

Chinese University Students With Gritty and Not Gritty: A Preliminary Finding on Anxiety, Depression, Gratitude, and Zest for Life

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Abstract

Grit has received great focus in both educational and psychological research; however, researchers have questioned the linear association between grit and various outcomes that might fail to capture those not gritty individuals. Therefore, the current study aimed to attend this perspective and identify (1) any significant group differences in students' psychological illness (anxiety and depression) and well-being (gratitude and zest for life) among gritty and not gritty students, and (2) linear associations among the variables. A total of 326 university students completed the online survey package and were categorized into four groups using the mean score as the cut-off score (low-passion and low-effort, high-passion and low-effort, low-passion and high-effort, and high-passion and high-effort). Regression analysis results showed that students' gratitude, zest, anxiety, and depression play differently in two grit facets. Further, significant group differences were found. Results indicated that students with high-passion and low-effort showed the lowest level of gratitude and zest for life, and the highest level of anxious symptoms. Students with low-passion and low-effort showed the highest level of depressive symptoms. Researchers and educators should pay more attention to those students who are passionate but insufficient in sustaining effort toward long-term goal-striving. These findings provide a hint that the imbalance between passion and effort may negatively affect students' mental health during long-term goal-striving, which may block them from striving for their long-term goals.

Keywords: anxiety, depression, gratitude, grit, zest for life

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Introduction

Grit is defined as “perseverance and passion for long-term goals” (Duckworth et al., 2007, p. 1087). Consistency of interest describes how people stay focused on working toward long-term goals while perseverance of effort describes individuals who endure obstacles and challenges while sustaining effort, and these two facets operate as lower-order subscales of the construct of grit (Duckworth et al., 2007). Empirical findings have lent support to the idea that gritty students tend to have better school and psychological outcomes, such as better school engagement and performance, better psychological health (e.g., life satisfaction and happiness) and lower psychological illness (e.g., perceived stress, anxiety, depressive symptoms, and eating disorders) (e.g., Knauff et al., 2019; Sharkey et al., 2018). However, most of the existing results were drawn from linear associations (Shin, 2020), which failed to tell differences among those students with moderate levels of grit in their associations with analyzed factors.

It is worth noting that current two-faceted grit models equate individuals with high interest and low effort with individuals with low interest and high effort (Credé, 2018). Current grit scores that measure individual grit only represent individuals with low interest and effort, as well as individuals with both high interest and effort; however, the situations or empirical results for individuals with high interest and low effort (or vice versa) have been ignored or understudied. Therefore, this study aims to identify (1) any significant group differences in students’ psychological illness (anxiety and depression) and well-being (gratitude and zest for life) among gritty and not gritty students, and (2) linear associations among the variables.

Method

Participants and Procedure

A convenience sampling method with a correlation design was used. We randomly distributed paper invitations on the campus of a public university in the Macao SAR, China. We also provided an informed consent form, which clearly stated the purpose, nature, and procedures of the study. No illegal information was collected from the participants, and they all participated in the study voluntarily. Qualtrics was used to collect survey responses. A total of 326 students (aged between 18 to 25, Mean age = 20.93, 79% female) accessed the online questionnaire and completed the questionnaire packages.

Materials

Anxiety was assessed with the Chinese version of the State-Trait Anxiety Inventory (STAI-6; Hou et al., 2015). Six items about symptoms of anxiety were asked and rated on a 4-point Likert scale (from 0 = not at all to 3 = nearly every day); higher average scores indicated higher levels of anxiety. A good internal reliability coefficient was shown (Cronbach’s alpha = 0.86).

Depressive symptoms were assessed with the Patient Health Questionnaire (Kroenke et al., 2001). The PHQ-9 includes nine items that ask participants to report the depressive symptoms they experienced during the previous two weeks, rating on a 4-point Likert scale (from 0 = not at all to 3 = nearly every day); higher average scores indicated higher levels of perceived depressive symptoms. A good internal reliability coefficient was shown (Cronbach’s alpha = 0.86).

Gratitude was assessed with the Gratitude Questionnaire (GQ-6; McCullough et al., 2002), covering 6 items to assess individuals' gratitude experiences and expressions as well as appreciation in daily life, rating on a 7-point Likert scale (1 = strongly disagree and 7 = strongly agree); higher average scores indicated higher levels of gratitude. An acceptable internal reliability coefficient was shown (Cronbach's alpha = 0.77).

Grit was assessed with the Short Grit Scale (Duckworth & Quinn, 2009), covering 8 items to assess individuals' passion and sustaining effort toward long-term goals. Four negatively worded statements described one's consistency of interest, and four positively worded statements described one's perseverance of effort, rating on a 5-point Likert scale (1 = not like me at all and 5 = very much like me); higher average scores indicated higher levels of grit. This scale showed acceptable reliability (Cronbach's alpha for passion = 0.78 and Cronbach's alpha for effort = 0.80).

Zest for life was assessed using the zest for life subscale of the Chinese version of the Values In Action Inventory of Strengths (VIA-IS; Duan et al., 2012). The original VIA-IS consisted of 24 subscales in assessing 24 different types of character strength; however, only the zest for life subscale was of interest in this study. Four items about zest for life were asked and rated on a 5-point Likert scale from 1 (*very much unlike me through*) to 5 (*very much like me*); higher average scores indicated higher levels of zest for life. A good internal reliability coefficient was shown (Cronbach's alpha = 0.84).

Statistical Analyses

IBM SPSS Statistics 24 was used to calculate the descriptive statistics and correlations of tested variables. Linear regression analysis was used to identify the associations among the variables, and one-way ANOVA was used to identify the group differences. The collected data were categorized into four groups using the mean score as the cut-off score (low-passion and low-effort, high-passion and low-effort, low-passion and high-effort, and high-passion and high-effort).

Summary of the Results

Accordingly to Table 1, effort, gratitude, zest for life, anxiety and depressive symptoms had significant correlations with each other. Passion was only significantly associated with zest for life and depressive symptoms.

Table 1: Descriptive Statistics and Bivariate Correlations Among Variables (N = 326)

	1	2	3	4	5
1. Passion	-				
2. Effort	0.034	-			
3. Gratitude	-0.003	0.352***	-		
4. Zest for life	-0.128*	0.604***	0.400***	-	
5. Anxiety	-0.074	-0.283***	-0.163**	-0.286***	-
6. Depressive symptoms	-0.173**	-0.244***	-0.322***	-0.198***	0.439***

Note: $p < 0.05$; ** $p < 0.001$; *** $p < 0.001$.

As shown in Table 2, significant group differences were found. Results indicated that students with high-passion and low-effort showed the lowest level of gratitude and zest for life, and the highest level of anxious symptoms. Students with low-passion and low-effort showed the highest level of depressive symptoms.

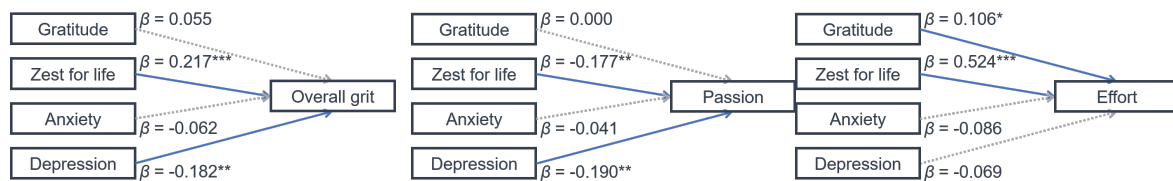
Table 2: Means (Standard Deviations) of Variables by Groups

	Low Grit (N = 68)		High Passion Low Effort (N = 83)		High Effort Low Passion (N = 100)		High Grit (N = 75)		<i>F</i>
Gratitude	5.03	(0.67)	4.53	(0.76)	5.13	(0.61)	5.32	(0.65)	20.32***
Zest for Life	3.30	(0.75)	3.01	(0.68)	3.88	(0.68)	3.89	(0.65)	33.39***
Anxiety	2.75	(0.61)	2.83	(0.56)	2.68	(0.60)	2.37	(0.69)	8.10***
Depressive symptoms	2.00	(0.49)	1.99	(0.60)	1.88	(0.56)	1.60	(0.42)	9.55***

Note: $p < 0.05$; ** $p < 0.001$; *** $p < 0.001$.

As shown in Figure 1, regression analysis results showed that students' gratitude, zest, anxiety, and depression play differently in two grit facets. Zest for life ($\beta = 0.22$, $p < 0.001$) and perceived depressive symptoms ($\beta = -0.18$, $p < 0.01$) were significantly associated with overall grit level, while gratitude and anxiety did not ($ps = n.s.$). Similar results were observed in predicting passion. However, gratitude ($\beta = 0.11$, $p < 0.05$) and zest for life ($\beta = 0.52$, $p < 0.001$) were significantly associated with effort, while anxiety and depressive symptoms did not ($ps = n.s.$).

Figure 1: The Path Models



Note. Solid lines represent significant paths and rectangles represent observed variables. The effects were reported in standardized values.

* $p < 0.05$; ** $p < 0.001$; *** $p < 0.001$.

Limitations

First, this was a cross-sectional study and could not show a causal relationship between the tested variables. Second, self-report data may induce homogeneous method variance, which may allow variables to covary and produce significant biases in the results; and involve social desirability bias. It is recommended to use multiple data resources in further research. Third, this study recruited only a sample of Chinese university students and cannot be generalized to other educational backgrounds, non-Chinese groups, or religions.

Implications and Conclusion

Researchers and educators should focus more on students who are passionate about pursuing long-term goals but lack the sustained effort. These findings suggest that an imbalance

between passion and effort may negatively impact students' mental health in the pursuit of long-term goals, thereby hindering their achievement of long-term goals. For example, educators could promote well-established interventions designed to increase mindfulness (Galla et al., 2015) and growth mindset (Nagy et al., 2023) to improve grit levels among student populations.

Furthermore, when leveraging positive strengths or emotions to foster student grit, educators need to be mindful of factors that may have opposing effects on predicting passion and effort (e.g., in this study, zest for life). Having a better zest for life may have a potential downside for passion in goal-striving. Further research is also warranted to investigate whether students develop different types of passion, such as obsessive passion or harmonious passion, during their long-term goal pursuit. From the perspective of the dualistic model of passion, harmonious passion arises when individuals control their participation time and energy and freely devote themselves to an activity, whereas passion turns into obsession when an activity develops into a controlled internalization that creates an internal pressure to participate in activities that one enjoys, making the person feel out of control and compulsive (Deci & Ryan, 2000; Vallerand et al. (2023). People with different passions show different efforts and persistence in the process of pursuing their goals: flexible persistence comes from harmonious passion, which enables people to experience positive activity results and achieve other life results while pursuing their desired activity goals; rigid persistence mainly comes from compulsive passion, which has significant emotional behaviors and negative behaviors during and after negative activities. Because current grit scales do not yet capture whether individuals have harmonious or obsessive passions, or whether these influence their persistence in pursuing goals over the long term, future research is recommended to clarify this mechanism.

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Conflicts of Interest

There is no conflict of interest.

Compliance With Ethical Standards

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

Informed Consent Statement

Informed consent was obtained from all individual adult participants included in the study.

Declaration of Generative AI and AI-Assisted Technologies in the Writing Process

The AI-generation or AI-assistive technology were not used in writing, improving, or proofreading this paper.

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