competence relative to others, a performance-avoidance goal is focused on avoiding incompetence relative to others and a mastery goal is focused on the development of competence itself and of task mastery. Achievement motives can be seen as direct predictors of achievement-relevant circumstances. Thus, achievement motives are said to have an indirect or distal influence and achievement goals are said to have a direct or proximal influence on achievement relevant outcomes (Elliot & McGregor, 1999).

The motivation for success is related to many of the theological and spiritual areas. This motivation can be accompanied with spirituality and development and success (Battle, 1960; Mahabadi, 1998). There are evidences that many of students’ motivational patterns are related to spiritual values because spiritual values are closely related to motivational system and could cause evolutions (Spaulding, 1996).

Bhatnagar (1969) attempted to investigate the relationship between need achievement and academic achievement. In this study, 1941 students of class 10 of Arts,
Science and Commerce stream from 29 schools in Rajasthan were selected randomly as samples of the study. The Edwards personal preference schedule (Hindi) and scores on attainment test in Hindi, General science, Elementary Arithmetic and Social Studies were employed as meaning tools of need achievement and academic performance respectively. A correlation of 0.38 was observed which is significant at 0.001 levels that obtained between need achievement and academic performance.

Robert and William (1975) carried out a study entitled achievement motivation: A rational approach to psychological education. They investigated the achievement motivation training component of psychological education, using 54 late-adolescent pupils as subjects. Subjects were stratified and randomly placed into control and experimental groups. In addition to a reduction of test anxiety, the experimental training program had as its objectives to increase in academic achievement motivation, internal feelings of control and school performance. Results indicated that significant differences existed between experimental and control groups in achievement motivation and internal feelings of control.

Chauhan (1982) attempted to find out in a study on academic motivation in relation to intelligence and socio-economic status. The sample consisted of 70 girls from 9th and 10th classes. The result revealed that academic motivation was influenced by socio-economic status of the subjects. Further, Ahmed (1998) carried out a study on achievement motivation differences among adolescent boys and girls that consisted 120 students. The findings revealed that influence of gender on achievement motivation was found to be statistically non significant.
Kulshreshtha (1992) examined relationship of educational achievement of adolescents with intelligence, adjustment and achievement motivation. There was significant negative correlation between achievement motivation and adjustment in general and higher groups. Significant negative correlation was found between the educational achievement and achievement motivation among male and female students of arts.

Hancock (1994) examined the influence of motivation and gender on secondary school student’s academic performance: the relationship between academic achievement motivation and English language proficiency was studied in a group of 160 Nigerian secondary students. Results showed that there were no significant gender differences between male and female students with regard to either academic motivation or language proficiency. However, mastery of English was found to be positively linked to student motivation levels which were also true for male and female students.

Pajares, Britner, and Valiante (2000) conducted two studies to investigate the relationship between achievement goals (task, performance-approach, performance-avoid), motivation constructs and gender in the areas of middle school writing (N=497) and science (N=281). Findings revealed that a development at component may be at work in determining whether these goals serve to facilitative function in fostering motivation and task goals including performance-approaches goals were found to be related suggesting that they are each grounded in self-regulatory practices which lead to positive outcomes.

Eccles, Wigfield, and Byrnes (2000) examined two major aspects of adolescent’s development: cognitive development and both achievement and achievement motivation.
They summarized current patterns of school completion and deferential performance on standardized test of achievement and then further summarized the positive and negative age related changes in school motivation and attempted to find out, how experiences in schools may explain the developmental patterns. They concluded that both gender and ethnic group differences in achievement motivation and the link between these differences were found in academic achievement and long-term career aspirations.

Identification of factors that influence post secondary student achievement and motivation in the classroom continues to be an important educational objective. Hancock (2001) investigated the interactive effects of learner characteristic, test anxiety, and the classroom variable, threat of evaluation on the achievement and motivation of 61 post-secondary students (approx. 13 yrs) assigned randomly of high-or-low-evaluative threat conditions. Statistically significant interactions revealed that all the students particularly the test-anxious students performed poorly and were less motivated when exposed to highly evaluative classrooms.

DiPerna, Volpe, and Elliott (2002) proposed a theoretical model on the relationship between specific academic enablers (motivation, interpersonal skills, engagement and study skills) and academic achievement. The results of the said theoretical model indicated that prior achievement and interpersonal skills influence motivation which in turn influence study skills and engagement to promote academic achievements.

Recent researches into gender differences on achievement have mainly been concentrated on the underperformance of boys in comparison to girls. Van Houtte (2004)
tested quantitatively the explanatory value of academic culture with respect to the stated gender differences in achievement. Three thousand seven hundred sixty (3760) pupils in the third and fourth year of secondary education in a sample of 34 schools in Flanders (Belgium) were studied. A distinction was made between general preparing students for higher education and schools offering technical and vocational education. It was demonstrated that the culture of boys’ was less study oriented as compared to girls’ culture and this difference can be held responsible for the gender differences in achievement at least in general schools.

Alfaro, Umana-Taylor, and Bamaca (2006) have examined the events to which mothers, fathers, teachers, teenage and friends influenced Latino adolescent’s academic motivation (154 boys & 156 girls). Findings indicated that mother’s and teacher’s academic support were positively related to adolescent girls on academic motivation and father’s and teacher’s academic support were found to be positively related to adolescent boys.

Adsul and Kamble (2008) investigated the effects of gender, economic background and caste differences on achievement motivation possessed by college students on the basis of societal transformation. An exploratory method of research was employed by adopting 2x3x4 factorial designs. One hundred ninety two (192) under graduate students of various colleges from Sangli city of Maharashtra were selected by random sampling procedure. The results showed significant differences among scheduled caste and nomadic tribes, scheduled caste and other backward caste students and between male and female students. Higher caste and scheduled caste group students having a high achievement motivation while other backward and nomadic tribes group students were at
average level achievement motivation. Male students having a high achievement motivation while female students have below average level of achievement motivation.

Pandey and Ahmad (2008) studied difference between male and female adolescents on academic performance, achievement motivation, intelligence and socio economic status. This study selected 621 students of class XI randomly and after being carried out the study, the researchers concluded no significant difference were found between male and female adolescents on the measures of academic achievement, achievement motivation, intelligence and socio economic status.

Alfaro, Umana-Taylor, Gonzales-Backen, Bamaca, and Zeiders (2009) in a longitudinal study examined whether academic motivation mediated the relation between Latino adolescents' \(N = 221\) experiences with discrimination and their academic success. The potential moderating role of gender was also examined. Using multiple group analysis in structural equation modeling, findings indicated that perceived discrimination at Wave 2 significantly predicted, academic motivation at Wave 2 and 3 for boys but nor for girls. Additionally for boys, academic motivation was significantly mediated the relation between perceived discrimination and their academic success.

Findings led underscore the importance of considering the long-term implications of discrimination for Latino boys' academic success. Furthermore, findings encouraged moving beyond the examination of gender differences in specific academic outcomes (e.g., academic success) and focusing on how the processes leading to academic success vary by gender.

Liu and Zhu (2009) studied on 278 students as a sample considering 2 senior high schools namely common senior high school and those from key senior high school on
their achievement motivation. This study resulted that there is no significant difference between the achievement motivation of students from common senior high school and those from key senior high school. The achievement motivation of senior high school students have significant difference in gender and male students have higher achievement motivations as compared to female students; the achievement motivation of students studying science and arts have differences closely to significant difference; motivation to pursue success has negative correlation with motivation to avoid failure. Schools, gender and science type do not have cross functions on achievement motivation.

Chaturvedi (2009) attempted to observed the effect of school environment and certain demographic variables on achievement motivation and academic achievement of young adolescents. The sample consists of 300 students in the age range of 12-15 years selected by stratified sampling method from various schools of Bhopal. The scores of the subjects were analyzed with the help of product moment correlation and regression analysis. ‘t’ test and ‘F’ test were used to compare the scores on gender, grade, father’s occupation and type of school. All the six sub-scales of school environment have significant effect on achievement motivation and three sub-scales have significant effect on academic achievement. The scores on achievement motivation as well as academic achievement differed significantly in case of gender grades and father’s occupation. It was concluded that type of schools possessed significant difference on academic achievement only. This study further indicated that school environment plays a significant role in achievement motivation as well as academic achievement of young adolescents.
Byrne and Flood (2009) explored the relationship among background variables and academic performance of the first year accounting students at an Irish university. They examined the associations among prior academic achievement, prior knowledge of accounting, gender, motives, expectations and preparedness for higher education and academic performance in the first year of an accounting program at an Irish university. Data for regarding the background variables were gathered using a questionnaire and examination marks were used to measure of academic performance. Results indicate a significant association among prior academic achievement, prior knowledge of accounting and students’ academic performance. Additionally, students’ confidence in their skills and abilities, perceptions regarding the role of university in career development, positive prior experiences of learning accounting and a desire to experience intellectual growth were all significant variables in explaining variation in first year academic performance. Interestingly, the opportunity provided by university to broaden one’s horizons (motive) and a willingness to ask for help from lecturer’s (preparedness) were found to be negatively associated.

Komarraju, Karau, Schmeck, and Avdic (2011) explored the role of the big five personality traits in predicting college students’ academic motivation and achievement. College students (308 undergraduates) completed the Five Factor Inventory and the Academic Motivations Scale and reported their college grade point average (GPA). A correlation analysis revealed an interesting pattern of significant relationships. Further more regression analyses indicated that conscientiousness and openness explained 17% of the variance in intrinsic motivation; conscientiousness and extraversion explained 13% of the variance in extrinsic motivation and conscientiousness and agreeableness explained
11% of the variance in motivation. Further, four personality traits (conscientiousness, openness, neuroticism, and agreeableness) explained 14% of the variance in GPA and intrinsic motivation to accomplish things explained 5% of the variance in GPA. Finally, conscientiousness emerged as a partial mediator of the relationship between intrinsic motivation to accomplish and GPA. These results were interpreted within the context of what educators could do to encourage and nurture student’s motivation and achievement.

Shonali (2010) undertaken academic self-efficacy of two hundred (116 women and 84 men, mean age = 19.72 and 19.84 years respectively) college students in Shimla. An increasing emphasis on student's academic achievement puts pressure on students to excel. Results showed that self-efficacy enhanced student's problem solving ability and moderated effects of stress. Performance was measured in three different ways, (a) problem solving ability, (b) academic achievement, and (c) classroom tests. Results pointed out that although stress was a precursor of poor performance in all three testing situations, self-efficacy as a coping mechanism had the strongest influence on improving problem solving ability in comparison to academic achievement or classroom tests. Males predominantly outperformed than females on anagram solution that showed greater self-efficacy and comparatively less stress. This study pointed out that in modern life, youths want to excel and get a professional degree at any cost and therefore become self-sustaining at a very early age.

Achievement motivation is considered a prerequisite for success in academic settings. Shekhar and Devi (2012) carried out a study with the objectives to investigate the gender differences and differences across academic majors on achievement motivation among college students. This study conducted on 80 undergraduate students
of various colleges from Jammu region, 40 males and 40 females (ages 18-23 years) selected by purposive sampling method. As per research plan all 80 subjects were selected on the basis of gender (males and females) and academic majors (arts and sciences) using Achievement Motivation Scale. Analysis of t-test indicated significant difference between the achievement motivation of sciences and arts stream students and achievement motivation among male and female college students. The differences indicated significant role of gender and academic majors in achievement motivation of college students.

Murayama, Pekrun, Lichtenfeld, and vom Hofe (2012) explored predicting long-term growth in students’ mathematics achievement: The unique contributions of motivation and cognitive strategies. This research examined how motivation (perceived control intrinsic motivation and extrinsic motivation), cognitive learning strategies (deep and surface strategies) and intelligence jointly predict long term growth in students’ mathematics achievement over 5 years. Using longitudinal data from six annual waves (Grades 5 through 10; age = 11.7 years at baseline; N = 3,530), latent growth curve modeling was employed to analyze growth in achievement. Results showed that the initial level of achievement was strongly related to intelligence with motivation and cognitive strategies explaining additional variance. In contrast, intelligence had no relation with the growth of achievement over years whereas motivation and learning strategies were predictors of growth. These findings highlight the importance of motivation and learning strategies in facilitating adolescents’ development of mathematical competencies.
Stewart (2012) explored student perceptions and motivations regarding performance character qualities (i.e., assertiveness, perseverance, resilience, and self-control) at an urban high school. A descriptive quantitative research design approach was used to collect data on students' perceptions and motivations toward performance character qualities. The findings revealed a statistically significant relationship between students' perceptions of performance character qualities and their motivations towards these qualities. The findings also indicated that male and female students did not differ in their perceptions of these qualities. In addition, female students possessed a greater motivational orientation towards task and effort than male students. Lastly, it was found that students' self-reported academic grades can be predicted from students' perceptions of performance character qualities. Two main conclusions were drawn from the present research: (1) without being aware of students' perceptions and motivations regarding performance character qualities, character educators may find it difficult to make learning relevant to students' understanding of performance character qualities; and (2) results of the correlations between students' perceptions of performance character qualities and their motivation for performance character qualities can be used to improve student orientations towards a particular performance character quality.

Nasrabadi, Heshi, Nadi, Tavakolnia, and Najafi (2013) investigated relationship between intellectual characteristics and academic achievement motivation of educational sciences students of Isfahan city. There were 370 male and female students of Isfahan city in academic year of 2011-12 these all were educational science students. Subjects were selected through stratified random sampling technique. Academic Achievement Motivation (AAM) and Intellectual Characteristics (IC) were used. To analyze the data,
simple regression, multiple regressions, factor analysis and secretion coefficient methods were applied. The findings showed that there was no significant relationship between capacity and ability for straining of the work. However, a significant relationship was observed between intellectual characteristics and academic achievement motive. Also, the findings indicated that factors namely, ability to employ intellectual resources in life problem-solving, and ability of investigation and strainness of experiments and activities had the most effect on motive.

Roy, Sinha, and Suman (2013) examined the relationship between emotional intelligence and academic achievement motivation. They also studied that the emotional intelligence of students with high, average and low academic achievement motivation. Sample for the study includes 105 students (48 boys and 57 girls) of class XII of Patna. The data were analyzed with the help of product moment coefficients of correlation. The findings of the study revealed positive relationship between emotional intelligence and academic achievement motivation. The study also revealed that students with high, average and low academic achievement motivation differed from one another on emotional intelligence. In addition to this Ghayas and Malik (2013) have observed that academic achievement of girls was higher than that of boys and students of arts and social sciences were significantly more sociable as compared to the students of pure sciences.

Badola (2013) conducted a study on the academic achievement motivation and different administrative setups of secondary school students. Sample of 480 students of secondary level were taken from Pauri and Tehri Garhwal, (Uttarakhand State). Analysis of variance showed that there was significant difference among Government, Public and
convent School Secondary Students on their academic achievement motivation. The mean difference was found significant on male and female as well as Urban and rural secondary school students on their academic achievement motivation. Further, findings revealed that significant difference was not observed between Public and Convent school students on their academic achievement motivation.

Velmurugan and Balakrishnan (2013) conducted a study to investigate the achievement motivation of higher secondary students in relation to locality and type of family. This study consisted of a random sample of 600 students studying in Ariyalur and Perambalur districts in Tamil Nadu. Results revealed no significant differences found between the rural and urban school students, the general stream higher secondary students and students belonging to joint family and nuclear family in their achievement motivation.

Smartt (2014) examined the relationship between student achievement and spiritual intelligence controlling the age and gender in two public and two private schools in a southeastern city. The results were analyzed using sequential (hierarchical) multiple regression statistics. Analysis showed the strength of the relationship between the predictor and control variables of spiritual intelligence, age, and gender, and the criterion variable of achievement (American College Test, ACT). A small inverse relationship between a student’s self-reported spiritual intelligence (SISRI-24) and the participants’ achievement (ACT) was also found that was not statistically significant. The study concluded demographic variables of age and gender were predictors of achievement while the SISRI-24 was not.
Grit

Duckworth, Peterson, Matthews, and Kelly (2007) introduced the construct of grit defined as trait-level perseverance and passion for long-term goals, and showed that grit predicted achievement in challenging domains over and beyond measures of talent. For instance, at the U.S. Military Academy West Point Cadets higher in grit were less likely to drop out than their less gritty peers. In four separate samples, grit was found to be either orthogonal to or slightly inversely correlated with intelligence. Duckworth et al. (2007) proposed that grit is distinct from traditionally measured facets of Big Five conscientiousness in its emphasis on stamina. McClelland (1961) believed that particularly grit entails the capacity to sustain both effort and interest in projects that take months or even longer to complete. Grit is also related to but distinct from need for achievement.

Grit has also been shown to be positively correlated with age and level of education (Duckworth et al, 2007). Though there have been few studies involving this trait and the findings were very promising because grit is a trait that could potentially be taught exploring it further could have more practical value for attrition researchers than the findings about intelligence or fixed personality traits. The importance of intellectual talent to achievement in all professional domains is well established but less is known about other individual differences that predict success. The authors tested the importance of one non cognitive trait grit that defined as perseverance and passion for long-term goals, grit accounted for an average of 4% of the variance in success outcomes.

Duckworth and Quinn (2009) have made headway in developing a standard measure of grit. The Grit Scale measures trait-level perseverance and passion for long-
term goals. Duckworth sought some way to make sense of the qualities that go beyond IQ: People, who accomplished great things. She noticed, often combined a passion for a single mission with constant dedication to achieve that mission whatever the obstacles and however long it might take. She named this quality “grit” and then came up with this quite straightforward Grit Scale for measuring it.

Duckworth and her fellow researchers (Duckworth, Peterson, Matthews, & Kelly, 2007; Duckworth & Quinn, 2009) proposed that individuals who possess a drive to tirelessly work through challenges, failures and adversity to achieve set goals are uniquely positioned to reach higher achievements than others who lack similar stamina. They found in a series of scientific studies that higher levels of grit were more highly associated with cumulative grade point average. The series of studies provide empirical evidences that an individual difference conceptualized as grit by Duckworth and Seligman (2005) who found that students with a strong sense of self-discipline significantly outperformed their less-disciplined peers on a range of academic indicators, including grades, achievement test scores and attendance. Additionally, self-discipline appears to be a better predictor of academic gain than is intelligence (as measured by an IQ test). Conrad and Patry (2012) pointed out a vast amount of research illustrates that conscientious students achieve higher levels of academic success, both in high school and university.

The importance of intellectual talent to achievement in all professional domains is well-established but less is known about other individual differences that predict success (Duckworth, Peterson, Matthews, & Kelly, 2007). They tested the importance of grit which accounted for an average of 4% of the variance in success outcomes, including
educational attainment among two samples of adults \((N = 1545 \text{ and } N = 690)\), GPA among Ivy League undergraduates \((N = 138)\), retention in two classes of West Point cadets \((N = 1218 \text{ and } N = 1308)\) and ranking in the National Spelling Bee \((N = 175)\). Grit did not relate positively to IQ but was highly correlated with Big Five Conscientiousness. Grit nonetheless demonstrated incremental predictive validity of success measures over and beyond IQ and Conscientiousness. Collectively, these findings suggested that the achievement of difficult goals entails not only talent but also the sustained and focused application of talent over time.

Research on self-handicapping producing barriers to personal success to reduce the meaningfulness of failure has focused mostly on the short-term benefits of maintaining self-esteem and reducing the crushing emotional blow of failure (Gitter, 2008). Separately two studies were carried out to test the moderating role of grit (Duckworth, Peterson, Matthews, & Kelley, 2007) and trait self-control (Tangney, Baumeister, & Boone, 2004) on self-handicapping behaviors. A correlational study did find strong negative relationships between reported self-handicapping and both grit and trait self-control. A follow-up study examining actual behavior failed to confirm this finding. However, males high in grit appeared to challenge themselves in a non-evaluative situation. There were no differences between those high versus low on these individual differences in their likelihood to engage in self-handicapping behaviors.

Although ability and motivation have long been implicated in the prediction of achievement and a greater amount of research has focused on the benefits of ability for predicting achievement than motivation (Duckworth & Seligman, 2005). Recently Duckworth and colleagues (Duckworth & Seligman, 2005; Duckworth et al., 2007) have
investigated several studies which highlight the importance of long-term persistence and passion in the prediction of academic achievement. Their research findings highlighted the indices of trait self-control (Duckworth & Seligman, 2005) as well as passion and perseverance toward long-term goals (Duckworth et al., 2007) add incremental predictive validity of achievement above that which can be accounted for by measures used to index ability.

Duckworth and Quinn (2009) found additional support for the Grit construct when they developed and validated a more condensed version of the Grit Scale (Grit-S) by removing four of the previous items and improving its psychometric properties. Using samples from the data collected in their 2007 studies, the authors were able to achieve complementary results that suggested the positive relationships between Grit and educational attainment, GPA, retention in college and success in a national spelling bee competition.

The grit measure has been compared to the Big Five personality model which is group of broad personality dimension consisting of openness to experience conscientiousness, extraversion, agreeableness and neuroticism (Goldberg, 1990). In one study by Duckworth and Quinn observed that the Short Grit Scale (Grit–S) and 12-item self-report measure of Grit (Grit–O) measuring Grit was strongly correlated with conscientiousness ($r = .77$, $p < .001$ and $r = .73$, $p < .001$) while grit is related to conscientiousness that also differs from conscientiousness in important ways. For example, while both Grit and conscientiousness are often associated with short term accomplishments and Grit is also associated with longer term and multi-year goals. This long-term persistence and dependability are important aspects that make Grit distinct
from conscientiousness. Another personality characteristic that is often linked to Grit is the need for achievement. One way in which Grit differs from the need for achievement is that individuals with high scores in Grit often set extremely long-term goals for themselves and pursue them deliberately even without positive feedback (Duckworth et al., 2007) while need for achievement lacks this long-term component.

Singh and Jha (2008) explored the relationship between the concepts of happiness, life satisfaction, positive and negative affect and grit. This study considered 254 undergraduate students of technology and after completing research procedure, results revealed that the concepts of grit, positive affect, happiness and life satisfaction are significantly positively correlated. Negative affect showed a significantly negative correlation with grit, happiness and life satisfaction. Stepwise regression analysis showed that Positive affect, grit and negative affect together account for 19% of the variance in life satisfaction while grit negative affect and positive affect account for 11% of the total variance in happiness.

Recent research in Education and Psychology has demonstrated that non-cognitive factors have a significant influence on learning. Certain segments of these traits (school climate, collective efficacy and academic optimism) bearing in the realm of school effectiveness while others traits like grit, resilience, persistence and self-efficacy are more applicable to individual student’s success (McIntyre, 2013). Collective efficacy was shown to have a positive effect on student achievement and like the personality trait of “grit” that reflects perseverance in the face of unmotivated or disinterested learners.

Strayhorn (2013) explored the study on what role does grit play in the academic success of black male collegians at predominantly white institutions? This study testifies
the importance of non cognitive trait grit to predicting grades for a sample of Black males attending a predominantly White institution. Using multivariate statistics and hierarchical regression techniques which result that grit is positively related to college grades for Black males and that background traits, academic factors and grit explain 24% of the variance in Black male’s college grades. Grit alone added incremental predictive validity over and beyond traditional measures of academic success such as high school grade point average and American College Test scores.

More recent scholars have posited the importance of grit to outcome such as educational achievement. Grit research has focused in three areas: (a) initial development of a grit scale, (b) theoretical mining of the concept to clarify its meaning and distinction from other personality traits as well as (c) tests of its predictive validity for specific samples (Duckworth et al. 2007). For instance, Duckworth and Quinn (2009) analyzed data from 1,248 at West Point Cadets US Military Academy found that grit predicted completion of the academy’s rigorous summer training program better than the whole Candidates Index comprised of one’s weighted high school rank, SAT score, involvement and physical exercise evaluation which is used for admission. They concluded “Grittier” West Point cadets were less likely to drop out during their first summer of training” (p. 173). Similar conclusions have been drawn for National Spelling Bee participants (Duckworth, Kirby, Tsukayama, Berstein, & Ericsson, 2011) and public school students in grades 4 through 8 (Rojas, Reser, Usher, & Toland, 2012). Despite these advancements there are limits to the existing research on grit. To date only a few studies examined the role of grit in predicting academic success among students (Duckworth & Quinn 2009; Rojas, Reser, Usher, & Toland, 2012).
Adams (2010) explored relationships between grit, burnout and intent to quit among 62 pastors in the Church of the Nazarene. A survey was administered online and correlational analyses revealed that grit was not related to burnout or intent to quit, although it was significantly related to age and tenure. Despite this, a nearly significant negative relationship was found between one of the grits sub-scales termed consistency of interest and client burnout. Significant relationships were found between burnout and intent to quit and further more regression analyses indicated that when predicting intent to quit from three sub-facets of burnout (e.g., client burnout, work burnout, and personal burnout), client burnout was the only significant predictor of the intent to quit variable college student samples.

Singh (2011) was curious in exploring the resilience and grit. He found correlations of big five factors of personality with grit and resilience along with descriptive statistics and for contribution of personality to the prediction of resilience and grit. The results showed that neuroticism is significantly associated with all factors of resilience and grit yielding a correlation coefficient of $r = -0.18 \ p<.01$ and $-0.23, \ <.01$. Extraversion, agreeableness, conscientiousness and openness to experiences correlated significantly with the composite scales of resilience and Grit. The correlations of agreeableness and openness with Resilience and its subscales and conscientiousness with grit and its subscales have higher correlation. These results indicated that the personality factors reported were more directly related with resilience and grit. Resilience and grit as full scales and their subscales are significantly correlated with each other. Openness, agreeableness and neuroticism have been observed as significantly predictor of resilience ($R^2 = .21$) and conscientiousness was found to be the strongest predictor for purpose ($R^2$
Conscientiousness has been observed as a significant predictor for subscales and full-scale grit along with other factors of personality. Interestingly extroversion is a significant predictor neither of resilience nor of grit except 1% of variance of optimism explained. Furthermore, students completed the grit scale and reported their cumulative GPA at the same time. As a result, students’ grit may have been influenced by their performance in school, in other words students who were doing well might have reported more grit rather than vice versa (Farrington et al., 2012).

Ali and Rahaman (2013) attempted to compare the level of grit between male and female national fencers of Manipur considering forty (40) fencers (male = 20, female = 20) who represented Manipur in the national fencing championship were recruited as the subjects. The age of the subjects ranged from 17 to 25 years and Grit Scale (Duckworth & Quinn 2009) was administered on the subjects for data. The obtained data was analyzed by computing ‘t’ ratio. Results revealed that significant difference was not found between male and female fencers of Manipur to their level of consistency of interest, perseverance of efforts and ambitions towards the attainment of long-term goals dimensions of grit. The findings also suggested that the level of grit of male and female fencers fall in the analogous range which seemed to be necessary for getting success at highest level of competition to achieve a long-term goal in the arena of fencing sport.

Some more studies have found positive correlations between grit and exercise behavior (Reed, Pritschet, & Cutton, 2012). Grit and the Big Five Inventory (BFI) conscientiousness dimension were examined with respect to the Trans Theoretical Model (TTM) stages of change for exercise behavior. Participants (N = 1171) completed an online survey containing exercise-related TTM staging questions, the Short Grit Scale
and BFI Conscientiousness. This study resulted that grit significantly predicted high intensity and moderate intensity exercise TTM stage while BFI Conscientiousness did not. The results suggest that grit is a potentially important differentiator of TTM stage for moderate and high intensity exercise.

Remaining committed to goals is necessary (albeit not sufficient) for attaining them but unfortunately very little is known about domain-general individual differences that contribute to sustained goal commitment. Eskreis-Winkler, Shulman, Beal, & Duckworth (2014) examined the association between grit defined as passion and perseverance for long-term goals, other individual difference variables, and retention in four different contexts: the military, workplace sales, high school and marriage. Grit predicted retention over and beyond established context-specific predictors of retention (e.g., intelligence, physical aptitude, Big Five personality traits, job tenure) and demographic variables in each setting. Grittier soldiers were more likely to complete an Army Special Operations Forces (ARSOF) selection course, grittier sales employees were more likely to keep their jobs, grittier students were more likely to graduate from high school and grittier men were more likely to stay married. The relative predictive validity of grit compared to other traditional predictors of retention is examined in each of the four studies. These findings suggested that in addition to domain-specific influences, there may be domain-general individual differences which influence commitment to diverse life goals over time.

Culin, Tsukayama, and Duckworth (2014) explored the motivational orientations correlates of the character strength of grit and its two component facets: perseverance of effort and consistency of interests over time. Specifically, they examined how individual
differences in grit are explained by distinct approaches to pursuing happiness in life: leisure in immediately hedonically positive activities, meaning in activities that serve a higher, altruistic purpose and engagement in attention absorbing activities. In both samples, grit demonstrated medium-sized associations with an orientation toward engagement, small-to-medium associations with an orientation toward meaning and small-to-medium (inverse) associations with an orientation toward pleasure. These motivational orientations differentially related to the two facets of grit: pursuing engagement was more strongly associated with perseverance of effort whereas pursuing pleasure was more strongly (inversely) associated with consistency of interests over time. This recent investigation explored the relationship between motivational dispositions, particularly approaches to happiness in life and the individual differences of grit and its facets.