

Grit and Mental Health of Postgraduate Students: The Gender Perspective

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Abstract

This research aims to measure the relationship between grit and mental health of university students with gender comparison. A total of 426 postgraduate students were selected from 3 public universities in South Punjab, Pakistan. The mean age of participants was 25.19 ± 2.66 years. A short Grit Scale and Mental Health Inventory were used in data collection. The SPSS (Version 25) was used in data analysis. The results of bivariate correlation confirmed the positive significant relationship of grit with mental health and psychological well-being. While grit revealed an inverse significant relationship with psychological distress. The independent sample t-test found that the grit and mental health with subscale psychological well-being were significantly higher among female postgraduate students as compared to male postgraduate students. Whereas psychological distress was significantly higher among male postgraduate students as compared with female postgraduate students. The findings of the present research have imperative contributions in practical implications for the attention of educationalists, mental health experts, and government authorities.

Keywords: Grit, Mental Health, Gender Perspective, Postgraduate Students

Introduction

Grit has been studied along motivational qualities as like personality traits, have a long-term consistency (Duckworth, 2016; Von Culin et al., 2014). This consistency originates from the underlying drive of grit, which is focused on values, goals, preferences, and desires as opposed to instant fulfillment (Duckworth, 2017). Psychology uses the term "grit" to describe a non-cognitive personality trait that is typically characterized as a drive to accomplish long-term goals by diligence or exertion and donates to the upkeep of interest and effort, regardless of the failure of advancement (Duckworth et al., 2007; Duckworth & Quinn, 2009). According to Duckworth et al. (2007), two main elements of grit are the consistency of interest, the capacity to uphold the same selection of interest over a long period, and the determination of strength or effort, inspired by difficulties one's ability to maintain on the objective. Because grit gives power and confidence to the ability of individuals to accomplish the goals of life because grit is future-oriented and life-objective as well (Duckworth et al., 2007). According to Kannagara et al. (2018), people with high grit had higher levels of mental health.

The World Health Organization (2004) defines mental health as "a condition of well-being in which the person understands his or her abilities, can cope with everyday stressors, can work creatively and fruitfully, and can contribute to his or her community." In the present research mental health is measured considering the dual-continue mental health model of Keyes (2005), which represented two dimensions such as psychological well-being and psychological distress. Huppert (2009) defines psychological well-being characterizes a mixture of good feelings and functioning successfully, exciting and continuing negative emotions are compromised with the psychological well-being that obstructs daily life, working situations, and routine. Whereas, psychological distress is a state of emotional suffering associated with stressors and demands that are difficult to cope with in daily life (Arvidsdotter et al., 2016).

According to Institute for Health Metrics and Evaluation (2020), one in every eight individuals was living with mental health disorders worldwide and overall 970 million individuals were living with mental health problems in the world before the COVID-19 pandemic, which has increased, now 1 billion individual are living with mental health disorders (World Health Organization, 2020). Due to the COVID-19 pandemic, the prevalence of mental health issues increased significantly and it is estimated that 28% of people faced mental health worldwide (World Health Organization, 2022).

Whereas, university students also face mental health problems (Vargas-Huicochea et al., 2020). The interest in mental health and well-being in university students has grown exponentially in the last decades. University students report low levels of mental health similar to their non-university counterparts (Blanco et al., 2008). Many recent studies suggested an increase and the severity of mental health problems and help-seeking behaviors in university students around the world in the last two decades (Hunt & Eisenberg, 2010; Lipson et al., 2019).

However, grit was found positive correlation with psychological well-being and mental health (Choi & Jeong, 2022; Kaur, 2021). For instance, stress, depression, and anxiety are negatively correlated with grit but mental well-being is positively

correlated with grit (Musumari et al., 2018; O'Neal et al., 2016). Grit among students is a significant affirmative psychological source to deal with life pressure. Students with greater levels of grit are less prone to experience distress because they are more inclined to view challenges and stress as inevitable parts of life's fight (Datu et al., 2017). Grit has beneficial connections to psychological well-being and protects against signs of distress (Datu & Fincham, 2022; Wilson et al., 2021). Recent studies report that grit buffer against psychological distress and play important role in improving the mental health of university students (Natalia et al., 2022; Shah & Deshpande, 2022).

Grit with gender differences found that females are grittier than males (Jaeger et al., 2010; Kannangara et al., 2018). Female university students have more capabilities, determination, and passion, therefore, females perform better in academic performance than boys, this is probable cause female university students have more grit than male university students (Aswini & Deb, 2017; Sigmundsson, Haga, & Hermundsdottir, 2020). In a meta-analysis, it is proposed that females have more psychological well-being as compared to males (Roothman et al., 2003). Similarly, past studies found that females reported higher mental health and psychological well-being than male students (Malik, 2021; Ramnath & Singh, 2019; Singh & Sharma, 2018). While empirical studies reported higher depression and stress among males than females, therefore males have more suicide rates than females (Garnett et al., 2022; Ran et al., 2016). While past studies also reported contradictory findings that males have more well-being and females have more psychological problems (Kar et al., 2020; Prowse et al., 2021). With different findings, Zada et al. (2021) found insignificant findings among Pakistani university students regarding mental health problems but males reported more mental health problems. In the same way, another study also found insignificant gender differences among students in mental health (Pant & Srivastava, 2019).

The above-cited studies provide evidence to move an effective campaign for further studies to investigate the gender differences in grit and mental health of university students as well as the relationship between grit and mental health. This study fills the gap in context to investigate the relationship between grit and the mental health of postgraduate students. While this study also provides gender base comparisons in grit and mental health of Pakistani postgraduate students. Therefore, it is hypothesized that;

H1: There will be a positive relationship between grit with mental health and psychological well-being and a negative relationship with the psychological distress of postgraduate students.

H2: Grit, mental health, and psychological well-being will be higher and psychological distress would be lower among females as compared with male postgraduate students.

Material and Method

Participants

In this research, a total of 426 (male = 179 and female = 247) postgraduate students were collected from three public universities (Islamia University Bahawalpur, Bahauddin Zakariya University Multan, and Dera (Ghazi University Dera Ghazi Khan) of South Punjab Pakistan. The mean age of participants was 25.19 ± 2.66 years. Multistage random sampling was used to collect the data in four stages, in first stage, three universities were selected from three divisions (Multan, Bahawalpur, and Dera Ghazi Khan) of South Punjab. In second stage, three faculties (Faculty of Science, Faculty of Arts and Humanities, and Faculty of Social Sciences) were selected from six faculties (Faculty of Social Science, Faculty of Arts and Humanities, Faculty of Science, Faculty of Medical, Faculty of Agriculture and Faculty of Engineering) from each university to more generalize the results on specific faculties. In the third stage, data were collected by stratified random sampling from three departments of each faculty, so in this stage total 9 departments (3 departments from each faculty) from each university were selected. So, in third stage 3 departments from each faculty were finalized. In Faculty of Science; Mathematics Department, Physics Department and Chemistry Department were selected. Whereas in stage fourth, the data were collected from only 20 postgraduate (Master's and Ph.D.) students from each department out of nine departments e.g. Department of Mathematics, Physics, Chemistry, English, Urdu, Islamic Studies, Psychology, Economics, and Social Work/Sociology to reach the total sample 540, therefore the 540 questionnaires were given to respondents and they returned only 426 filled questionnaires, while 114 respondents did not complete questionnaires and returned incomplete questionnaires with the following reasons: not having completed them (68), not gave consent (22), withdraw with their consent (34), which were discarded from the final data. Therefore, the response rate was only 79%, and out of 540 respondents, only 426 completed questionnaires.

Research Instruments

Demographic Sheet: The demographic details were examined from participants through a self-constructed demographic sheet, age (as continue), gender (male and female), education (master and PhD.), educational institute (name of university), home residence (urban and rural), family system (joint and separate), and family total monthly income (in Pakistani rupees) were added to the demographic sheet. In Pakistan, gender, rural and urban residence, joint and nuclear family

systems, and family monthly income have different effects on people' quality of life. Therefore, these demographic variables were considered in this research.

Short Grit Scale (SGS): It is developed by Duckworth and Quin (2009). The scale consists of 8 elements and 2 subscales; four purpose elements are coherent; e.g. "I sometimes set objectives but then want to follow a different one." – Item is scored on a Likert scale of five points (1 = strongly disagree 5 = strongly in agreement). The higher score on SGS demonstrates higher level of grit and lower score on SGS demonstrates lower level of grit with range of scoring 8 for minimum and 40 for maximum, where 8 score shows less grit level and 40 score show high grit level. SGS exhibited adequate internal consistency across the four samples with ranges of alphas from .73 to .83 (Duckworth & Quinn, 2009).

Mental Health Inventory (MHI): MHI contains 38 items based on two subscales; the psychological well-being subscale (16 items) and psychological distress (22 items). The response rate on MHI is measured on 6 points Likert scale, ranging from 1 (all times) to 6 (none of the time). The psychological distress subscale investigates negative mental health and the psychological well-being subscale investigates positive mental health. The overall psychological distress scale ratings vary between 22 and 132, whereas 22 score indicates lower psychological distress and 132 score indicates higher psychological distress. While, the range from 16 to 96 for psychological well-being, whereas 16 score indicates lower psychological wellbeing and 96 score indicates higher psychological wellbeing. The psychological distress subscale is negative, so that to measure the overall mental health (as a positive) reverse scoring on psychological distress is needed. Therefore, the overall mental health scale very between 38 and 228, however 38 score indicates lower mental health and 228 score indicates higher mental health. The internal consistency (reliability) was measured for all two subscales and MHI overall was satisfactory and ranging from .92 to .96 alpha (Veit & Ware, 1983).

Procedure

Before the start of data collection from participants, detailed presentations were given by researchers to participants about the purpose of the research. The participants were selected only from selected universities in South Punjab. The self-rated instruments were used during data collection and researchers disseminated the questionnaires of the research by hand to ensure that the participants receive the survey and respond instantly. Questionnaires were disseminated among the postgraduate students and collected back after completing them. All obtained data was reserved and confidential and used only for research purposes. The 40 minutes were allocated to students to respond to questionnaires.

Data Analysis

The collected data were entered in SPSS (Version 25) for data analysis purposes. In the current research, the analysis of bivariate correlation was used to examine the relation between grit and the mental health of students, and an independent sample t-test was used to measure male-female differences in terms of grit and mental health.

RESULTS

Bivariate Correlation between Grit and Mental Health

The results of Table 1 indicated the positive significant weak relationship of grit with mental health ($r(424) = .29, p < .001$) and psychological wellbeing ($r(424) = .26, p < .001$). While grit revealed an inverse significant weak relationship with psychological distress ($r(424) = -.23, p < .001$). The reliability of both questionnaires was also found satisfactory in internal consistency for this study considering the criteria of Cortina (Cortina, 1993), the value of Cronbach's Alpha should be equal to or above 0.70.

Table 1: Bivariate correlation between Grit and Mental Health (N= 426)

Variables	Grit	Mental Health	Psychological Wellbeing	Psychological Distress
Grit	-	.29***	.26***	-.23***
Mean	21.81	107.29	44.73	90.57
SD	7.71	44.48	18.74	26.07
Cronbach's Alpha	.76	.89	.92	.87

*** $p < .001$

Gender Difference between Grit and Mental Health

The results of Table 2 showed the significant gender difference in the mean (average) score of grit and mental health with both subscales (psychological well-being and psychological distress). While the mean score of grit ($t(424) = -4.71, p <$

.001), mental health ($t(424) = -3.61, p < .001$) with subscale psychological well-being ($t(424) = -3.74, p < .001$) are significantly higher among female postgraduate students as compared male postgraduate students. Whereas the mean score of psychological distress as a subscale of mental health ($t(424) = 2.71, p < .01$) is significantly higher among male postgraduate students as compared with female postgraduate students. Its mean that grit, mental health and psychological wellbeing were higher among female postgraduate students but psychological distress was higher among male postgraduate students.

Table 2: Gender Comparison between Grit and Mental Health (N=426)

Variable	Male (n = 179)		Female (n = 247)		t(424)	p	95%CI	
	M	SD	M	SD			LL	UL
	Grit	19.79	7.49	23.27			7.55	-4.71
Mental Health	98.27	42.38	113.82	44.90	-3.61	.00	-24.02	-7.09
Psychological Well-being	40.81	18.05	47.58	18.76	-3.74	.00	-10.33	-3.21
Psychological Distress	94.55	25.21	87.68	26.35	2.70	.01	1.87	11.86

M = Mean; SD = Standard deviation; t = t-score; p = probability ($p < .05$); LL = Lower limit; UL = Upper limit; df = 424

DISCUSSION

This study aimed to investigate gender differences and the relationship between grit and the mental health of postgraduate students. Aiming to achieve the first hypothesis of existing research about the positive relationship between grit and mental health including psychological well-being and the negative relationship between grit and psychological distress, the correlation analysis of grit with mental health, psychological well-being, and distress was studied. The results of the present study found that grit had a significant positive relationship with mental health and psychological well-being, but grit had a significant but negative relationship with psychological distress among postgraduate students from Punjab, Pakistan. Past studies provide sufficient evidence that grit has a significant relation with mental health (Datu & Fincham, 2022; Umucu et al., 2021; Wilson et al., 2021).

Students with a higher grit are deliberated to be focused on their goal, consistent, less inclined to give up and put in their best efforts to succeed, therefore grit is the reason for higher mental health among the students' population (Shah, R. & Deshpande, 2022). Consequently, students with a high level of grit have more mental health, because grit helps people to maintain their mental health while adjusting to social changes and grit is positively connected with well-being (Vainio & Daukantaite, 2016). Although, past many studies support the results of current research and reported the negative connections of grit with psychological distress (Liu et al., 2022; Musumari et al., 2018). The results of current research could be anticipated among Pakistani university students that the reason behind the positive association of grit and mental health is that grit enhances personal goals and students who are actively pursuing personal goals exhibit better levels of overall well-being compared to students who lack goal-directedness (Kiaei & Reio, 2014). In the same context, Haq and Khalil (2022) claimed that high achievers of Pakistani university students have higher personal goals and habits. One more reason is that gritty people have better self-control and can repel their impulses and focus on their future goals are more determined in achieving long-term individual, professional and academic goals and they enhance their mental health through this process, similarly findings have been reported among Pakistani population (Khan et al., 2008; Saleem et al., 2020; Zamarro et al., 2020). Upcoming researchers must investigate the likely essential and intervening factors such as meaning in life focusing on the contribution of grit to mental health.

In purpose is to accomplish the second hypothesis of this research about gender differences in terms of grit and mental health (psychological well-being & distress). The results of the present research through independent sample t-test were tested to see the significant gender differences that found the grit and mental health (including psychological wellbeing) were significantly higher among female as compared to male postgraduate students. Whereas psychological distress was significantly higher among males as compared with female postgraduate university students. Past many other pieces of research also established that females are grittier than males (Kannangara et al., 2018). Aswini and Deb (2017) also found that grit was higher among females than male students. The probable cause for this may be that females are possibly more capable in many abilities that are linked with grit level, for example, academic performance, positive psychological capital, and passion (Luthans et al., 2019; Sigmundsson et al., 2020). Past studies found that females reported higher mental health and psychological well-being than male students (Akhter, 2015; Singh & Sharma, 2018). In Pakistan, male students have to expect more responsible outside and inside the home, although, they are permitted with more freedom but they have also more burdened with a lot of responsibilities compared with females, therefore Pakistani female students have more well-being than males (Jibeen, 2016). Nygaard and Heir (2012) concluded that females have better life quality and more ability to face stress than men in a difficult situations. While, Matud et al. (2019) claimed that female has a higher positive

relationship with others and personal growth than male, which lead to more psychological well-being. According to Gestsdottir et al. (2015), females can improve their mental health from adolescence to young adulthood period, while males' mental health doesn't change. The findings of the present study could assess that the reason behind the gender difference in grit, and mental health among Pakistani university students is that Pakistani male have more responsibilities and they have to earn for home, which make them burdened and the reason for high level of psychological distress (Akmal et al., 2020). While, Pakistan is an underdeveloped country and the economy of Pakistan is very low, and only a few opportunities for the job with high competition (Kassem et al., 2019; Nasir et al., 2022). Where most of the time only males have to earn for home families and females are not allowed some time for a job even with higher education, in the same scenario females have to compromise with family rules (Akmal et al., 2020), which makes them grittier, and mental health with psychological wellbeing but males have only psychological distress with a heavy burden.

While expecting the study findings, it is important to be aware of the limitations of research. The first limitation of this study is that only postgraduate students were added to the research, which was collected from 3 public universities located in South Punjab, Pakistan, so these findings of this research are only limited to postgraduate students from South Punjab. So, it is suggested to scholars that they conduct studies on the whole Punjab province. The second limitation of this research is that data were collected only from public sector universities, while the postgraduate students from private universities were not included in this research, so the findings of this research have only generalizability with public sector postgraduate students, further empirical investigations should be conducted on the comparison between students from public and private universities. This research also has limitations in demographic variables because, in this research, only gender was considered for comparison, so in upcoming studies, home residence, family system, and education level should be studied among university students to better understand the role of demographics in the mental health of university students.

Conclusion

This research investigated the positive relation of grit with the mental health and psychological well-being of postgraduate students. While grit reported an inverse relation with psychological distress. Female participants reported more grit and mental health including psychological well-being, while male participants reported higher psychological distress. Upcoming studies should emphasize on interventions in the domain of positive psychology to improve mental health and decrease psychological distress among postgraduate students, particularly among male students. The health professions and psychologists should conduct seminars to improve grit among postgraduate students which will boost mental health. Mental health is stigmatized in Pakistan, so policymakers should make policies on mental health awareness, and university authorities with the help of psychologists and health professionals, should offer free courses and workshops on positive psychology for university students to improve their mental health.

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