

A comparative and correlational study of self-efficacy, grit, achievement motivation and gender differences on performance

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ABSTRACT

Psychological factors such as self-efficacy, grit, and achievement motivation have been heralded as powerful predictors of performance. Their joint contribution to the prediction of success has not been fully investigated, however. The purpose of this study was to examine students' (N=156) self-efficacy, grit (assessed as the perseverance of effort), and achievement motivation, and their relationship with gender. Correlation analysis was conducted between self-efficacy, grit, and achievement motivation, and the results were found to be positively correlated with each other. There was a marked significant correlation between self-efficacy, grit, and achievement motivation but when it was compared with gender self-efficacy and grit, grit, and achievement motivation had significant differences but self-efficacy and achievement motivation did not. The findings of the present study can find implications and help in the field of positive psychology. Counselling students and helping them to increase their self-efficacy and grit through various intervention programs. Screening of an individual's belief in himself and having the grit to achieve success in life can also be greatly influenced as the findings say.

Keywords: *Self-Efficacy, Grit, Achievement Motivation, Powerful Predictors*

Albert Bandura originally proposed the concept, a private judgment of "how well one can execute courses of action required coping with prospective situations". A personality's belief in his or her capacity to execute behaviours necessary to supply execution attainments (Bandura, 1977, 1986, 1997). It reflects confidence with the ability to exert control over one's own motivation, actions, and social environment. An individual's self-efficacy can have a tremendous effect on grit which in turn will affect an individual's achievement and achievement motivation. If a person truly believes in his or her capacity then the person will work towards a goal with efforts and focus. In accordance with this, measuring self-efficacy in an individual can help us understand an individual's grit and also use different interventions to increase self-efficacy and grit to improve an individual's achievement in life. Self-efficacy, or your belief in your own capacities to manage different circumstances, can play a role in not only how you feel about your own self, however, whether you effectively accomplish your objectives throughout everyday life.

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Bandura's original 1977 paper, "Self-Efficacy: Toward a Unifying Theory of Behavioural Change," has gotten one of the most considered points in brain research. Why has self-adequacy become such a significant point among clinicians and teachers? As Bandura and different analysts have illustrated, self-efficacy can affect everything from mental states to conduct to inspiration. Self-efficacy additionally figures out what objectives we decide to seek after, how we approach achieving those objectives, and how we think about our own performance. Moreover, some other studies which hold value to the current research are 'Perceived Self-efficacy in Cognitive Development and Functioning' by Albert Bandura Published on 08 Jun 2010 talks about the assorted manners by which saw self-efficacy adds to intellectual improvement and working. This study holds value to the current research because it talks about improving self-efficacy to cognitively function well. Bandura, A. (1989) in his article 'Regulation of cognitive processes through perceived self-efficacy.' Self-beliefs of efficacy can improve or debilitate execution through their impacts on psychological, full of feeling, or inspirational mediating forms. This study holds value to the current research because it talks about memory abilities and includes regulation of cognitive processes through perceived self-efficacy.

Angela Duckworth is the world's leading expert on "grit," the much-advertised fixing in close to personal achievement. As Duckworth characterizes it, grit is enthusiasm and supported diligence applied toward long term accomplishment, with no specific worry for rewards or recognition along the way. It joins flexibility, desire, and restraint in the quest for objectives that take months, years, or even decades. Grit is the capacity to continue something you feel enthusiastic about and endure when you face snags. This sort of enthusiasm isn't about extreme feelings or fascination. It's tied in with having bearing and responsibility. At the point when you have this sort of energy, you can remain focused on an assignment that might be troublesome or exhausting. Grit is significant in light of the fact that it is a driver of accomplishment and achievement, autonomous of and past what ability and insight contribute. Being normally keen and gifted are incredible, however, to really progress admirably and flourish, we need the capacity to continue on. Without grit, the ability might be just neglected potential. It is just with hard work that the ability turns into expertise that prompts achievement (Duckworth 2016).

Moreover, some other studies which hold value to the current research are the Role of Self-control and Grit in Domains of School Success in Students of Primary and Secondary School Xavier Oriol¹, Rafael Miranda, Juan C. Oyanede and Javier Torres. Discretion and grit have gotten two of the most significant factors that clarify achievement in various parts of individuals' day by day life (Duckworth and Gross, 2014). Discretion advances postponed satisfaction and legitimately impacts musings, feelings, and driving forces. This study holds value to current research because it focuses on discretion and grit and also mentions that achievement can be a part of our day to day life and not just in academics. The article 'Investigating grit and its relations with college students' self-regulated learning (SRL) and academic achievement.' by Christopher A. Wolters & Maryam Hussain says one part of grit, the steadiness of effort, was a reliable and versatile indicator for all markers of SRL including esteem, self-efficacy, cognitive, metacognitive, and motivational, time and study condition, the board techniques, and procrastination. The second part of grit, consistency of interest, was connected uniquely with the last two aspects of SRL. This study holds value to current research because it mentions self-learning as a factor that can affect grit and achievement motivation.

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Achievement motivation is the requirement for greatness and critical achievement, notwithstanding what prizes might be offered after the accomplishment has been met. Atkinson and his partners shaped the idea that achievement motivation comes from two separate needs. One is the motivation to accomplish and is identified with one's longing to achieve fruitful objectives and the other is the thought process to maintain a strategic distance from disappointment. A few people might be reluctant to assume the duties of achieving objectives or utilize them in exercises since they are hesitant to come up short. The intention to stay away from disappointment incorporates stresses over the results of falling flat, self-analysis, and redirection of consideration quickened pulse or apprehension, which would all be able to prompt terrible showing.

In contrast, the individuals who want to accomplish fruitful objectives are increasingly inspired to persevere at objectives they realize they can achieve.

Achievement motivation has been conceptualized from various perspectives. Accomplishment objectives are seen as increasingly strong psychological portrayals guiding people to a particular end. There are three sorts of these accomplishment objectives: a performance-approach goal, a performance-avoidance goal, and a mastery goal. An exhibition approach objective is centred on accomplishing ability comparative with others, a presentation shirking objective is centred on staying away from inadequacy comparative with others, and a dominance objective is centred on the improvement of the skill itself and of errand authority. Accomplishment thought processes can be viewed as immediate indicators of accomplishment in significant conditions. Along these lines, accomplishment thought processes are said to have a backhanded or distal impact, and accomplishment objectives are said to affect accomplishment important results (Elliot and McGregor, 1999).

These thought processes and objectives are seen as cooperating to direct accomplishment conduct. The hierarchical model presents accomplishment objectives as indicators for execution results. The model is by and large additionally conceptualized to incorporate more ways to deal with accomplishment inspiration. One shortcoming of the model is that it doesn't give a record of the procedures liable for the connection between accomplishment objectives and execution. As this model is upgraded, it turns out to be increasingly valuable in foreseeing the results of accomplishment-based practices (Elliot and McGregor, 1999).

Moreover, some other studies that hold value to the current research are 'What Role Does Grit Play in the Academic Success of Black Male Collegians at Predominantly White Institutions?' by Terrell L. Strayhorn tests the significance of non-cognitive characteristics such as grit, to anticipating grades for an example of Black guys going to a predominantly White organization. This study holds value to current research because it tries to know how grit and academic success of black males at the white institutions are affected. 'Grit as a mediator of the relationship between motivation and academic achievement' by Maria Reraki analyzed the connection between coarseness, scholarly inspiration, and academic achievement. The second point of the exploration is to examine the middle person's job of grit on the connection between scholarly inspiration and scholastic accomplishment. This study holds value to current research because it talks about being motivated in the first place is important and then grit comes into the picture and both these elements together can help you to achieve success.

METHODOLOGY

Significance and rationale

There are various elements answerable for achieving success, for example, cognitive development, mastery, curriculum experience, physical deficits, mindsets, grit, self-adequacy, orientation, learning, life fulfillment, objectives, parental styles, procrastination. This exploration particularly focuses on the impact of self-efficacy on grit and achievement motivation.

This is correlational descriptive research that attempts to look at whether simply the capacity of a person to believe in their abilities can really bring about persistent effort and subsequent achievement. Achieving something in life is one of the objectives of each person. To accomplish anything an individual needs to invest effort. On the off chance that the individual accepts that he/she has the capacity and furthermore has steady enthusiasm to make something at that point progress will be seen. At the point when an individual has the ability and applies effort to it skill is accomplished and when expertise is again duplicated with effort accomplishment is seen. This examination is significant in light of the fact that grit is a driver of achievement, independent of and beyond what talent and intelligence contribute. Being normally keen and gifted are incredible, yet to really progress nicely and flourish, we need the capacity to drive forward and have confidence in ourselves. Without grit, the ability might be just neglected potential. It is just with exertion that ability turns into an aptitude that prompts achievement. The population for this exploration is the age group of 17 to 22 years of age understudies. These discoveries can be valuable in various everyday issues (self-improvement, love life, wellbeing, vocation, riches) in such a case that an individual has faith in his/her abilities and has reliable enthusiasm to accomplish something then the individual will be propelled to succeed.

Objectives

The study aimed at fulfilling the following objectives.

- To examine correlation between self-efficacy and grit.
- To examine correlation between grit and achievement motivation.
- To examine correlation between self-efficacy and achievement motivation.
- To check if gender affects self-efficacy, grit and achievement motivation.

Hypothesis

- There is a significant correlation between self-efficacy and grit.
- There is a significant correlation between grit and achievement motivation.
- There is a significant correlation between self-efficacy and achievement motivation.
- There is no significant difference in self- efficacy between males and females.
- There is no significant difference in grit between males and females.
- There is no significant difference in achievement motivation between males and females.

Variables

Independent variable

For correlational study – Self-efficacy, grit, achievement motivation.

For comparative study – Gender

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Dependent variables

For correlational study – performance

For comparative study – Self-efficacy, grit, achievement motivation and performance.

Sample Characteristics

It consists of 156 student participants ranging from 17 to 24 years of age out of which 65 were males and 91 females. The students participated by filling up the self-efficacy, grit and achievement motivation standardized scales. Sample selection processes will be simple random sampling.

Tool descriptions

- **Self-efficacy:** An 8 item self-efficacy scale was used by Peter Lehmann and Catherine A. Simmons, Gilad Chen, Stanley M. Gully, and Dov Eden, *Organizational Research Methodology*, 4(1), 79. Copyright © 2001 by SAGE Publications. It is a 5 point Likert scale.
- **Achievement motivation questionnaire (John Jay Ray, 1980):** A 14 item short form of the Ray Achievement Motivation scale was used. It has been tested and shows the reliability of over .70 when applied to English speakers. It is a 14 item questionnaire that can be answered by yes no and maybe.
- **The Short Grit Scale (Duckworth, Peterson, Matthews, & Kelly, 2007):** The Short Grit Scale maintains the structure of the original Grit Scale (Duckworth, Peterson, Matthews, & Kelly, 2007) and enhances its psychometric properties. It is a 12 item questionnaire with a 5 point Likert scale.

RESULTS

The results for the present research have been given below. The independent variables have been correlated with dependent variables as listed in the table given below. The correlation between the groups with respect to the dependent variables has been given as follows. Also, a comparative analysis between two genders males and females was conducted and the results have been shown below.

Age	17 - 24 years old students
Nature of the study	Comparative and correlational study

Correlation between self-efficacy, grit and achievement motivation using Pearson's correlation coefficient.

	Self-efficacy	Grit	Achievement Motivation
Self-efficacy	1		
Grit	0.31	1	
Achievement Motivation	0.25	0/29	1

The above table signifies the results for the correlation between self-efficacy, grit, and achievement motivation scores. The r score for the 156 samples was found to be significant at 0.01 levels

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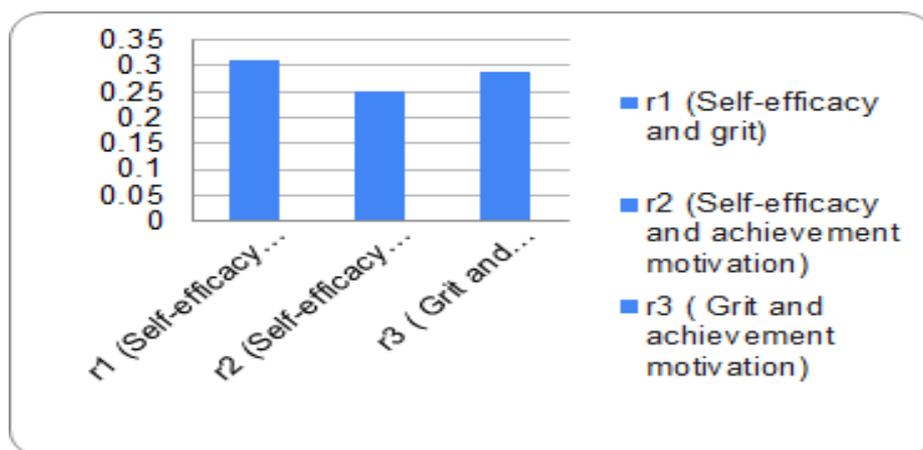


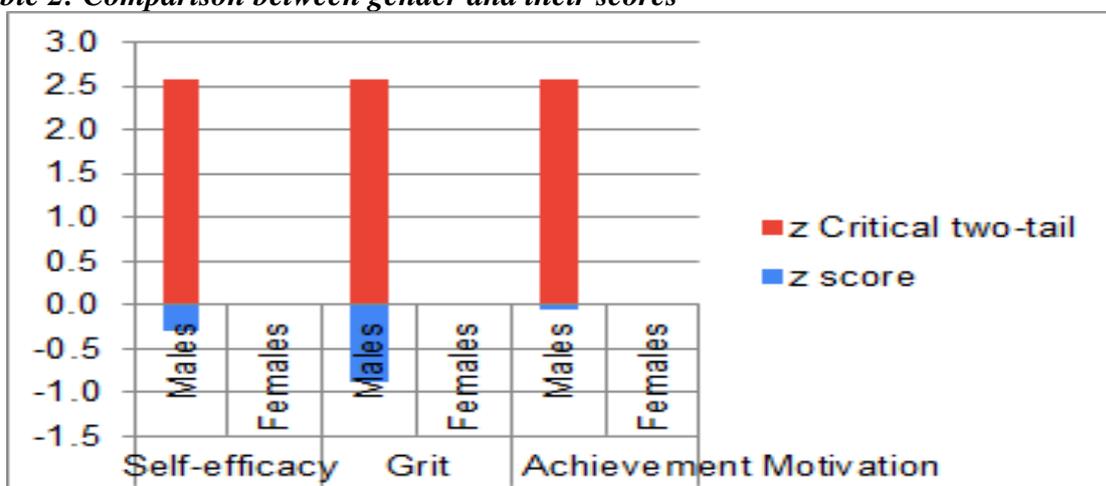
Table 1: Correlation between self-efficacy, grit and, achievement motivation.

Z-test to check whether there is difference seen in the scores for self-efficacy, grit and achievement motivation based on gender.

Column 1	z score Males, females
Self-efficacy	-0.3
Grit	-0.9
Achievement motivation	-0.05

The above table signifies the results for impact of gender on self-efficacy, grit and achievement motivation. The z score was not found to be significant at the 0.01 level.

Table 2: Comparison between gender and their scores



DISCUSSION

The aim of the study was to find if there is a correlation between self-efficacy, grit, and achievement motivation and also to check how gender impacts them. The results obtained have been displayed above and the same has been discussed here.

1. The first hypothesis stating that ‘there is a significant correlation between self-efficacy and grit’ was accepted.

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2. The second hypothesis stating that ‘there is a significant correlation between grit and achievement motivation’ was accepted.

3. The third hypothesis stating that ‘there is a significant correlation between self-efficacy and achievement motivation’ was accepted.

The r score after correlating self-efficacy with grit, grit with achievement motivation, and achievement motivation with self-efficacy were found to be 0.31, 0.29, and 0.25 respectively which was found to be significant at 0.01 levels.

The results obtained were found to be consistent with the literature referred to. For context Usher, Butz, Rojas,(2019) in their article 'Grit and self-viability: Are both fundamental for kids' scholarly achievement?' talks about grit positively relates with self-efficacy in early kids, 'Self-Efficacy as a Mediator of Children's Achievement Motivation and in-Class Physical Activity' by Zan Gao, Marc Lochbaum, Leslie Podlog First Published on December 1, 2011, got results where there was seen a progression and relapse in the relation and in the article 'Grit, self-efficacy, achievement orientation goals, and academic performance in University students' by Amal Alhadabi investigated the relationships between grit, self-efficacy, achievement orientation goals, and academic performance in equal and sequential intervention models. The outcomes showed that ‘grit’ positively associates with academic performance including self-efficacy and achievement orientation goals. 'Grit as a mediator of the relationship between motivation and academic achievement' by Maria Reraki analysed the connection between coarseness, scholarly inspiration, and academic achievement. It was found that grit is a part of motivation and achievement.

4. The fourth hypothesis stating that ‘There is no significant difference in self-efficacy between males and females’ was accepted.

As the z score of females compared with males self-efficacy was -0.3, which was not found to be significant at 0.01 levels. Hence the hypothesis was accepted.

The result was found to be in contrast with the literature that was referred to. For context Mathematical Self-Efficacy Gender Differences in Gifted/Talented Adolescents research by Michael E. Junge, Beverly J. Dretzka says that females reported stronger self-efficacy expectations on only a few items that involved stereotypical female activities.

5. The fifth hypothesis stating that ‘There is no significant difference in grit between males and females’ was accepted.

As the z score of females compared with male’s grit score was -0.9, which was not found to be significant at 0.01 levels. Hence the hypothesis was accepted.

The literature did not entirely back the hypothesis but the result was found to be consistent with the literature that was referred to. For context Effects of Grit on the Academic Success of Adult Female Students at Korean Open University by Mae Hyang Hwang, Hyo Jin Lim, Hye Suk. The results of the study were found to be that age had both immediate and aberrant impacts on grit and scholastic accomplishment of the female understudies.

6. The sixth hypothesis stating that ‘There is no significant difference in achievement motivation between males and females’ was accepted.

As the z score of females compared with males achievement motivation, which was not found to be significant at 0.01 level.

It did not entirely back the hypothesis as self-efficacy and achievement motivation based on gender have not been compared to check the difference but different factors that can affect achievement motivation have been checked. A study on how does grit

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impact college students' for their academic achievement in Science? Bazelais, Paul; Lemay, David John; Doleck, Tenzin says grit was not seen as a huge indicator of understudy scholastic accomplishment or course achievement.

RESULT AND CONCLUSION

The results for 'there is a significant correlation between self-efficacy and grit', 'there is a significant correlation between grit and achievement motivation', 'there is a significant correlation between self-efficacy and achievement motivation' were accepted. As the r score after correlating self-efficacy with grit, grit with achievement motivation, and achievement motivation with self-efficacy was found to be 0.31, 0.29, and 0.25 respectively which was found to be significant at 0.01 levels.

This implied that there is a positive correlation between self-efficacy, grit, and achievement motivation. The results for 'There are no significant difference in self-efficacy between males and females' was accepted.

As the z score of females compared with males on self-efficacy was -0.3, which was not found to be significant at 0.01 levels. Hence the hypothesis was accepted. The results for 'There is no significant difference in grit between males and females' were also accepted.

As the z score of females compared with males on self-efficacy was -0.9, which was not found to be significant at 0.01 levels. Hence the hypothesis was accepted.

The results for 'There are no significant difference in achievement motivation between males and females' was accepted. As the z score of females compared with males on self-efficacy was -0.05, which was not found to be significant at 0.01 levels. Hence the hypothesis was accepted.

This implied that there is no difference in gender on self-efficacy, grit, and achievement motivation.

IMPLICATIONS OF THE PRESENT STUDY

The findings of the present study can find implications and help in the field of positive psychology. Counselling students and helping them to increase their self-efficacy and grit but various intervention programs can help them to increase self-awareness, confidence, self-esteem which can, in turn, help them to become more optimistic, altruistic, happier, and achiever in real life by setting realistic, attainable goals for them. It is vital that these facets are gauged well and appropriate plans of action are selected. Screening of an individual's belief in him and having the grit to achieve success in life can also be greatly influenced by the above findings.

LIMITATIONS OF THE PRESENT STUDY

1. Factors like culture, mastery over the environment, parental styles should also be taken into consideration.
2. The sample was collected majorly from Pune, so generalization of results to all students can be tricky because of different conditions.
3. Collection of data was affected due to the COVID-19 pandemic.

SUGGESTIONS FOR FUTURE RESEARCHES

1. A study can be conducted with a sample from various regions of the country for better generalization.

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2. More number of students can be taken into consideration for better and justified representation of the nature of self-efficacy and grit.
3. Research can be conducted with experimental and control groups by planning interventions to increase self-efficacy and grit and testing them before and after interventions.
4. Research can be conducted on factors that lead to successful outcomes and based on those results further interventions for students can be planned.
5. Research can be conducted on under-resourced students considering the community they come from.

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Conflict of Interest

The author declared no conflict of interest.

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