REVIEW OF LITERATURE

The primary aim of the present investigation was to study the role of Grit, Perfectionism, Self-Efficacy, Flow and Emotional Intelligence in Excellence in Academics and Sports. The sample was studied with respect to Grit and its dimensions viz., Perseverance of Effort and Consistency of Interest; Perfectionism and its dimensions viz., Self-Oriented, Other-Oriented and Socially Prescribed Perfectionism; Self-Efficacy; Flow and its dimensions viz., Challenge-Skill Balance, Action-Awareness Merging, Clear Goals, Unambiguous Feedback, Concentration on Task at Hand, Sense of Control, Loss of Self-Consciousness, Transformation of Time and Autotelic Experience and Emotional Intelligence.

A. CONCEPTUAL FRAMEWORK

GRIT

Definitions of Grit

Grit is defined as “the determination to accomplish an ambitious, long-term goal despite the inevitable obstacles” (Doskoch, 2005).

It is also described as, “working strenuously towards challenges, maintaining effort and interest over years despite failure, adversity and plateaus in progress.” The gritty individual is explained as one who “approaches achievement as a marathon, his or her advantage is stamina. Whereas disappointment or boredom signal to others that it is time to change trajectory and cut losses, the gritty individual stays the course.” (Duckworth, Peterson, Matthews, & Kelly, 2007)

According to the Merriam-Webster Dictionary (2015), grit is the “firmness of mind or spirit and unyielding courage in the face of hardship or danger”.

Grit refers to the character strength of perseverance described in Positive Psychology. Duckworth et al. (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.
Duckworth et al. (2007) proposed that grit is distinct from traditionally measured facets of Big Five conscientiousness in its emphasis on stamina. In particular, 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 (McClelland, 1961). Individuals high in grit do not swerve from their goals, even in the absence of positive feedback.

**Origin of Grit**

According to Duckworth and Quinn (2009), perseverance in difficult or impossible tasks has served as the dependent variable in studies of optimistic attribution style, self efficacy, goal orientation, and depletion of self-control resources (Bandura, 1977a; Baumeister, Bratslavsky, Muraven, & Tice, 1998; Elliott & Dweck, 1988; Muraven, Tice, & Baumeister, 1998; Seligman & Schulman, 1986). However, the study of perseverance as a predictor, in particular as a stable individual difference, was of keen interest to psychologists in the first half of the 20th century. In a review of the existing literature of his day, Ryans (1939) concluded that “the existence of a general trait of persistence, which permeates all behavior of the organism, has not be
en established, though evidence both for and against such an assumption has been revealed”. Very recently, positive psychology has renewed interest in the empirical study of character in general and in the trait of perseverance in particular (Peterson & Seligman, 2004).

Duckworth et al. (2007) developed the construct of grit to capture an essential part of the variance in successful outcome of academics and professionals not explained by concepts such as “IQ” and “Conscientiousness” (Sending, 2014). They postulated that certain characteristics (cognitive ability, creativity, vigor, emotional intelligence, charisma, self-confidence, emotional stability & physical attractiveness) are likely characteristics of high achieving individuals. Additionally, they suggested that some of the 'Big Five' dimensions might be relevant and necessary for some careers but not others (for example, extraversion for a salesperson, though, irrelevant to a creative writer).

Pioneering researchers, Duckworth et al. (2007) thought so, and introduced the concept of grit. Grit is defined as "perseverance and passion for long-term goals" (Duckworth et al., 2007). According to Duckworth et al. (2007) grit entails working
Review of Literature

Persistently toward challenges, upholding effort and concentration over years throughout hardships, setbacks and stagnancy. Gritty individuals view achievement as a long-term process; their lead is endurance, determination and stamina. Disappointment and/or boredom may indicate to many that it is time to modify one’s trajectory, whereas gritty persons continue on track (Duckworth et al., 2007). Gritty individuals sustain this effort and concentration over many years despite disappointments, failures and hardships while in development of their goal. The gritty individual characteristically finishes tasks at hand and pursues long-term goals.

Thus, Duckworth et al. (2007) ascertained a two-factor structure for a 12-item self-report measure of grit. This configuration was consistent with the premise of grit as a multifarious trait encompassing stamina in dimensions of interest and effort (Duckworth et al., 2007). They observed that grit was distributed and shared by the most prominent and successful leaders in every field.

The subcomponents of grit are perseverance of effort and consistency of interest, which refer to continuing a strenuous effort to task for the former, and having a stable knowledge of one’s interests over the long-term for the latter (Duckworth et al., 2007).

Grit is rather a new concept in terms of its moderating effect on academic and sports excellence. Although it is limited, the existing literature supports the relationship between grit and academic performance, which is further moderated by other factors such as student background and previous academic achievement. Since grit has not been adequately studied in college students, examining the moderating effects of grit on excellence may provide different implications when predicting academic and sports performance (Chang, 2014).

PERFECTIONISM

Definitions of Perfectionism

According to Burns (1980), ‘perfectionists are those whose standards are high beyond reach or reason, people who strain compulsively and unremittingly toward impossible goals and who measure their own worth entirely in terms of productivity and accomplishment’.
Pacht (1984) defined perfectionism as the setting of excessively high standards for performance accompanied by overly critical self-evaluations. ‘For the perfectionists, only the extremes of the continuum exist, they are unable to recognize that there is a middle ground’. For them, achieving 95% or even 99% of their goals is usually seen as a failure because they are not perfect (Franco-Paredes, Mancilla-Díaz, Vázquez-Arévalo, López-Aguilar, & Álvarez-Rayón, 2005).

According to Flett and Hewitt (2002), perfectionism is a personality trait characterized by striving for flawlessness and setting excessively high standards for performance, accompanied by tendencies toward overly critical evaluations of one’s behavior.

Perfectionism has been mentioned in the literature for a long time, dating back even before Karen Horney’s (1939) important theoretical work, but not until more recently has perfectionism received specific empirical attention and focus (Hannah, 2008). According to Maslow, striving for perfection through self-actualisation is really an “indication of the absence of neurosis”. It is believed that the root of excellence is perfectionism and that this is what urges the individual toward achieving higher goals (Ram, 2005).

Dimensions of Perfectionism

Although perfectionism was once thought of as one-dimensional, since the early 1990’s it has been considered multidimensional (Riley & Shafran, 2005). Two main conceptualisations have emerged in the literature. Frost, Marten, Lahart and Rosenblate (1990) identified perfectionism as having five dimensions. The first dimension, which is considered the major dimension, is concern over mistakes. This reflects a tendency to interpret mistakes as equivalent to failure, and the belief that one will lose the respect of others following failure.

The second dimension is the setting of excessively high personal standards, which often cannot be met satisfactorily. The third dimension is parental expectations, which involves the extent to which the parents of the individual are perceived as setting high expectations. The fourth dimension is parental criticism, which involves the extent to which parents are perceived as being overly critical. The fifth dimension
is doubts about actions, which is the tendency to doubt the quality of one’s performance. Additionally, a sixth dimension has been identified. This is organisation, which reflects a tendency to be orderly and organized (Alden, Ryder & Mellings, 2002; Frost, Heimberg, Holt, Mattia, & Neubauer, 1993; Frost, Lahart & Rosenblate, 1991; Frost et al., 1990).

Earlier, Hamachek (1978) had suggested that two forms of perfectionism be differentiated—a positive form labeled “normal perfectionism” in which individuals enjoy pursuing their perfectionistic strivings and a negative form labeled “neurotic perfectionism“ in which individuals suffer from their perfectionistic strivings. In support of this distinction, empirical research outside of sport has found that positive and negative perfectionism have divergent relationships with a wide range of psychological factors that includes cognitive styles (Burns & Fedewa, 2005), coping strategies (Burns, Dittmann, Nguyen, & Mitchelson, 2000), shame, guilt, pride (Fedewa, Burns, & Gomez, 2005), emotional regulation and life-satisfaction (Bergman, Nyland, & Burns, 2007; Mitchelson & Burns, 1998).

Alternatively, Hewitt and Flett (2002) identified three dimensions of perfectionism. According to this conceptualisation, although the behaviours exhibited are frequently similar among the dimensions, the distinguishing features among the dimensions involve:

1) from whom the perfectionist expectations derive (i.e. the self or others), and
2) to whom the behaviours are directed (i.e. toward the self or others) (Hewitt & Flett, 2002).

The first dimension is self-oriented perfectionism, in which the individuals have unrealistic standards for themselves, strive for these standards, are overly critical of themselves, tend to overly focus on their flaws, and try to avoid failure.

The second dimension is other-oriented perfectionism, in which the individual have unrealistic standards and expectations about the abilities of others, and are often overly evaluative of others’ performance.

The third dimension is socially prescribed perfectionism, in which the individuals believe that others have perfectionist expectations and motives about

In the Hewitt and Flett perspective, self-oriented perfectionism and to a lesser extent, other-oriented perfectionism is thought to be associated with adaptive aspects (Flett & Hewitt, 2002; Flett, Hewitt & De Rosa, 1996).

**GENERALISED SELF-EFFICACY**

It "refers to beliefs in one's capabilities to organize and execute the courses of action required to manage prospective situations" (Bandura, 1995). More simply, self efficacy is what an individual believes he or she can accomplish using his or her skills under certain circumstances (Snyder & Lopez, 2007).

Self-efficacy is defined as the ‘beliefs in one’s capabilities to organize and execute the courses of action required to produce given attainments” (Bandura, 1977a). It has been related to general and specific health behaviors (Schwarzer, 1992).

According to Margolis and McCabe (2006), “Self efficacy is defined as the belief in ones capabilities to achieve a goal or an outcome”.

Ormrod (2006) defined self-efficacy as the belief that one is capable of performing in a certain manner to attain certain goals. It is believed that our personalized ideas of self-efficacy affect our social interactions in almost every way.

It is the belief that one can succeed at something that one wants to do (Bandura, 1977b). It helps in decisions to carry out a healthy behavior by deciding whether it will achieve the desired effect and then assessing whether one is capable of doing it.

**Self-Efficacy Theory**

Bandura (1977a) hypothesized that self-efficacy affects choice of activities, effort, persistence and achievement. He held that compared with persons who doubt
their capabilities, those with high self-efficacy for accomplishing a task participate more readily, work harder, persist longer when they encounter difficulties, and achieve at a higher level. People acquire information to appraise self-efficacy from their performances, vicarious (observational) experiences, forms of persuasion and physiological reactions. They consider the performances as reliable guides for assessing self-efficacy (Schunk, 1995).

Bandura (1986) articulated that success raises efficacy and failures lower it, but once a strong sense of efficacy is developed, a failure may not have much impact. He further added that people also acquire self-efficacy information from knowledge of others through social comparisons. Those who observe similar peers, perform a task, are apt to believe that they, too, are capable of accomplishing it. However, according to him, to remain credible, information acquired vicariously necessitates validation by actual performance (Schunk, 1995).

Positive feedback like receiving persuasive information from others that one is capable of performing a task can enhance self-efficacy, but this increase is temporary if subsequent efforts turn out poorly. He believed that individuals also acquire efficacy information from physiological reactions (e.g., heart rate, sweating). Symptoms signalling anxiety might be interpreted to mean one lacks skills. Conversely, he held that, self-efficacy is not the only influence on behavior. High self-efficacy does not produce a competent performance when requisite knowledge and skill are lacking. In this instance, a sense of self-efficacy for learning is beneficial because it motivates individuals to improve their competence, outcome expectations, or beliefs concerning the probable outcomes of actions, are important because people strive for positive outcomes. Outcome expectations and self-efficacy often have been found to be related (Schunk, 1995).

He reiterated that efficacious learners expect and usually receive positive outcomes for their actions. However, no automatic relation exists between the two. Finally, he upheld that, value of outcomes, or how much individuals desire certain outcomes relative to others, affects behavior because people are motivated to act in ways they believe will result in outcomes that are self-satisfying (Schunk, 1995).
At the start of an activity, individuals differ in their self-efficacy for learning or performing actions as a function of their prior experience at the same or similar activities and such personal qualities as abilities and attitudes. He articulated that initial self efficacy also is affected by the type of support persons receive from significant individuals in their environment. Students differ, for example, in the extent that parents and teachers encourage them to develop skills, facilitate their access to resources necessary for learning (e.g., materials, facilities), and teach them self-regulatory strategies that enhance skill acquisition and refinement (Ericsson, Krampe, & Tesch-Romer, 1993).

He enunciated that people are affected by personal influences as goal setting and information processing, along with situational factors (e.g., rewards, teacher feedback) when they engage in activities and derive cues signaling how well they are performing, from the factors. He further added that motivation and self-efficacy can be enhanced when people perceive they are performing skillfully or becoming more competent. Lack of success or slow progress does not necessarily lower self-efficacy and motivation if individuals believe they can perform better by adjusting their approach (e.g., expend more effort, use effective task strategies) (Schunk, 1989).

Thus, the concept of generalized self-efficacy developed by Jerusalem and Schwarzer (1992) reflects a global reference in one’s coping ability across a wide range of demanding situations (Schwarzer, 1992), like the settings that demand successful performance. Thereby, making this concept utterly imperative to study as it helps to remain motivated by believing in ones capabilities and potentialities.

FLOW

Definitions of Flow

The term flow refers to an optimal state of immersed concentration in which attention is centered, distractions are minimized, and the subject enjoys an autonomous interaction with the activity (Whalen, 1999).

According to Csikszentmihalyi (2000b), Flow is a psychological state in which individuals feel entirely absorbed in their activity.
According to Jackson and Eklund (2004), Flow is “a state of consciousness where one becomes totally absorbed in what one is doing to the exclusion of all other thoughts and emotions”. Flow can also be described as being “in the zone.”

Flow is a term first coined by Csikszentmihalyi (2000) as an optimal experience so engrossing and enjoyable that the activity becomes worth doing for its own sake without the impetus of extrinsic motivation (Csikszentmihalyi, 2000).

Being in a flow is described as being in a period of deep, intense involvement in activities that are challenging the person physically and/or intellectually but at the same time do not overwhelm the person’s level of skill (Johnson & Christensen, 2008).

Flow Theory

Flow theory has its historical roots in positive psychology, a perspective originated in the humanistic approach to psychology which began in the mid-1950s. Positive psychology focuses on the nurturance of intrinsic strengths and on the potential of human beings rather than on the pathology of mental illness. Being originally interested in examining the subjective, positive feeling of happiness, Csikszentmihalyi became fascinated with the state of being happy, in particular, peak moments of happiness and, subsequently, produced the theory of flow (Csikszentmihalyi, 1990a).

He put forth a theory of optimal experience based on the concept of flow – the state in which people are so involved in an activity that nothing else seems to matter; the experience itself is so enjoyable that people will do it even at great cost, for the sheer sake of doing it (Csikszentmihalyi, 1990a).

According to him, a series of feelings, sensations, experiences, or conditions, characterize the flow state (Csikszentmihalyi, 2000; Nakamura & Csikszentmihalyi, 2002). In particular, when individuals experience flow:

- Their goals are challenging but clear and attainable, aligning closely to their skills and abilities
• They can readily ascertain their progress—that is, feedback is available and their behavior can thus be adjusted readily
• Their focus is sharp and their concentration is intense
• They do not feel at all self conscious
• Any worries or anxieties tend to dissipate entirely
• They experience a sense of control and agency
• Their perception of time is distorted; that is, they underestimate the passage of time
• Their activities seem intrinsically rewarding—that is, their tasks seem inherently interesting, called autotelic motivation
• They experience a merging of action and awareness (Whitson & Consoli, 2009).

Flow is a state which is intrinsically motivating and is assumed to have evolved to encourage growth and development. Specifically, when individuals engage in challenging tasks—tasks that facilitate growth and development—the ensuing state of flow is experienced as pleasurable. This pleasure reinforces the inclination of individuals to engage in other challenging tasks in the future (Csikszentmihalyi, 1993).

EMOTIONAL INTELLIGENCE

Definition of Emotional Intelligence

Emotional intelligence is defined by Salovey and Mayer (1990) as the process of one's assessment of his own and others' emotions accurately, to express feelings appropriately and process of emotional information including the regulation of emotion to make life better.

According to Cooper and Sawaf (1997), emotional intelligence is the ability of using effectively the emotions’ power and acumen, as a source of human energy, information, connection and influence.
According to Mohan (2012b), “emotional intelligence is a positive combination of a deep insight into ones emotional and cognitive capacities and a charming flair of communication, empathy and motivation, leading to a personal optimism, interpersonal confluence and organizational excellence” (Sharma, 2014).

Singh (2003) defined Emotional intelligence as the ability of an individual to appropriately and successfully respond to a vast variety of emotional inputs being elicited from inner self and immediate environment. Emotional intelligence constitutes three psychological dimensions such as emotional competency, emotional maturity and emotional sensitivity, which motivate an individual to recognize truthfully, interpret honestly and handle tactfully the dynamics of human behavior.

Goleman (2010) has defined emotional intelligence as recognizing and managing feelings, self-action, the ability of understanding the others’ feelings and to conduct the relationships.

According to Hein (2010) “Emotional intelligence is the innate potential to feel, use, communicate, recognize, remember, describe, identify, learn from, manage, understand and explain emotions.

As a concept, Emotional Intelligence (EI) refers to intelligent behavior in the emotional domain. It is expected to apply to a broad range of life domains, such as the home, school, work, and other settings (Van der Zee & Wabeke, 2004). It can broadly be defined as the ability to perceive, control and evaluate the emotions. It is a term used to describe the complex ability to regulate our impulses, empathize with others and to be resilient in the face of difficulties. Therefore, emotional intelligence is a product of the amount of communication between rational and emotional centers of the brain.

Many people have expressed opinions about the scientific viability of emotional intelligence and many others have labeled it as an “elusive concept” (Davies, Stankov, & Roberts, 1998). According to some, it has been proven resistant to adequate measurement (Becker, 2003). Since 1990, Peter Salovey and John D. Mayer have been the leading researchers on emotional intelligence (Mayer, Salovey, & Caruso, 2003). In their influential article “Emotional Intelligence,” they defined...
emotional intelligence as, “the subset of social intelligence that involves the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions”.

Broadly, the EI is the ability to perceive, control and evaluate the emotions. There are two existent approaches in studying EI i.e. the ability based EI and the EI as a self report measure. While the former approach looks at EI as the ability of cognitive processing of emotional information which requires an ability type test for measurement while the latter approach proposes EI as a dispositional tendency which can be measured by the self report methods only. The trait EI concerns a constellation of emotion-related self-perceived abilities and dispositions. The ability EI encompasses various dispositions from the personality domain, such as empathy, impulsivity and assertiveness as well as elements of social intelligence and personal intelligence. It is not currently clear if the two measurement methods actually assess the same construct (Petrides & Furnham, 2001).

However, the most appropriate method and approach is still a controversy (Saklofske, Austin & Minski, 2003). Problematic aspects of EI assessment by questionnaire include questions about the extent to which self-reported EI relates to actual emotional skills, and the significant correlations found between trait EI measures and personality. Nonetheless, this method of EI assessment seems likely to continue to be widely used because of the straightforwardness of questionnaire compared to task-based assessment, and the possibilities for unsupervised use e.g. in postal surveys (Williams, Daley, Burnside & Hammond-Rowley, 2009). The distinction between the two conceptualizations of EI is further explained by their relationships with other factors.

MODELS OF EMOTIONAL INTELLIGENCE

The theory of EI is based upon five major domains that EI covers: They are:

1. **Self-Awareness:** It includes three components
   i. Emotional awareness: Recognizing one’s emotions and their effects.
   ii. Accurate self-assessment: Knowing one’s strengths and limits.
iii. Self-confidence: Sureness about one’s self-worth and capabilities.

2. **Self-Regulation:** It consists of five components
   
i. Self-control: Managing disruptive emotions and impulses.
   
   ii. Trustworthiness: Maintaining standards of honesty and integrity.
   
   
   iv. Adaptability: Flexibility in handling change.
   
   v. Innovativeness: Being comfortable with and open to novel ideas and new information.

3. **Self-Motivation:** It has four components.
   
i. Achievement drive: Striving to improve or meet a standard of excellence.
   
   ii. Commitment: Aligning with the goals of the group or organization.
   
   iii. Initiative: Readiness to act on opportunities.
   
   iv. Optimism: Persistence in pursuing goals despite obstacles and setbacks.

4. **Social Awareness:** It has five components.
   
i. Empathy: Sensing others’ feelings and perspective, and taking an active interest in their concerns.
   
   ii. Service orientation: Anticipating, recognizing, and meeting customers’ needs.
   
   iii. Developing others: Sensing what others need in order to develop, and bolstering their abilities.
   
   iv. Leveraging diversity: Cultivating opportunities through diverse people.
   
   v. Political awareness: Reading a group’s emotional currents and power relationships.

5. **Social Skills:** It has eight components.
   
i. Influence: Wielding effective tactics for persuasion.
   
   ii. Communication: Sending clear and convincing messages.
   
   iii. Leadership: Inspiring and guiding groups and people.
iv. Change catalyst: Initiating or managing change.

v. Conflict management: Negotiating and resolving disagreements.

vi. Building bonds: Nurturing instrumental relationships.

vii. Collaboration and cooperation: Working with others toward shared goals.

viii. Team capabilities: Creating group synergy in pursuing collective goals.

In brief, the five domains relate to knowing one’s emotions; managing one’s emotions; motivating self; recognizing and understanding other people’s emotions; and managing relationships, i.e., managing the emotions of others.

**The Four-Branch Model of Emotional Intelligence**

The Four-Branch Model of EI is an integrative approach to understand EI (Mayer et al., 2003). The four branch model of emotional intelligence describes four areas of capacities or skills that collectively describe many of areas of emotional intelligence. The model views overall EI as joining abilities from four areas: (a) accurately perceiving emotion, (b) using emotions to facilitate thought, (c) understanding emotion, and (d) managing emotion. The four branches have been concretely elaborated as:

a) **Perception, appraisal and expression of emotion**

It includes ability to identify emotion in one's physical states, feelings, and thoughts. The emotional appraisal also involves the ability to identify emotions in other people, designs, artwork, etc. through language, sound, appearance, and behavior. While the expression refers to ability to express emotions accurately and to express needs related to those feelings. It includes the ability to discriminate between accurate and inaccurate, or honest vs. dishonest expressions of feeling.

b) **Emotional facilitation of thinking**

Emotions prioritize thinking by directing attention to important information. Emotions are sufficiently vivid and available that they can be generated as aids to judgment and memory concerning feelings. Emotional mood swings change the individual's perspective from optimistic to pessimistic, encouraging consideration of...
multiple points of view. Emotional states differentially encourage specific problem-solving approaches such as when happiness facilitates inductive reasoning and creativity. The emotional facilitation of thinking is the ability to use feelings constructively. The ability to let your feelings guide you to what is important to think about.

c) **Understanding and analyzing emotions; Employing emotional knowledge**

   It is the ability to label emotions and recognize relations among the words and the emotions themselves, such as the relation between liking and loving. Ability to interpret the meanings that emotions convey regarding relationships, such as that sadness often accompanies a loss. It encompasses the ability to understand complex feelings: simultaneous feelings of love and hate or blends such as awe as a combination of fear and surprise. Ability to recognize likely transitions among emotions, such as the transition from anger to satisfaction or from anger to shame. This includes the ability to understand the causes of emotions and their relationship to our human psychological needs, especially our unmet emotional needs.

d) **Reflective regulation of emotion to promote emotional and intellectual growth**

   It is the ability to stay open to feelings, both those that are pleasant and those that are unpleasant. The ability to reflectively engage or detach from an emotion depending upon its judged informativeness or utility. It is the ability to reflectively monitor emotions in relation to oneself and others, such as recognizing how clear, typical, influential or reasonable they are. On the whole it is the ability to manage emotion in oneself and others by moderating negative emotions and enhancing pleasant ones, without repressing or exaggerating information they may convey.

**B) REVIEW OF LITERATURE**

**Grit and Excellence**

   Being a relatively emerging concept, grit was initially studied in terms of “deliberate practice” which is necessary to reach expert performance, that is, systematic training, always aiming to improve performance in a domain. It included
suitable training tasks, concentration, and self-regulated learning (Ericsson et al., 1993; Ericsson, 2006).

The personality trait of grit, defined as the tendency to pursue long-term goals with sustained zeal and hard work, has been shown to predict achievement in academic, vocational, and avocational domains (Duckworth et al., 2007; Duckworth & Quinn, 2009; Duckworth, Quinn, & Seligman, 2009).

Duckworth et al. (2007) found that the achievement of difficult, long-term goals not only required talent but also grit, that is, “sustained and focused application of talent over time”

Peterson, Ruch, Beermann, Park, and Seligman, (2007) have found that perseverance in the face of adversity was strongly associated with an orientation toward engagement, moderately associated with an orientation toward meaning, and only weakly associated with an orientation toward pleasure.

Borghans, Duckworth, Heckman and ter Weel (2008) specified that motivation contributed to differences in personality, it was altogether possible that the causal arrow runs in the opposite direction. The observed associations were equally consistent with the possibility that grit casually determined orientations to happiness.

Strayhorn (2008) reported that grit positively predicted achievement in challenging domains over and beyond mere talent. That grit—the tendency to pursue long-term challenging goals with perseverance and passion—was correlated with Black male collegians’ grades, holding all other factors constant, underscored the significance of this trait to achievement.

Duckworth and Quinn (2009) analyzed data from 1,248 cadets at West Point, the US Military Academy, and found that grit predicted completion of the academy’s rigorous summer training program better than the Whole Candidate Index, comprised of one’s weighted high school rank, SAT score, involvement, and physical exercise evaluation, which was used for admission. They concluded, “grittier West Point cadets were less likely to drop out during their first summer of training”. Similar conclusions had 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).

Schueller and Seligman (2010) found that more educated and professional successful adults were more likely to endorse engagement and meaning, and less likely to endorse pleasure, as their preferred paths to happiness. While they did not assess educational or professional attainment in the study, they speculated that grit might mediate the effect of this motivational configuration on achievement outcomes. This supposition would comport with prospective, longitudinal research demonstrating the predictive validity of grit for educational attainment and job performance (Duckworth et al., 2007, 2009).

Duckworth, Grant, Loew, Oettingen, and Gollwitzer (2011) in a longitudinal study of eighth-grade students. It was found that self-discipline measured in the fall accounted for more than twice as much variance as Intelligence (IQ) in final grades and also as high school selection, school attendance, hours spent doing homework, hours spent watching television (inversely), and the time of day students began their homework.

Grit, tenacity, and perseverance are part of the intrapersonal domain identified by National Research Council (2012), as an important 21st century skill. Skills like grit matter to educational achievement, to social mobility, and employment and opportunity (Roberts, 2009).

Duckworth and Eskreis-Winkler (2013) stated that, participants who scored high on grit score, on average scored lower on IQ scores than those who scored low on grit. Duckworth concluded that, talented children have fewer opportunities to develop a resilient approach to setbacks and failures compared with highly gritty children due to their less frequent encounter with negative outcome.

Lastly, in a study, Strayhorn (2014) tested the importance of a noncognitive trait, grit, to predicting grades for a sample of Black males attending a predominantly White institution. Using multivariate statistics and hierarchical regression techniques, results suggested that grit was positively related to college grades for Black males and that background traits, academic factors, and grit explained 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.

**Perfectionism and Excellence**

Empirical researches outside of sport have found that positive and negative perfectionism have divergent relationships with a wide range of psychological factors that includes cognitive styles (Burns & Fedewa, 2005), coping strategies (Burns et al., 2000), shame, guilt, pride (Fedewa et al., 2005), emotional regulation and life-satisfaction (Bergman, 2007; Mitchelson & Burns, 1998). Initial research in sport has found similar findings in that positive perfectionism appears unrelated to the aversive outcomes associated with negative perfectionism in athletes (disturbed eating attitudes and social physique anxiety) (Haase, Prapavessis, & Owens, 1999, 2002).

Roberts and Lovett (1994) found that gifted students demonstrate higher levels of perfectionism and more negative affective and physiological stress reactions following failure compared to their non-gifted peers.

Kline and Short (1991) reported increasing perfectionism in gifted girls as they went from elementary to high school. Baker (1996) also found higher levels of perfectionism in exceptionally gifted ninth grade girls than in girls of average ability.

Greenspon (1999) suggested that striving for excellence reflected good self-esteem and involved "strong desires to do well, to master a task, to challenge oneself, to know as much as possible, or to be the best" (as cited by Silverman, 2007).

Accordino, Accordino and Slaney (2000) examined the relationship of perfectionism with measures of achievement and achievement motivation and mental health aspects of depression and self-esteem in high school students. They found that as students’ personal standards increased, their levels of depression decreased and self-esteem increased. Furthermore, when students experienced a discrepancy between their personal standards and actual performance, their depression levels increased and self-esteem decreased.
Gilman and Ashby (2003) found that students who established high personal standards but nonetheless recognize their limitations (adaptive perfectionists) reported significantly higher (i.e., more positive) scores on a number of academic, intrapersonal, and interpersonal variables. However, the perceived inability for some students to consistently meet their high standards (maladaptive perfectionists) was significantly and negatively related to perceptions of school and family relationships, and greater emotional distress.

Rice and Slaney (2002); Mobley, Slaney, and Rice (2005); Wang, Slaney, and Rice (2007) found that adaptive perfectionists reported the highest self-esteem compared to non-perfectionists and maladaptive perfectionists.

Mallet and Hanrahan (2004) argued that pattern of achievement striving may enable some elite athletes to fulfill fundamental needs because it allows them to demonstrate competence, prove their worth to others, and gain a high degree of recognition, all of which contribute to positive self-perceptions.

Anshel and Mansouri (2005) conducted a laboratory study investigating the performance of 30 male undergraduate athletes in a body-balancing task. Athletes completed a multidimensional measure of perfectionism including scales that measured perfectionistic strivings and perfectionistic concerns. Following this, they were asked to perform a body balancing task on a stabilometer for 20 trials. In half of the trials, athletes received no feedback on their performance. In the other half, they received false negative feedback that they were failing to reach their previous best. Results showed that perfectionistic strivings and perfectionistic concerns were unrelated to performance when athletes received no feedback, but both were associated with impaired performance when athletes received false negative feedback on their performance, suggesting that perfectionism may undermine sport performance when athletes are made to believe that they are underperforming.

Hall (2006) proposed that the underlying differences between perfectionism and adaptive forms of striving may be a function of the motivational goals that regulate achievement cognition and behavior. He argued that unlike adaptive achievement striving, perfectionism may be underpinned by potentially debilitating
patterns of achievement goals that energize perfectionistic striving. These patterns impart a particular narrow meaning to success and failure and thus provide little scope for error and the avoidance of failure (Hall, Hill & Appleton, 2012).

Stoeber and Rambow (2007) investigated whether striving for perfection was associated with positive characteristics and adaptive outcomes. A sample of 121 ninth-graders completed measures of perfectionism at school (striving for perfection, negative reactions to imperfection), perceived parental pressure to be perfect, motivation, school achievement, and well-being. Results showed that negative reactions to imperfection were related to fear of failure, somatic complaints, and depressive symptoms; and perceived parental pressure was related to somatic complaints. In contrast, striving for perfection was related to hope of success, motivation for school, and school achievement. Moreover, striving for perfection showed a negative correlation with depressive symptoms, once the influence of negative reactions to imperfection was partialled out.

Canter (2008) studied influences on perfectionism and procrastination of race, gender, cognitive-affective and academic self-appraisals, and academic performance expectations. The sample consisted of 155 Introductory Psychology students (57 African Americans, 41 Asian Americans, and 57 European Americans; 51.6% women) with a mean age of 19.4 years. Results revealed that while women had higher GPA’s and were more likely to be Adaptive Perfectionists; men had higher levels of academic self-confidence and expected to achieve higher GPA’s. Regardless of race or gender, students with GPA’s of 3.5 or higher (on a 4.0 scale) were more likely to be both types of perfectionists. Academic self-confidence was a significant positive predictor of Adaptive Perfectionism and a negative predictor for Maladaptive Perfectionism and procrastination.

Appleton (2009) examined the origins of perfectionism in elite junior athletes using a cross-sectional design. Initially, in study two, a social learning model was supported with 18%-26% of variance in athletes’ perfectionism predicted by parents’ perfectionism. Building upon this finding in study three, a structural equation model revealed that parenting styles, including empathy and psychological control, mediated the parent-athletic child socially prescribed perfectionism (SPP) relationship. In study
four, a significant pathway emerged between parents’ achievement goals and athletes’ dispositional perfectionism, offering support for a social expectations model of perfectionism development. Specifically, parents’ task and ego orientations were positively associated with athletes’ self-oriented perfectionism (SOP). In contrast, athletes’ SPP was predicted by parents’ ego orientation. In the subsequent study, study four also demonstrated the nature and form of motivational regulation associated with athletes’ SOP and SPP. That is, a pathway emerged between athletes’ SPP and controlled forms of regulation, while athletes’ SOP was correlated with self-determined and controlled motivation. Finally, in study five, the coach-created motivational climate accounted for approximately 19% of variance in athletes’ perfectionistic cognitions, highlighting the role of additional social agents in the development of athletes’ perfectionism.

A study focused on perfectionism and goal orientations among Chinese students in Hong Kong revealed that the 315 primary and secondary students in the sample tended to endorse positive perfectionism more than negative perfectionism (Chan, 2009).

In Chan’s (2009) study, gender emerged as a significant predictor for negative perfectionists, suggesting that boys were more likely to be negative perfectionists, but the evidence for gender differences was relatively weak. Chan (2007) found an overall gender main effect for perfectionism with girls having significantly higher ratings than boys on positive perfectionism.

Sagar and Stoeber (2009) investigated the relationships of the perfectionism dimensions with positive and negative affect after success and failure. Athletes were presented with two scenarios: one success scenario (where they imagined achieving their goals in an important competition) and a failure scenario (where they imagined failing to achieve their goals). Afterwards athletes indicated how positive and negative they felt in each scenario. When multiple regressions controlling for the overlap between the two perfectionism dimensions were computed, perfectionistic strivings predicted higher positive affect after success. In contrast, perfectionistic concerns predicted higher negative affect after failure.
A review done by Stoeber (2011) indicated that only perfectionistic concerns showed unique positive relationships with competitive anxiety, fear of failure, and avoidance goal orientations. In contrast, perfectionistic strivings showed unique positive relationships with self-confidence, hope of success, approach goal orientations, and performance in training and competitions. The findings suggested that only perfectionistic concerns are clearly maladaptive, whereas perfectionistic strivings may form part of a healthy striving for excellence.

Fletcher and Speirs-Neumeister (2012) reported that self-oriented perfectionism was related to the adoption of mastery approach goals, performance approach goals, and performance avoidance goals, and socially prescribed perfectionism was related to the adoption of performance approach and performance avoidance goals.

According to Hill, Hall and Appleton (2012) findings of Stoeber and colleagues (Stoeber & Becker, 2008; Stoeber & Kersting, 2007; Stoeber, Otto, Pescheck, Becker, & Stoll, 2007; Stoeber, Stoll, Pescheck, & Otto, 2008), have illustrated that perfectionistic striving and negative reactions to imperfection encourage disparate cognitive (e.g., attributions), affective (e.g., anxiety, guilt, shame) and behavioural (e.g., performance) outcomes in athletes.

According to Hall et al. (2012) a number of prominent sport psychology practitioners and coaches have noted that at an elite level, many athletes appear to exhibit distinct qualities of perfectionism in their achievement striving (Gould et al., 2002; Stoeber, Uphill, & Hotham, 2009). Some have suggested that these qualities may play a significant role in helping athletes to achieve and maintain performance excellence, leading to a belief that perfectionism is a positive characteristic that should not be discouraged (Hardy, Jones, & Gould, 1996).

According to Stoeber (2012) studies on perfectionism and academic performance shows that perfectionistic strivings are positively associated with academic performance: students with higher levels of perfectionistic strivings show higher exam performance, higher individual grades, and a higher GPA than students with lower levels of perfectionistic strivings.
Crocker, Gaudreau, Mosewich, and Kljajic (2014) examined the $2 \times 2$ model of perfectionism to predict competition related stress variables in intercollegiate athletes. A sample of 179 athletes ($n=99$ women) completed measures of sport perfectionism at Time 1 and 4-5 weeks later, completed measures of coping, appraisal, affect, and goal progress after a competition. Results showed some evidence that goal progress moderated the relationship between perfectionism, coping, and control appraisals. Overall, the results indicated that pure personal standards perfectionism was associated with better outcomes than pure evaluative concerns perfectionism. For most variables, evaluative concerns perfectionism was related to the poorest outcomes.

Gotwals and Spencer-Cavaliere (2014) explored perfectionistic athletes’ perspectives on achievement in sport. Male and female intercollegiate athletes whose Sport Multidimensional Perfectionism Scale 2 (Sport-MPS-2; Gotwals & Dunn, 2009) subscale profile reflected healthy perfectionism ($n = 7$) or unhealthy perfectionism ($n = 11$) were purposefully sampled and interviewed. Content analysis of the interview data revealed three themes: personal expectations, coping with challenge, and role of others. Although these themes were common to both healthy and unhealthy perfectionists, the content generally represented a dichotomy of positive and negative interpretations, respectively.

Semcho (2014) assessed perfectionism in Indians via MTurk and compared scores on multidimensional perfectionism scales to an American sample. He found that Indians scored higher than Americans on Concern Over Mistakes, Perceived Parental Pressure, and Striving for Excellence, while Americans scored higher than Indians on Planfulness and Need for Approval.

Greblo, Barić and Erpič (2015) investigated the relationship between different types of peer motivational climates and distinct aspects of athletes’ perfectionism. The study included 258 athletes (32 % female) who ranged in age from 18 to 25 years ($M= 20.44$ years; $SD=1.01$). The findings showed that athletes’ perfectionistic strivings were positively related to their perceptions of a task-involving motivational climate (i.e., improvement, relatedness/support, and effort), whereas negative reactions to imperfection were positively related only to perceptions of intra-team conflict. Moreover, when the overlap between the two facets of perfectionism
was controlled for, negative reactions to imperfection were negatively associated with perceptions of an effort-oriented motivational climate. Peer motivational climate explained a significant amount of the variance in striving for perfection and negative reactions to imperfection during sports competitions.

**Self-Efficacy and Excellence**

The self-efficacy construct is also one of the most influential psychological constructs thought to affect achievement strivings in sport (Feltz, 1988). Gould and his colleagues found that self-efficacy and team efficacy were chief among that factors that US Olympic athletes reported to influence their performance at the Nagano Olympic games (Gould, Greenleaf, Lauer, & Chung, 1999).

Self-efficacy has been shown to be influential in the actions and success of individuals in many different areas, including overcoming fears, success in the workplace, hard life transitions, and academic performance (Bandura, 1986; Chemers, Hu, & Garcia, 2001). Moreover, in the academic setup, it has been shown to be a significant predictor of students’ course selection (Britner & Pajares, 2006), academic continuance and achievement (Britner & Pajares, 2006; Klassen, 2004) college performance and persistence (Gore, 2006; Robbins, Lauver, Le, Davis, Langley & Carlstrom, 2004), GPA (Robbins et al., 2004), academic aspirations (Bandura, Barbaranelli, Caprara, & Pastorelli, 2001), occupational self-efficacy, and career trajectories across domains and age levels (Bandura, Barbaranelli, Caprara, & Pastorelli, 1996, 2001; Britner & Pajares, 2006; Gore, 2006) beyond that accounted for by more traditional predictors (i.e., standardized achievement, cognitive ability) (Caprara, Vecchione, Alessandri, Gerbino, & Barbaranelli, 2011). In the area of psychology, the term self-efficacy has received special attention and has also generated important research progress, which has contributed to the improvement of the pedagogical and teaching practices (Pérez, Lescano, Zalazar, Furlán, & Martínez, 2011). Empirical research has demonstrated in a wide way that the higher self-efficacy is perceived, the higher is the degree of effort made and the persistence of achievement of the proposed goal; which is very important for success
Academic self-efficacy belief is about the extent to which a person feels himself competent in competing in the academic tasks successfully. Students' goals, motivation levels, academic achievements affect their adequacy beliefs in learning and getting greater academic achievements (Schunk, 2009). Efficacy beliefs related with past experiences’ consequences, affect the success or failure status in the future and consequently affect the academic motivation. Students with high self efficacy beliefs, become more willing in learning activities compared with students with low self-efficacy. They spend more effort towards the activities and can develop more effective strategies against the difficulties they have faced (Eggen & Kauchak, 1997). Self-efficacy is known to provide individuals with capacity to acquire new knowledge and to develop their skills for a better life (Bandura, 1995). Therefore, strengthening students' individual resources such as self-efficacy, would contribute towards the achievement of the objectives of education system.

Pajares (1996) also found academic self-efficacy to be strongly associated with academic performance in college students, with positive correlations ranging from $r = .49$ to $r = .71$.

Singleton and Feltz (1999), using a 5-item, skill specific self-efficacy scale, found that collegiate hockey players exposed to several weeks of self-modeling videotapes showed greater shooting accuracy and higher self-efficacy for game performance compared to controls (Feltz & Lirgg, 2001).

Chemers, Hu and Garcia (2001) conducted a longitudinal study of 1st-year university student adjustment and examined the effects of academic self-efficacy and optimism on students’ academic performance, stress, health, and commitment to remain in school. Predictor variables (high school grade-point average, academic self-efficacy, and optimism) and moderator variables (academic expectations and self-perceived coping ability) were measured at the end of the first academic quarter and were related to classroom performance, personal adjustment, stress, and health,
measured at the end of the school year. Academic self-efficacy and optimism were strongly related to performance and adjustment, both directly on academic performance and indirectly through expectations and coping perceptions (challenge-threat evaluations) on classroom performance, stress, health, and overall satisfaction and commitment to remain in school.

**Pajares and Schunk (2001)** conducted a study and found that academic self-efficacy explained approximately a quarter of the variance in the prediction of academic outcomes beyond that of instructional influences.

**Torres and Solberg (2001)** in their study, found a positive association between academic self-efficacy and the number of hours students spent studying. Research has also shown that academic self-efficacy is positively associated with grades in college *(Bong, 2001).*

In another study by **Caprara, Barbaranelli, Pastorelli and Cervone (2004),** the role of both facets of perceived self efficacy in predicting academic performance was investigated, and their findings revealed that perceived academic self-efficacy, which included the perceived capability to both master academic subjects and self-regulate one’s own studying activities, predicted junior high-school performance, even after controlling for self-reported global personality dispositions, as the Big Five Factors.

**Zajacova, Lynch and Espenshadt (2005)** investigated the joint effects of academic self-efficacy and stress on the academic performance of 107 nontraditional, largely immigrant and minority, college freshmen at a large urban commuter institution in their study. The results showed that academic self-efficacy was a more robust and consistent predictor than stress of academic success.

**Lampert (2007)** assessed the relationships among self-efficacy, self-concept and academic performance as measured by grade point average. A model using three measures of these constructs was found to be a significant predictor of grade point average for college students.
Caprara et al. (2008) examined the developmental course of self-efficacy beliefs for self-regulated learning from early to late adolescence, and its contribution to academic achievement at different points of children’s scholastic career. Results showed that high levels of perceived self-efficacy for self-regulated learning measured at the age of 12 were associated with higher high-school grades and with a lower probability of dropping out of school, after controlling for variations in socio-economic level.

Hsieh, Cho, Liu and Schallert (2008) examined changes in 549 middle school students' goal orientation, self-efficacy and science knowledge after engaging in science learning in a technology-rich environment. They explored how these motivational constructs interact to predict science achievement. Findings indicated that students' performance and self-efficacy increased significantly while the performance-approach and performance-avoidance goals significantly decreased. Findings also indicated that performance-avoidance goals moderated the relation between self-efficacy and science achievement, indicating that self-efficacy has positive influences on achievement when students are not performance-avoidance oriented.

Ferla, Valcke and Cai (2009) investigated (1) whether academic (e.g. math) self-efficacy and academic self-concept represent two conceptually and empirically distinct psychological constructs when studied within the same domain, (2) the nature of the relationship existing between both self-constructs, (3) their antecedents, and (4) their mediating and predictive qualities for background variables such as gender and prior knowledge and outcome variables such as math performance, math interest, and math anxiety. Results indicate that (1) math self-efficacy and math self-concept do indeed represent conceptually and empirically different constructs, even when studied within the same domain, (2) students' academic self-concept strongly influences their academic self-efficacy beliefs, (3) academic self-concept is a better predictor (and mediator) for affective–motivational variables, while academic self-efficacy is the better predictor (and mediator) for academic achievement.
Turner, Chandler and Heffer (2009) undertook a research concerning the effects of parenting style on undergraduate students’ academic achievement. The investigation explored the relationship between authoritative parenting style, academic performance, self-efficacy, and achievement motivation. Participants were a sample of undergraduate students from the south western United States (N = 264) who were enrolled in psychology courses in university. To determine the relationship between parenting styles, academic self-efficacy, achievement motivation, and academic performance, Pearson correlations were conducted. The results showed that authoritative parenting significantly predicted students' academic performance. Furthermore, the results illustrated that authoritative parenting style and academic self-efficacy were significant predictors of academic performance and also authoritative parenting, self-efficacy, and the interaction term (self-efficacy × authoritative parenting) were significant (Parsasirat, Montazeri, Yusooff, Subhi, & Nen, 2013).

Curtis-Fields (2010) investigated the impact of self-efficacy, locus of control, and perceived parental influence on the academic performance of low and high achieving African-American high school students with low socioeconomic status. The gender and grade level differences (tenth, eleventh, and twelfth) for self-efficacy, locus of control, and perceived parent involvement in a public school environment were taken into consideration. The study found statistically significant differences for high achieving students with higher scores than those students in the low achieving group and also between male and female students regarding self-efficacy, with female students having higher scores than male students. Research has also shown that girls have higher academic achievement than boys (Clay-Spotser, 2015).

Brausch (2011) assessed the predictive quality of specific measures toward academic success in college students. In particular, high school grade point average, (GPA), American College Testing exam scores (ACT), academic stress, academic self-efficacy, and mindfulness measures were used as independent variables to determine their predictive significance toward undergraduate fall 2010 semester GPAs. Data from 268 undergraduate students at Midwestern University were
collected and analyzed. Results revealed significant predictive quality of high school GPA and academic self-efficacy toward undergraduate performance. However, ACT scores, academic stress, and mindfulness measures were not found to be predictive of undergraduate semester GPAs. Further analysis showed significant positive correlations between: high school GPA and semester GPA; self-efficacy and semester GPA, ACT and semester GPA, ACT and high school GPA, self-efficacy and stress, and mindfulness and stress.

Caprara et al. (2011) conducted a meta-analysis of studies published between 1977 and 1988 which revealed that self-efficacy beliefs were positively related to academic achievement (r = .38) and accounted for approximately 14% of the variance (Multon et al., 1991).

Caprara et al. (2011) undertook a study to examine the unique contribution and the pathways through which traits (i.e., openness and conscientiousness) and academic self-efficacy beliefs were conducive to academic achievement at the end of junior and senior high school. The sample comprised of 412 Italian students, out of which 196 were boys and 216 were girls, in the age range of 13 to 19 years. Results showed that openness and academic self-efficacy at the age of 13 contributed to junior high-school grades, after controlling for socio-economic status (SES). Junior high-school grades also contributed to academic self-efficacy beliefs at the age of 16, which in turn contributed to high-school grades, over and above the effects of SES and prior academic achievement. It was further established that academic self-efficacy beliefs partially mediated the contribution of traits to later academic achievement. In particular, conscientiousness at the age of 13 affected high school grades indirectly, through its effect on academic self-efficacy beliefs at the age of 16.

Galyon, Blondin, Yaw, Nalls, and Williams (2012) examined the relationship of academic self-efficacy to engagement in class discussion and performance on major course exams among students (N = 165) in an undergraduate human development course. They used cluster analysis to identify three levels of academic self-efficacy: high (n = 34), medium (n = 91), and low (n = 40). Results indicated that high, medium, and low academic self-efficacy, all significantly
predicted levels of student participation and exam performance, but the directionality of group placement on the academic measures was different for students at the high self-efficacy level versus those at the low and mid self-efficacy levels. Cluster analysis was also used to divide students into high, medium, and low grade-point average (GPA). These groups did not differ significantly on either self-efficacy or class participation but did differ on exam performance. Within GPA levels, self-efficacy was most strongly related to class participation and exam performance at the highest level of GPA and least related at the lowest level of GPA.

Richardson, Abraham and Bond (2012) conducted a review of 13 years of research into antecedents of university students' grade point average (GPA) scores which generated the following: a comprehensive, conceptual map of known correlates of tertiary GPA; assessment of the magnitude of average, weighted correlations with GPA; and tests of multivariate models of GPA correlates within and across research domains. They carried out a systematic search of PsycINFO and Web of Knowledge databases between 1997 and 2010, identified 7,167 English-language articles yielding 241 data sets, which reported on 50 conceptually distinct correlates of GPA, including 3 demographic factors and 5 traditional measures of cognitive capacity or prior academic performance. In addition, 42 non-intellective constructs were also identified by them, from 5 conceptually overlapping but distinct research domains: (a) personality traits, (b) motivational factors, (c) self-regulatory learning strategies, (d) students' approaches to learning, and (e) psychosocial contextual influences. They retrieved 1,105 independent correlations and analyzed data using hypothesis-driven, random-effects meta-analyses. They found significant average, weighted correlations for 41 of 50 measures. Univariate analyses revealed that demographic and psychosocial contextual factors generated, at best, small correlations with GPA. Medium-sized correlations were observed for high school GPA, SAT, ACT, and A level scores. Three non-intellective constructs also showed medium-sized correlations with GPA: academic self-efficacy, grade goal, and effort regulation. They observed a large correlation for performance self-efficacy, which was the strongest correlate (of 50 measures) followed by high school GPA, ACT, and grade goal.
Clay-Spotser (2015) investigated the influence of self-efficacy, locus of control, and perceived parental influence on the self-reported academic achievement of 10th, 11th, and 12th grade high school students in a charter high school located in a suburb adjacent to a large urban area. A cross-sectional, quantitative research study had been conducted to collect the data needed to address the research questions posed for this study. In addition, self-efficacy, locus of control, and students’ perceptions of the importance of their parents’ involvement in their education were compared by grade and gender. According to key findings of the data analysis, students with higher school self-efficacy and lower levels of parental structure were more likely to self-report higher academic achievement.

Flow and Excellence

Csikszentmihalyi (1997) suggested that optimal learning experiences are intrinsically motivated and related to positive emotions and enhanced cognitive processing. In other words, learning occurs only when an individual is cognitively and emotionally engaged.

According to Seligman and Csikszentmihalyi (2000) activities that require intense physical or mental involvement are those that are most conducive to a flow experience. It is because of this that athletes and sports are often the focus of research on flow. One pertinent construct from positive psychology that provides clear picture of engagement is flow.

Jackson, Thomas, Marsh, and Smethurst (2001) examined psychological factors of potential relevance to athletic flow experiences and relationship between flow and optimal performance. Results revealed self-concept and use of psychological skills were predicted to be related to self-reported flow states. Competitive athletes across three sports completed dispositional assessments of athletic self-concept, psychological skills, and flow. The athletes also completed a post-event flow assessment, as well as other questions relating to their performance, after a specified competitive event. Positive relationships were found between flow and aspects of self-concept, and the relationships between flow and psychological skills use were also in
the expected directions. In addition, the predicted positive relationship between a post-event flow assessment and performance criteria was obtained.

In a study, Pajares, (2001) reported that flow was found to be higher in high-achieving students than in low-achieving students. Thus it is not far-fetched to propose that students must be in a state of flow if they want to achieve higher.

Durand-Bush and Salmela (2002) examined the factors that contributed to the development and maintenance of expert athletic performance. Four men and six women having won at least two gold medals at separate Olympics and/or World Championships were interviewed using an in-depth, open-ended, and semi-structured approach (Patton, 1987). The qualitative data were analyzed both inductively and deductively. Results revealed that the athletes progressed through four stages throughout their career: the Sampling, Specializing, Investment, and Maintenance Years. Common findings were that at an elite level, contextual factors included parents, coaches, teammates/friends, support staff, other athletes, and school/education. Personal characteristics pertained to self-confidence, motivation, creativity, and perseverance. Training involved technical, tactical, physical, and mental components and was influenced by quantity, quality, intensity, and recovery. Competition factors concerned meticulous planning, evaluations, dealing with pressure, expectations, and adversity, and focusing on the process rather than the outcome of events.

Kiehne (2003) studied Tai Chi practitioners for their experiences of flow. The participants of the study were those individuals who had practiced Tai Chi for at least five years. Participants reported experiencing all dimensions of flow with the exception of clear goals and the loss of self consciousness.

Adamson (2003) examined the relationship between reported flow state, individual goal orientation, and changes in reported flow state among Equestrian athletes involved in the sport of dressage. The study found that the athletes in the experimental group showed significant change when their competitive outcome was better than their expectations.
Shernoff, Csikszentmihalyi, Schneider, and Shernoff (2003) conducted a longitudinal study of 564 high school students across the nation using Csikszentmihalyi’s Experience Sampling method (electronic pager) to assess how challenge, skill, and challenge/skill conditions affected student engagement, attention, and quality of experience. They found that over 60% of instructional time involved non-interactive activities and that student perception of control and relevance of the activity appeared to be important contributors to student engagement. The findings of this study indicated that teachers may be able to encourage engagement in the learning experience by offering more tasks which invite student choice that is reflective of their own personal goals. It was also found that students reported feeling higher self-esteem, and a more positive mood when experiencing higher levels of control over situations.

Stavrou and Zervas (2004) examined the link between trait sport confidence and state flow, finding moderate correlations with several flow dimensions, such as sense of control, concentration on the task at hand, challenge-skills balance, loss of self-consciousness, and clear goals. It was expected that confidence had a positive relationship with flow.

A study conducted by Beveridge and Milner (2006) examined a high school English classroom instructional behavior to determine what characteristics of flow were observed during instructional time. Specifically, Beveridge and Milner were observing for those characteristics which increased student engagement. For example, activities which were highly student centered demanded a higher degree of student concentration. They identified such activities as group work, individual seat work, writing activities, independent reading, and tests/quizzes as student-centered and therefore requiring a greater degree of concentration and student control. Low level activities were identified as watching films, listening to lectures, class discussions and reading aloud. Of the 114 classroom activities that he observed, only 40 (35.1%) were student-centered. The majority were teacher centered. They found that students who were challenged and in control of their learning were more focused and had a more valuable learning experience.
According to Engeser and Rheinberg (2008), flow should be associated with better performance for two reasons. First, flow is a highly functional state that should in itself foster performance. Second, individuals experiencing flow are more motivated to carry out further activities, and in order to experience flow again, they will set themselves more challenging tasks. Thus, flow could be seen as a motivating force for excellence.

According to Whitson and Consoli (2009) research regarding student engagement has shown that increases in student engagement are correlated to increases in positive student learning outcomes (Appleton, Christenson, Kim, & Reschly, 2006; Nystrand & Gamoran, 1989) such as higher GPA, more credits earned in high school, higher attendance rates, and higher classroom participation (Appleton et al., 2006).

In a series of studies, Baumann and Scheffer (2011) administered the operant motive test to assess and characterize this flow motivation. The findings of the studies implied that individuals who experience flow often form challenging, but plausible, goals and intentions (cf., personality systems interaction theory). These goals and intentions are plausible because they are, at least partly, derived from preferences that evolved from past experiences.

Bakker, Oerlemans, Demerouti, Slot, and Ali (2011) examined the relationship between environmental resources (autonomy, social support from the coach, and performance feedback), flow, and performance among young talented soccer players. Both soccer players (N = 398) and coaches of 45 talented soccer teams in The Netherlands filled out a questionnaire. Soccer players answered questions about environmental resources, flow and performance during a particular match. In addition, coaches rated the performance of every player in the team during the same match. Results of multilevel analyses showed that flow at the team level is higher when the match results in a draw or win than when the match results in loss. Moreover, environmental resources and particularly performance feedback and support from the coach predicted flow during the soccer game, which, in turn, was positively related to self- and coach-ratings of performance.
Mustafa, Elias, Roslan, and Noah (2011) investigated the role of achievement need in predicting flow in high school students. This study used a preliminary data involving 94 high school students aged sixteen attending two different secondary schools. Students responded to a questionnaire set consisting of a subscale measuring flow and another measuring achievement need. Simple linear regression analysis found that for high school students in this study, achievement need significantly predicts flow. When examined in detail, standard multiple regression analysis found that only two out of three dimensions of achievement need significantly predict flow, which were commitment and competition.

Koehn, Morris, and Watt, (2013) investigated the relationship between psychological correlates and flow in tennis competition. Using a cross-sectional design, the sample of 261 junior tennis athletes showed moderate-to-strong correlations between flow (dispositional and state) and confidence, imagery use, and action control, whereas absorption was orthogonal to flow. Commonality analysis revealed that imagery and confidence accounted for 34.2% of the variance in dispositional flow.

Hanus and Fox (2015) tested students across two courses, measuring their motivation, social comparison, effort, satisfaction, learner empowerment, and academic performance at four points during a 16-week semester. One course received a gamified curriculum, featuring a leaderboard and badges, whereas the other course received the same curriculum without the gamified elements. Results revealed that students in the gamified course showed less motivation, satisfaction, and empowerment over time than those in the non-gamified class. The effect of course type on students' final exam scores was mediated by students' levels of intrinsic motivation, with students in the gamified course showing less motivation and lower final exam scores than the non-gamified class.

Cseh, Phillips, and Pearson, (2015) determined relationships between flow and visual creativity. Fifty-seven psychology undergraduates (37 female; age M = 19.60, SD = 2.15) were tested in classes of 18–19 students for course credit. Participants performed the creative mental synthesis task to simulate the creative
process. Affect change (pre- vs. post-task) and flow were measured via questionnaires. The creativity of synthesis drawings was rated objectively and subjectively by judges. Findings empirically demonstrated that flow was related to affect improvement during visual creativity. Affect change was linked to productivity and self-rated creativity, but no other objective or subjective performance measures. Flow was unrelated to all external performance measures but was highly correlated with self-rated creativity; flow may therefore motivate perseverance towards eventual excellence rather than provide direct cognitive enhancement.

**Emotional Intelligence and Excellence**

Emotional Intelligence has been a very crucial determinant of performance in challenging situations. Research has also demonstrated and has been effective in highlighting the sheer importance of emotions in the fields like academics and sports, as both the fields have been found to highly demanding by their very nature.

**Mandell and Pherwani (2003)** had found that women were more likely to score higher on measures of emotional intelligence than men, both in professional and personal settings. **Brackett and Mayer (2003)** found that females scored higher than males on E.I. when measured by a performance measure (the Mayer-Salovey-Caruso Emotional Intelligence Test). However, when using self-report measures such as the Bar-On Emotion Quotient Inventory (EQ-i) and the Self-Report Emotional Intelligence Test (SREIT), they found no evidence for gender differences.

Emotional intelligence was found to be one of the predictors of academic success (Parker, Summerfeldt, Hogan, & Mojeski, 2004; Erdogdu, 2008).

**Zizzi, Deaner, and Hirschhorn (2003)** examined the relationship between EI and sport performance among Division I college baseball players. Informed by the 33-item EIS, Zizzi et al. found that certain aspects of EI were moderately related to pitching performance but not hitting performance (Meyer & Fletcher, 2007).

**Parker et al. (2004)** examined the relationship between emotional intelligence and academic achievement. During the first month of classes 372 first-year full-time students at a small Ontario university completed the short form of the Emotional
Quotient Inventory (EQ-i:Short). At the end of the academic year the EQ-i:Short data was matched with the student’s academic record. Predicting academic success from emotional intelligence variables produced divergent results depending on how the former variable was operationalized. When EQ-i:Short variables were compared in groups who had achieved very different levels of academic success (highly successful students who achieved a first-year university GPA of 80% or better versus relatively unsuccessful students who received a first-year GPA of 59% or less) academic success was strongly associated with several dimensions of emotional intelligence.

Petrides, Frederickson, and Furnham (2004) examined the role of trait emotional intelligence (‘trait EI’) in academic performance and in deviant behavior at school on a sample of 650 pupils in British secondary education. Trait EI moderated the relationship between cognitive ability and academic performance. In addition, pupils with high trait EI scores were less likely to have had unauthorized absences and less likely to have been excluded from school.

Low and Nelson (2005) summarized in a study on emotional intelligence and academic excellence that Emotional intelligence skills are key factors in personal, academic, and career excellence. Texas Educators in public schools, community colleges, and universities are committed to achieving high standards of academic achievement, teacher and student productivity, and responsible behavior.

Tamannaifar, Sedighi Arfai, and Salami Mohammadabadi (2010) explored the relationship between emotional intelligence, self-concept and self esteem with academic achievement. Results revealed that the average academic achievement in total samples was significantly related with emotional intelligence, self concept and self-esteem. Gender differences were found among the subjects, with males scoring higher on emotional intelligence and self-concept, and in self-esteem female students were significantly better.

Waddar and Aminabhavi (2010) investigated whether Post-Graduate (PG) student staying at home and hostel do differ significantly from each other in some of the important personality variables such as self-efficacy and emotional intelligence?
The study was conducted on a sample of 200 PG students, out of which 100 students staying at home and 100 PG students staying at hostel. Both groups (consisting of 50 female and 50 male students) were selected from different Departments of Karnataka University Dharwad. The results revealed that PG students staying at home have significantly higher self-efficacy and overall emotional intelligence compared to hostlers. An incidental analysis also revealed that demographic variables such as age, gender, order of birth, and caste have significantly contributed to the self-efficacy and emotional intelligence of PG students staying at home and hostel.

_Bal, Singh, Sood, and Kumar (2011)_ investigated whether there are cognitive psychological factors used in competition and training which differentiate athletes participating in an open and closed skill sport. In addition, factors discriminating successful from less successful participants in the open skill sport of football and the closed skill sport of gymnastics were identified. A total of 40 inter-varsity athletes (n = 20; footballers) from open-skill and (n = 20; gymnasts) from closed-skill sports completed the emotional intelligence questionnaire (EIQ16). The results revealed significant difference in self-analysis, analysis of others, self-expression, thinking, judgment, problem solving, complexity, transitions, openness, self-control and others among open-skill and closed-skill athletes.

_Kajbafnezhad, Ahadi, Heidarie, Askari and Enayati (2011)_ compared psychological skills, overall emotional intelligence and athletic success motivation between team and individual sports. Results revealed that there was significant difference between the two groups (individual and team sports) in terms of psychological skills and motivation of athletic success but there wasn’t a significant difference with respect to overall emotional intelligence.

_Yazici, Seyis, and Altun (2011)_ investigated the influence of emotional intelligence and self efficacy beliefs on academic achievement of high school students. The sample consisted of 407 (Female=236, Male=171) participants recruited from high school students. The results indicated that age, gender and self-efficacy were the significant predictors of academic achievement.
Gail (2012) examined the relationship between youth sports participation and emotional intelligence competency. The most significant conclusion from the study was that middle school students that participated in youth sports had a higher emotional intelligence competency than those that did not participate in youth sports. Furthermore, male middle school students that participated in youth sports had a higher emotional intelligence competency than female students that participated in youth sports.

Nwadinigwe and Azuka-Obieke (2012) investigated the impact of emotional intelligence on academic achievement of senior secondary school students in Lagos, Nigeria. The purpose of the study was to examine the relationship between emotional intelligence and academic achievement among senior secondary school students. A sample of 156 participants randomly selected from three senior secondary schools was used. The study revealed that there was a positive relationship between emotional intelligence skills and academic achievement such that developing emotional intelligence skills of a student would lead to the enhancement of his/her academic achievement. Emotions have been found to play an important role in the sporting arena too (D’Urso, Petrosso, & Robazza, 2002).

Mishra (2012) investigated the effect of Emotional Intelligence on Academic Achievement of senior secondary students. A sample of 1000 students was drawn adopting random-cum cluster sampling technique from Government senior secondary schools of Jaipur district, Rajasthan. Survey method was used to collect the data. The study revealed that there was a positive effect of emotional intelligence on academic achievement of total group students and especially girl students.

Qualter, Gardner, Pope, Hutchinson and Whiteley (2012) examined the long-term effects of ability- and trait EI on academic performance for British adolescents. The sample comprised 413 students from three secondary schools in the North-West of England. Students completed tests of ability EI, trait EI, personality, and cognitive ability in Year 7 (mean age=11 years 2 months). Performance data at the end of Year 11 (mean age=15 years 10 months) were collected. Structural Equation Modelling examined the longitudinal relationships between latent variables
of these constructs. Results show that the importance of ability EI resides in the fact that it moderates the effect of cognitive ability on performance in Year 11. Trait EI has a direct effect on Year 11 performance for boys only.

Costa and Faria (2015) examined the predictive validity of Emotional Intelligence (EI), assessed by a self-report and a performance ability-based measure, over students' academic achievement in Portuguese secondary school. Within a 3-wave longitudinal design, 380 students completed both Emotional Skills and Competence Questionnaire (42 items) and Vocabulary of Emotions Test (35 items). Students' GPA, Portuguese and Mathematics grades were collected at the end of each academic level. Path analysis results showed that although both types of EI can predict students' academic achievement, they exert a higher influence in the prediction of 10th grade students' achievement. Moreover, the performance measure exhibited higher predictive power over the self-report one. Multi-group analyses indicated that some paths in the GPA model differed by gender while those in the Mathematics model differed by type of school.

The review of literature clearly indicates the relationship of the different factors with excellence. Thereby emphasising their prominence in the phenomena of performance. However, the present study weaves them together to study their cumulative, exclusive and synergetic effects on excellence.