GRIT AND ITS RELATED FACTORS IN UNDERGRADUATE STUDENTS

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ABSTRACT

Objectives: *Grit is the ability to stay consistent and determined toward long term goals, even after facing many obstacles and failures while also maintaining the ability to resist defeat. The current study explored grit, as it manifests itself in Pakistani milieu among undergraduate students.*

Design of the study: *This study adhered to qualitative paradigm using thematic analysis as its main design.*

Place and Duration: *Colleges and universities of Faisalabad, Lahore, Chiniot, and Jhang districts of Punjab province of Pakistan. Carried out between January 2020 and April 2020.*

Sample and Method: *The current study was exploratory qualitative study utilizing thematic analysis. The sample of the study was 18 undergraduate students with the age range of 17 to 25 years; they were approached from different universities and colleges situated in the city of Faisalabad (Punjab, Pakistan). Universities and college students were contacted through email asking them to take part in a study. Purposive sampling was used for the selection of participants. Participants filled the grit questionnaire designed by Duckworth et al. (2007). After finding out the level of grit, participants with higher levels of grit were requested for an in-depth semi-structured interview.*

Results and Conclusion: *Thematic analysis method was used to analyze the interviews. Six super themes named 'passion and perseverance, social support, growth mindset, self-control, role of environment and religiosity' emerged as the factors affecting grit of Pakistani undergraduate students. This study highlighted some already known (in literature) aspects like passion, perseverance, social support, self-control and some novel aspects like role of environment, growth mindset and religiosity.*

Keywords: *Grit; Passion; Perseverance; Thematic Analysis, Qualitative Research.*

INTRODUCTION

Perseverance in the time of difficulties is known as grit (Duckworth et al., 2007). In the field of positive psychology, grit is a new concept related to non-cognitive skill (Heckman & Rubinstein, 2001; Otani, 2015), its characteristics make people stronger and resistant to failures (Seligman et al., 2005; Seligman et al., 2009), face the challenges (WSSDA, 2014) and it also emphasizes to achieve goal (Duckworth et al., 2007). Because having a 'growth mindset' encourages students to keep learning, they become accustomed to trying and grow up to find themselves be better equipped to deal with higher education demands (Kamentez, 2015).

The term grit is based on Bandura's social cognitive framework (Dobbins, 2016); when a person believes in his or her abilities, this leads him/her toward success, so, when an individual is confident that he/she can be successful, he/she gets success (Bandura, 1995; Bandura, 1997). Duckworth (2016) argues that grit, and its related traits such as discipline, self-control, and the need for success, are different, and the scales show that difference. Grit is further explained in terms of determination and interest toward goals (Vansteenkiste et al., 2004). Moreover, conscientiousness is usually also related to grit as conscientious people are usually reliable, careful, self-controlled, and organized but gritty people have long-term competence and effort, they especially have the need to look beyond short-term temptations (Duckworth et al., 2007). Furthermore, it is pertinent to mention here that more purposeful people have clearer goals, and they are more enthusiastic, hardworking, and industrious in achieving those goals (Bandura, 2001; Duckworth, 2016) thereby, are grittier (as per recent definitions). Bandura's theory emphasizes the importance of modeling by observing the behaviors and attitudes of others and provides conditions that allow students to use or apply these behaviors (Robert, 2009). Therefore, the present study may help other students of Pakistan by showing them what grit looks and feels like in Pakistani milieu.

Another factor that makes it important for us to study grit in Pakistani milieu is that classroom culture, school and students' cultural background influence their grit and mindsets (Baker, 2015). Social background and culture affect the experience of grit greatly, however the experiences of grit of non-western countries are scarce in literature and there is a growing need to add this knowledge (Mohammad, 2016). The present study aims to fill the gap

highlighted by Mohammad (2016) as it explores the experience of grit in a non-western collectivist culture of Pakistan.

Higher education and grit are closely linked (Duckworth et al., 2007). Undergraduate students need long term motivation in order to complete their degree and attrition of undergraduate students is a global problem and working on increasing students' grit could help solve such a problem (De Vera et al., 2015). Grit can be increased by focusing on four psychological assets i.e. purpose, action, focus, and desire (Duckworth & Quinn, 2009). One of the ways of developing grit in students is through storytelling by teachers; teachers can tell students that successful people have faced challenges and succeeded only after going through failures (Goodwin & Miller, 2013; Outliers, 2010) as the way people think about the feasible results of their actions and deeds gives a scientific origin of encouragement, so the stories a person tells himself/herself are of supreme importance (Bandura & Simon, 1977). Teachers have influence on students' long-term outcomes in many ways, like income, may be due to their .influence on their skills and abilities, which are not taken into account in state-standard tests (Chetty et al., 2014; Bowles & Gintis, 2002). The little number of college going lecturer's effects were defined on standardized tests (Chamberlain, 2013).

However, all such literature (reported above) regarding developing grit was produced in the West, therefore, the present study was planned to choose undergraduate Pakistani university students, thereby producing knowledge that might help reduce attrition of future Pakistani undergraduate students and help them succeed in their college/university.

METHOD

Research Design

This is a qualitative, exploratory research that explored the construct of grit and factors affecting grit of undergraduate students (enrolled in any undergraduate degree program at different colleges and universities of Punjab, Pakistan). Thematic analysis approach was used to explore the construct of grit. The researchers themselves served as data gathering agents.

Participants

At the initial stage, convenient sampling was used to get as many respondents fill out the grit questionnaire as possible. Then, purposive sampling was used for the selection of those participants who filled the grit questionnaire. Initially 400 students filled out this questionnaire, those who scored higher (above 50) and also chose to agree to an in-depth interview were included in the study. In-depth semi-structured interviews of (N=18) individuals were conducted, individuals with highest level of grit were selected as research participants. It has been recommended that qualitative studies require minimum sample size of at least 12 to reach data saturation so the sample size was kept above this mark (Clarke & Braun, 2014). Data was collected from undergraduate students, 7 of them were male and 11 were female participants. The sample of study was approached from different public-sector college and university undergraduate students of Faisalabad, Lahore, Chiniot, and Jhang districts of Punjab province of Pakistan.

Inclusion and Exclusion Criteria

Respondents with age less than 17 years and more than 25 years were not part of study. The maximum score on this scale is 60 (extremely Gritty), and the lowest scale on this scale is 12 (not at all Gritty). Individuals who scored on grit scale above 50 were selected for interview as part of the current study.Those students enrolled in any of the 4 years of any undergraduate degree program were part of this study. Students who had completed their graduation or masters were not part of this study. Any respondent who did not give complete responses was excluded.

Measures

Duckworth et al. (2007) 12-Item Grit Scale was used to screen out the grit level in the participants. It was designed to assess a respondent's passion and perseverance for long-term goals (Duckworth et al., 2007). Grit questionnaire consists of two sections i.e., 1) passion, and 2) perseverance. Responses are gathered on a 5-point likert scale having the response options of 'not like me at all, not much like me, somewhat like me, mostly like me and very much like me'. Agreement with each statement yield higher scores i.e., closer to 5 and disagreement with a statement yields a lower score i.e., closer to 1. Six of the items i.e., item number 2, 3, 5, 7, 8 and 11 are scored in reverse. High scores

show high level of grit and low scores show lower levels of grit. A person can have maximum 60 scores on this scale and a minimum score of 12.

The grit scale was only used in the present study to recruit participants with higher grit scores and then semi-structured interviews were conducted with them to find out about grit and factors affecting grit of undergraduate students from various districts of Punjab, Pakistan.

Procedure

First, ethical approvals were sought from the Institutional Review Board, Government College University, Faisalabad as the researchers were part of this institution. Then the grit questionnaire was distributed in different public sector universities of different districts of the province Punjab. It was initially thought that around 1000 questionnaires would be filled by the potential participants; however the Covid-19 lockdown reduced the researchers' capacity to 400 students.

Students who scored above 50 on the grit questionnaire were requested to take part in an in-depth interview. Fulfilling this criterion, 25 semi-structured interviews were conducted with those consented. Out of these 25 interviews, 7 proved to be too short and were discarded and 18 interviews were kept for analysis as those were detailed enough and rich in information. The main objective of the interviews were to know about the experience of grit and factors that affect it. Many different questions were asked about the experience of grit; some of these questions are as under:

1) How do you usually go about doing your work?
2) How do you usually finish your assignments?
3) What keeps you going even when you don't like the work?
4) What helps you in finishing your assignments?
5) How do you plan your work routine?
6) How do you control yourself when you do not want to continue doing a task?

The interviews were conducted and transcribed in Urdu language, but the data analysis (coding onwards) was done in English language. All the steps involved in data analysis are as under.

Data Analysis

Data from the semi-structured interviews was analyzed by using thematic analysis technique. Thematic Analysis method was used to identify, analyze and generate themes within data. A realistic approach was chosen to reflect the experiences and facts from the interviewees; the researchers stayed close to the data and represented participants' real experiences that are independent of the influence of previous theories and literature (Braun & Clarke, 2006). As per recommendation of Braun and Clarke (2006), 6 main data analysis steps were followed. These steps are as under:

1) Familiarizing yourself with the data

The first step was reading and re-reading the transcripts. During the first stage, it was important to be familiar with the data. We looked at all data from all interviews and started taking notes and initial ideas that can explain the content.

2) Generating initial codes

In 2nd step, we organized the data into a meaningful and systematic way. A code is a brief description of what is said in an interview. So, whenever we noticed something interesting in data, we wrote a code for it. A code is a description, not an interpretation. It's a way to start organizing data into purposeful groups.

3) Searching for themes

In step 3, we started sorting codes into themes. While codes indicate interesting information in data, themes are broader and include active interpretation of codes and data. We started by looking at a list of codes and associated quotes and then tried to integrate the code into broader themes that say something meaningful about data.

4) Reviewing themes

In step 4, we reviewed and revised the topics that were identified during step 3 and read all the code-related extracts to see whether they support the theme or not, if there is any contradiction, and to know about any overlapping in the themes.

5) Defining and naming themes

In step 5, we named and described each theme that we identified in the previous steps. We tried that the theme names should be descriptive. In explaining the themes, all the themes were described in detail. At this point in the analysis, the researchers analyzed the stories which were the sum of all stories of all the participants.

Producing the report

In last step, the researchers wrote the results. In order to do this, we wrote a clear description of what we have done. We already had the descriptions of themes from the previous steps, therefore we used it as the basis for final report.

RESULTS

Results are based on thematic analysis report and thematic map. Thematic analysis report was based on super themes, main themes and sub themes. Participants' quotations were coded with reference to transcript of interviews. In reference, ''PT" stands for participant. "P" stands for page number and DU stands for discourse unit.

After in-depth study of grit, this study concluded 6 super themes of grit like passion and perseverance, social support, growth mindset, self-control, role of environment and religiosity. Each super theme has some main themes under it (see Figure 1).
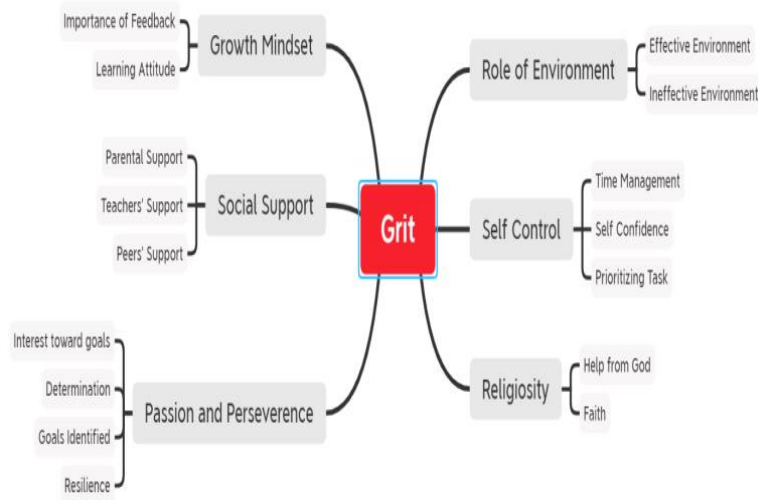
Figure 1 Super themes, and Main Themes of the study

1) Passion and Perseverance

After an in-depth analysis of results, it was found that passion and perseverance has four main themes which are: interest towards goals, determination, goals identification and resilience. Each main theme has sub themes. Interest toward goals has four sub themes which are: internal motivation, enthusiasm, urge to do better and personal choice. Determination has five sub themes which are: hard work, effort, struggle, consistency and practice. Goals identification has three sub themes which are: to serve needy people, to earn money and to fulfil parental expectation. Resilience has three sub themes which are: face hurdle bravely, ignore social discouragement and endurance.

Interest toward goals is a very important main theme of passion and perseverance. According to participants,

We are more competitive when we have interest toward long term goals. We have urge to perform better and achieve goals automatically when we have

interest toward specific goal PT8 (P3, DU42) we must be focused on goals because "focus automatically creates interest in long term goal PT1(P5, DU84).

According to participants' understanding, when an individual is determined to achieve goal, he puts all his efforts without giving up until he succeeds. According to result analysis and participants' responses "determination" means consistency. When an individual is determined, he does not change his goal. It is reported by participants as:

I want to earn money and I want to buy a big car with four guards sitting behind it. I am working hard for luxurious lifestyle PT13 (P2, DU25-27). I had a goal to be confident. I have been trying for 6 months and I have achieved that goal. Now I can speak confidently in any gathering" PT17 (P2, DU20-24).

Goals identification is a 3rd main theme of passion and perseverance which is reported by participant as:

Getting a laptop is my goal and be a good nutritionist. I wanted to become a soft natured girl" PT4 (P1, DU10-12). Another participant reported as I'll focus more on programming after completing my BS degree because I want to be the best programmer" PT18 (P1, DU8-10).

Resilience is one of the main themes of passion and perseverance. Resilience is a potential to confront situation or face challenges positively and recover quickly. Participant reported in their responses as:

When an individual decides to achieve a goal but that could not bring happiness and satisfaction for him, for which he worked hard then how will he overcome it? Of course, with patience. It was meant to happen. I have to move on" PT14 (P4, DU55-60). Another participant reported it as: "I faced the difficulties bravely and encountered them to achieve my goals" PT2 (P2, DU21).

2) Social Support

Social support is a second super theme of grit and has three main themes which are parental support, teachers' support and peers' support. Parental support has 15 sub themes which are: trust, help, guidance, financial support, moral support, emotional support, acceptance, support to face hurdles, struggle, encouragement, supplication, training, motivation, negative reinforcement and

inspiration. Teachers' support has nine sub themes which are motivation, guidance, behavior, encouragement, help, cooperative behavior, responsible behavior, trust and moral support. Peers' support has five sub themes which are: peers' encouragement, peers' support, group study, help from peers and encouragement from fellows' achievement.

Parents' support has a major contribution of students' efforts that they put toward achieving goals. Parental trust, parental guidance, financial support, moral support, emotional support, parental acceptance, parental support to face hurdles, parents' struggle, Parents' encouragement, Parents' prayers, parental training, parental motivation, parental help, parental involvement, negative reinforcement from parents and parents' appreciation are the components that were highlighted by participants during in-depth interviews.

My parents supported me everywhere. They pay as much as they can, no matter what the circumstances"PT18 (P2, DU30-32). Another participant reported as "My parents enrolled me in the best college, met all the needs of my college, arranged a hostel for my stay and paid all the expenses PT17 (P3, DU44-47).
Teachers' support is a main theme of social support. it is reported by participants as:

My teachers supported me in achieving my goals to the best of my ability. I easily overcame all the problems I encountered due to the support of my teachers" PT10 (P3, DU39-43). "My teachers always guided me towards my goals and explained that focus is very important to achieve it. First you get one goal then work on the other goal. You will not be able to focus on both goals at the same time" PT13 (P5, DU92-95).

Peers' support is also a very important sub theme of social support. It is reported by participants as:

I always got encouragement from my classmates. They used to say that I know everything. I had to think and do something better and unique. It helped me a lot" PT1P3, DU60-62). When my friends compliment me on doing something good, it encourages me" PT4P4, DU60).

3) Growth Mindset

Growth mindset is a third super theme of grit and has two main themes which are: learning attitude and importance of feedback. Learning attitude has three sub themes which are: skills development, explore new things and self-study. Importance of feedback also has three sub themes which are: positive feedback, negative feedback and constructive criticism.

According to participants' responses, feedback from others sometimes becomes a motivation to achieve goals. It is reported by participants as:

Friends point out bad things that is also very important to achieve goals PT3 (P3, DU48). Some fellows and relatives discouraged that engineering is a boys' department. You cannot study that particular subject. I faced many problems of this kind, but I bravely faced these problems and got rid of them" PT2 (P2, DU23).

Learning attitude is a second sub theme of growth mindset according to participants' responses, when an individual is interested in exploring new things and developing his skills according to goal that individual is grittier and positive attitude toward learning or learning attitude is a key to achieve goals. A participant reported it as:

Wherever I found informative material, I study it deeply" PT2 (P4, DU63). "I work on fiber do online courses as well, so that I can hunt a job and skills after graduation. I have also received certificates" PT3 (P4, DU78-80). "I'm exploring things on my own, working hard and trying" PT18 (P2, DU27).
Self-Control

Self-control is a fourth super theme of grit and has three main themes which are: time management, self-control and prioritizing task. Time management has four sub themes which are: to set routine, to set timetable, extra time to study and regularity. Self-control has three sub themes which are: hopeful, self-awareness and sense of responsibility. Prioritizing task has six sub themes which are: focus on goals, planning to achieve goals, sacrifice of entertainment, sacrifice of sleep, honest with goals and attention toward goals.

Time management is a very significant theme that is essential to achieve goals. A participant reported it as:

I first set a timetable in which I prioritized my study, then I stopped going on outings and reduced the time spent with friends for hangouts PT13 (P5, DU116-119). I made a timetable, ate, drank, slept and prayed all the time. Then it will be much easier for me" PT15 (P2, DU17-18).

Self-confidence is a sub theme of self-control. According to participant's responses, self-confidence is very important factor that support in achieving goals. A participant reported it as:

I have not achieved my goals yet, but I am sure in the future Insha'Allah there will be a lot worth mentioning" PT1 (P1, DU2-3). Not everyone at home is literate so I had to do everything myself and being the eldest I also had responsibilities at home. I also had some problems which I had to face alone" PT7 (P1, DU18-23).

According to participants' responses, to organize task according to their importance and ignore extra activities of daily life that can affect goals. Prioritizing task is reported by participants as:

"Whenever my focus was diverted from my goals, I faced failure. Whenever I get excited about a test, I focus on it and achieve it". PT1 (P4, DU76). "I ignored the family function, gave my quality time to my goals, did not take care of the diet, nor did I participate in the gathering" PT4 (P5, DU62-64).
Role of Environment

Role of environment is a fifth super theme of grit and has three main themes which are: effective environment, ineffective environment and social recognition. Effective environment has four sub themes which are: learning environment, encouraging environment for competition, motivating environment and competitive environment. Ineffective environment has two sub themes which are: non-competitive and discouraging. Social recognition has three sub themes which are: to be a valued person, to get honor and to get money.

Got a lot of encouragement from the school and class environment. The co-education system was very motivating because the competition was with the opposite gender as well. It motivated me to work harder. Subsequently, school co-curricular activities also play a role in achieving the goals" PT2 (P4, DU52-57).

According to participants' responses, social recognition plays a significant role in achieving goals. It is reported by participants as:

I want a white-collar job where everyone solutes me. I want to be respected and be a valued person PT13(P2, DU19-21).

4) Religiosity

Religiosity is sixth super themes of grit and has two main themes which are help from God and faith. Help from God has three sub themes which are: supplication, seek help from Allah and praying. Faith has five sub themes which are: closeness to Allah, Believe on Allah, God's pleasure, God's grace and protection from Allah.

In order to achieve my goals, I first appeared before Allah and prayed because without Him we are nothing. PT6 (P4, DU85-86). Another participant reported it as "I went to the examination room and forgot everything, then I prayed, and my Lord opened my mind." PT6 (P4, DU43-44).

DISCUSSION

In-depth analysis of participants' responses concluded that passion and perseverance is a super theme that affect students' grit level. Interest toward goals, determination, goals identification, and resilience are the main themes of passion and perseverance. Internal motivations, enthusiasm, urge to do better and personal choice are the sub themes of Interest toward goals. These super themes are supported by literature such as the theory of interest and the theory of motivation are compatible to understand the development of the characteristics of grit. It includes the development of interest and scientific methods (Hidi, 2006).

One more important super theme which was reported by students in their responses is "Social support". According to participants' responses, social support is a very essential aspect that motivates students toward their goals and help them to achieve. Parental support, teachers support, peers' support are the main themes of social support that are reported by undergraduate students. It is supported by literature as family contexts deeply influence young people's interests and personality in a variety of ways, like parental careers, hobbies of family, and motivation of family (Dabney et al., 2013).

Another significant factor that is affecting grit of undergraduate students is "Growth mindset". According to participants' responses, importance of feedback and learning attitude are the main themes of growth mindset. After the result analysis, it concluded that developmental mind set can conquer the negative response of failure. Literature supported it as having a 'growth mindset' encourages children to keep learning, they become accustomed to trying and that is why when they grow up and get a higher education degree, they find themselves to be better understood (Kamentez, 2015).

In depth analysis of students' responses concluded that self-control is also a very effective super theme which has three major themes. According to participants' responses, self-control is a capacity to control oneself, especially one's desires and emotions particularly in tough condition. Time management, self-confidence and prioritizing task are the main themes of self-control. Self-control is basically an ability to control attention, emotions and behavior in the presence of impulses. Prioritizing task is a very important sub theme of self-control which means focus on goals that are most important or meaningful task. According to participants' responses, focus on goals, planning, sacrifice of entertainment, sacrifice of sleep, honesty with goals and attention toward goals are sub themes of prioritizing task.

Role of Environment is also a basic super theme that affect students' grit. According to participants' responses, role of environment has significant impact on achieving goals. According to participants' responses, social recognition push-ups students to achieve their goals, face hurdles and sacrifice of interest and routine. It is supported by literature as Shochet and Smith (2014) says, if classroom culture can be measured and understood, it can affect each student's grit score in the class.

Religiosity" is one of the super themes that has great impact on undergraduate students' lives and also their goals. Students' beliefs of Allah and their religion influences their lives greatly. According to participants' responses, whenever they face hurdles, frustration with goals and also face disappointment they have a hope from their God. It is supported by literature as a positive outlook on life is expected when an individual demonstrates grit and resilience. Being gritty and resilient, one should not restrain oneself in finding meaning in one's life, setting goals, achieving them in spite of any obstacles. It is expected that people who show high grit and resilience will also show high spirituality as

such people also show a constant struggle towards perfection and diligence in their work (Barton & Miller, 2015).

Conclusion

The current study gives an interesting and deep information about grit and its factors in Pakistani undergraduate students. Some of the information that we got from this research included some already known aspects like passion, perseverance, social support, self-control and some novel aspects like role of environment, growth mindset and religiosity.

Limitations and Recommendations

This study has several strengths, but it also has some limitations as all studies have. The data was collected online by google survey form. The data was taken only from some of the cities of the province of Punjab, but the data should be collected from other provinces of Pakistan as well. Furthermore, realist form of thematic analysis was used which takes the participants' account on an 'as it is' basis, hence, the data was not subjected to critical analysis by the researchers. Next, other researchers could try out more interpretations of data with a similar sample and similar goals. In this vein, interpretative phenomenological analysis is hereby recommended.

The current study explored the phenomenon of grit and its factors in undergraduate students. There are some implications and recommendations of the findings of this study that could help undergraduate students develop grit in themselves. Such implications are as under: Students must identify their study goals and note why they have interest in them. Setting timetable helps in achieving goals or stay focused. Students should prioritize their tasks, have a life-long learning attitude, and they should explore new things on their own. Practice and efforts are the effective things that students should include in their routines to achieve goals.

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