METHOD

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.

To measure Grit, the Short Grit Scale developed by Duckworth and Quinn (2009) was used, which has two dimensions viz. Perseverance of Effort and Consistency of Interest.

The Multidimensional Perfectionism Scale by Hewitt, Flett, Turnbull-Donovan and Mikail (1991) was used to measure three types of Perfectionism viz., Self-Oriented, Other-Oriented and Socially Prescribed Perfectionism.


Emotional Intelligence was measured by using The Emotional Intelligence Questionnaire, developed by Mohan, Malhotra and Mangla (Mangla, 2003).

SAMPLE

The total sample comprised of 200 students (100 in the field of academics and 100 in the field of sports) within the age range of 20 -26 years, out of which 91 were males and 109 were females. While gender equality was not maintainable in the sample because of the ground reality, a proportionate representation has been adhered to. Whereas in the academic field, the top rankers comprised of more females than
males, in the sports it was the males who outnumbered the females in top positions. Eventually, 100 students in the field of academics were taken, out of which 18 were males and 82 were females and 100 students in the field of sports were taken, out of which 73 were males and 27 were females. In the field of academics, only the top rankers at the university level, in their respective disciplines were selected. In the field of sports, the university players who top in their respective games were selected. Players were selected from individual games as it highlighted the individual level of excellence. Purposive sampling technique was used. The sample was collected from three universities- Panjab University (Chandigarh), Punjabi University (Patiala) and Guru Nanak Dev University (Amritsar). All the subjects were explained about the nature and aim of the study and their role in the study. Informed consent was obtained before they were enrolled as subjects in the study.

**INCLUSION CRITERIA**

1. For excellence in academics: Only the top rankers of post graduate courses at the university level, in their respective disciplines were selected.

2. For excellence in sports: The university players who were first in their respective games were selected. Only individual games were included in the sample.

**TESTS AND TOOLS**

The following standardized tests and tools were used:

1. Short Grit Scale (Duckworth & Quinn, 2009).


5. Emotional Intelligence (Mohan, Malhotra & Mangla, 2003).

A general information schedule was also administered to the respondent for getting information about name, age, gender, place of residence, education level, size of family, birth order, number of siblings, profession of father, profession of mother and educational level of both parents.
BRIEF DESCRIPTION OF TESTS

1. **SHORT GRIT SCALE (DUCKWORTH & QUINN, 2009)**

   The Short Grit Scale was developed by Angela Lee Duckworth and Patrick D. Quinn in 2009. It is a brief self report version of the original Grit Scale (Duckworth et al., 2007). It retains the two factor structure of the original scale, the two factors being Perseverance of Effort and Consistency of Interest. Both the factors are found to be successful predictors of the construct of grit, which is trait level perseverance and passion for long term goals. The scale comprises of 8 items, rated on a 5 point rating scale from 1- not like me at all to 5- very much like me. There are 4 items each covered by both the factors. Out of 8 items, 4 items are reverse-keyed and for them, the scoring is reversed i.e. 1- very much like me to 5- not like me at all. The scoring is done separately for both the factors. The total score is obtained by combining the scores on the factors and then dividing it by eight. Thereby, making the maximum score achieved on this scale to be 5 (extremely gritty), and the lowest being 1 (not at all gritty). The items are easy to understand and the response alternatives are simple to grasp. Each construct displays acceptable internal consistency, with alphas ranging from .73 to .83. The internal consistency of the Short Grit Scale has been found to be adequate (α=.82). The scale displays predictive and consensual validity. This scale was used in India by Singh and Jha (2008) and Ali and Rahaman (2013).


   Perfectionism was assessed using the Multidimensional Perfectionism Scale, which was developed by Hewitt, Flett, Turnbull-Donovan and Mikail (1991). The Multidimensional Perfectionism Scale is a 45 item measure of perfectionism. The scale assesses three types of Perfectionism viz., Self-Oriented Perfectionism (i.e., unrealistic standards and perfectionistic motivation for the self), Other-Oriented Perfectionism (i.e., unrealistic standards and perfectionistic motivation for the others) and Socially Prescribed Perfectionism (i.e., the belief that significant others expect oneself to be perfect). It consists of 45 items with 7 point rating of their degree of agreement with the items i.e. 7- strongly agree to 1- strongly disagree. 18 items are
reverse-keyed and for them, the scoring is reversed i.e. 7- strongly disagree to 1- strongly agree. The subscales are scored such that the higher scores reflect greater perfectionism. The internal consistencies for the sub scales was found to range from .74 to .88. The scale and its sub scales have adequate concurrent validity. This scale has been used by Sherry, Hewitt, Flett and Harvey (2003), Flett, Besser, Hewitt and Davis (2007) and Stairs (2009).

3. GENERALIZED SELF EFFICACY SCALE (SCHWARZER & JERUSALEM, 1995)

This scale was developed by Mathias Jerusalem and Ralf Schwarzer, first as a 20-item version and later as a reduced 10- item version (Jerusalem and Schwarzer, 1992). It includes ten statements which assess general sense of perceived efficacy. The subject has to respond on a 4 point likert scale, ranging from, whether the statement is 1- Not at all true, 2- Barely true, 3- Moderately true or 4- Exactly true. The total score ranges from 10 to 40. The scale typically yielded internal consistencies between alpha = .75 and .90. It has also proved valid in terms of convergent and discriminant validity. In this study English version of this scale has been used.

The construct of Perceived Self-Efficacy reflects an optimistic self-belief (Schwarzer, 1992). This is the belief that one can perform a novel or difficult task, or cope with adversity- in various domains of human functioning. Perceived self-efficacy facilitates goal-setting, effort investment, persistence in face of barriers and recovery from setbacks. It can be regarded as a positive resistance resource factor. The items are designed to tap this construct. Perceived Self-efficacy is an operative construct, i.e., it is related to subsequent behaviour and, therefore is relevant for clinical practice and behaviour change (Schwarzer and Jerusalem, 1995).

The measure has been used internationally with success for two decades. It is suitable for a broad range of applications. It can be taken to predict adaptation after life changes, but it is also suitable as an indicator of quality of life at any point in time (Schwarzer and Jerusalem, 1995). This scale has been used in India by Sharma (2005), Hoabam (2007), Kaur (2007), Bala (2007), Dhaliwal (2010), Rampal (2011), Sharma (2012), Jaswal (2013) and Mohan, Sehgal and Anand (2015).

The Flow State Scale-2 (FSS-2) was developed by Jackson and Eklund (2004). The FSS-2 is designed as a post-event assessment of flow with instructions worded to ground the respondent in the just completed activity. It consists of 36 items, rated on a 5-point Likert Scale, ranging from “1” (Strongly disagree) to “5” (strongly agree). It yields nine dimensions. There are four items for each of the nine dimensions of flow. Each dimension comprises a subscale of the total scale.

- **Challenge-Skill Balance:** A sense of balance between the perceived demands of the activity and the skills of the participant.
- **Action-awareness Merging:** A deep involvement when the activity feels spontaneous and automatic.
- **Clear Goals:** The extent to which participants know exactly what they are going to do.
- **Unambiguous Feedback:** The feedback inherent in the activity that allows participants to know that they are performing well.
- **Concentration on Task at Hand:** A total focus on the activity by the participant.
- **Sense of Control:** Control over the demands of the activity without conscious effort.
- **Loss of Self-Consciousness:** A sense of not being concerned with oneself while engaging in the activity. According to Jackson and Marsh (1996), a person still knows what is happening in mind and body, but does not use the information normally used to represent oneself.
- **Transformation of Time:** The sense of time being distorted, whether speeded up or slowed down; hence, it is experienced differently from normal.
- **Autotelic Experience:** An enjoyable experience that is intrinsically rewarding.

The item scores for each dimension are employed to obtain flow dimension scores. The subject obtains 9 scores on dimensions of Flow and a summated score on
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Flow. The alpha reliability of the subscales has been found to be ranging from .80 to .86, with a mean alpha of .83 by Jackson and Marsh (1996). The scale shows construct validity (Jackson & Eklund, 2002). The scale has been used by Phillips (2005) and Rupayana (2008).

5. EMOTIONAL INTELLIGENCE (MOHAN, MALHOTRA & MANGLA, 2003)

The Emotional Intelligence Questionnaire (developed by Mohan, Malhotra and Mangla, 2003) was used to assess the emotional intelligence level of the elderly. It consists of 95 statements which give one an opportunity to explore and describe oneself. The EI questionnaire is based on the Emotional Intelligence models of Bar-On (1997) and Goleman (1998). It indicates the degree to which each statement is true of the way one feels, thinks or acts in most of the situations and most of the times. The 95 statements were sub-classified into 29 emotional competencies. The participants were required to indicate their responses on a 5-point Likert scale ranging from 5 (Mostly true of me) to 1 (Not true of me). The response would indicate the degree to which each statement is true of the way a person feels, thinks, or acts most of the time and in most of the situations. The respondent has to indicate how he/she actually is and not how he/she would like to be. There is no time limit to complete this questionnaire. Overall emotional intelligence was represented by the average of scores from the statements measuring these dimensions. The factor analysis identified the dimensions of the structures, the structure of interrelationships and determined the extent to which each variable is explained by each dimension and the factor loadings thus yielded for the scale revealed significant results. The Bartlett’s test of Sphericity was significant and the value of Kaiser-Mayer-Olkin (KMO) measure of sampling adequacy was .81. In this scale, the factor analysis generated nine factors that accounted for 58.21% of the total explained variance in overall Emotional Intelligence. All the factors of emotional intelligence had factor loading of above ± .40, considering both rotated component matrix and component/un-rotated matrix. All the 29 dimensions were clustered into five factors while retaining all the emotional competencies. The reliability coefficient indicated the Cronbach’s Coefficient alpha value of .82 that demonstrates strong reliability of the scale and high internal
consistency of all the emotional competencies which is also an indirect indicator of high convergent validity. This scale has been used in India by Mangla (2003) and Jaswal (2012).

**PROCEDURE**

The purposive sampling technique was used in the present investigation, to collect the data from the sample as the sample comprised of only the top rankers at the university level, in their respective disciplines (in the field of academics) and the university players who top in their respective games in the field of sports. The sample selected for the study comprised of 200 students (100 in the field of academics and 100 in the field of sports) within the age range of 20 -26 years. The battery of questionnaires comprised of tests on Grit, Perfectionism, Self-Efficacy, Flow and Emotional Intelligence, was administered to the selected sample. The sample was collected from three universities- Panjab University (Chandigarh), Punjabi University (Patiala) and Guru Nanak Dev University (Amritsar). The subjects were given the questionnaires in a booklet form and were requested to respond to them truthfully. They were assured that their results and the information obtained would be kept strictly confidential and will be used for research purposes only.

The testing schedule was conducted personally. The testing schedule was started by firstly, asking the participants to fill in the general information portion and then proceed to respond to the tests one after the other until all tests and all questions had been responded to. All the respondents were given instructions for each questionnaire as specified in the respective manuals, as follows:

**INSTRUCTIONS FOR THE QUESTIONNAIRES**

1. **SHORT GRIT SCALE (DUCKWORTH & QUINN, 2009)**

   Instructions were: “Please respond to the following 8 items. Be honest – there are no right or wrong answers!”


   Instructions were: “Listed below are a number of statements concerning personal characteristics and traits. Read each item and decide whether you agree or disagree and to what extent”.

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3. GENERALIZED SELF EFFICACY SCALE (SCHWARZER & JERUSALEM, 1995)

   Instructions were: “Listed below are ten statements to which you have to respond by marking whether they are: Not at all true, Barely true, Moderately true or exactly true”.


   Instructions were: “Please answer the following questions in relation to your experience in the event or activity just completed. These questions relate to thoughts and feelings you may have experienced while taking part. There are no rights or wrong answers. Think about how you felt during the event or activity and answer the questions using the rating scale below. For each question, circle the number that best matches your experience”.

5. EMOTIONAL INTELLIGENCE (MOHAN, MALHOTRA & MANGLA, 2003)

   Instructions were: “Emotional Intelligence Questionnaire consists of statements giving you an opportunity to explore and describe yourself. It indicates the degree to which each statement is true of the way you feel, think, or act most of the time and in most of the situations. Please indicate how you actually are and not how you would like to be. There is no time limit but work quickly and make sure that you consider and respond to every statement. This questionnaire is completely confidential. Please circle the appropriate number (5, 4, 3, 2, 1) in each column which best describes your response to each statement, ranging from Mostly true of me (5) to Not true of me (1)”.

SCORING AND STATISTICAL ANALYSIS

Scoring for all the tests was done with the help of scoring keys as per all the instructions given in the scoring manuals of the tests. The raw scores were then tabulated and subjected to various statistical analyses.

Keeping in view the objectives of the study, Means, Standard Deviations and t- ratios were calculated. Analysis of Variance, Inter-Correlation analysis and Stepwise Multiple Regression analysis were also carried out.