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The Relationships between Achievement Goal Orientations and Grit

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Abstract

The present study aims to investigate the associations of achievement goal orientations with grit. Participants were 509 university students who completed The 2X2 Achievement Goal Orientations Scale and Grit Scale. This relationship was investigated using correlation and multiple regression analysis. According to results learning-approach goal orientations positively related to grit. In contrary, learning-avoidance and performance-approach/avoidance goal orientations related negatively to grit. Students who adopt learning-approach goal orientation are more likely to have higher level of grit.

Keywords

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Introduction

Generally researchers have proposed two achievement goal orientations; learning and performance (Dweck & Leggett, 1988). Achievement goal orientations and grit are related to significant differences in behavior. Students, adopting learning goal orientation are curious about learning new skills, improving their understanding and competence. A student, who adopts learning goals, attempts to enhance their abilities, give preference to effortful tasks, and stand on despite the failures. Learning errors are considered as natural parts of the learning process by those students. They show adaptive reaction when they do not succeed, and they use failures as an opportunity to develop themselves (Ames & Archer, 1988; Dweck & Leggett, 1988). On the contrary, students, orienting towards performance goal orientation are more interested in social comparisons, improving their ability, receiving desirable judgments and avoiding negative evaluations about their performance. These students try to support their abilities, perform better than their classmates, and they do not attempt to challenging tasks so as not to threaten their ability representation. Moreover, they back away from performing when they face with a failure (Ames, 1992; Dweck & Leggett, 1988).

Studies show that, in terms of learning goal orientation vs. performance goal orientation, internalizing learning goal orientation has motivational advantages, whereas, internalizing performance goal orientation may be detrimental and not adaptive (Urdan & Maehr, 1995). On the other hand, studies indicate that there is a positive link between performance goals and maladaptive behaviors like absence of grit, dysfunctional affectivity, and increased anxiety (Meece, Blumfeld, & Hoyle, 1988).

Indeed, some researchers (Midgley, Kaplan, & Middleton, 2001) have addressed the maladaptive nature of performance goal orientations. Therefore, achievement goal orientations theory has been revised and performance orientation has been divided into two, namely, approach and avoidance components. This model suggests that, students, adopting performance-approach goal orientation are interested in representing their competence and performing better than their

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classmates. On the other hand, students with performance-avoidance goal orientations are concerned with avoiding the representation of their incompetence. Despite of the widely acceptance of this approach-avoidance distinction that is also empirically supported, recent studies have indicated that (Elliot & Church, 1997) learning goals also can be divided into two parts; as learning approach goals and learning avoidance goals. Studies assert that there can be incidents that students are interested in avoiding misunderstanding, or they may not be willing to learn or master the task. In relation to the task, some perfectionist students may adopt some rules as not to get the task wrong or not to do it inaccurately. The usefulness of 2X2 achievement goal orientations model was analyzed via factor analysis, and it was found that four goal orientations were significantly differentiate each other (Elliot & McGregor, 2001). In the present study, the 2X2 achievement goal orientations model (Elliot, 1999, Elliot & Church, 1997; Elliot & McGregor, 2001) has adopted to account for the motivational process, producing grit.

Grit

Grit has come up as a relatively new personal characteristic in the literature and it is thought to be related with the prediction of change in leadership effectiveness. In addition, since the field of educational research has come out, the researches made in this area have been quite modernized (Duckworth & Quinn, 2009; Peterson & Seligman, 2004). Peterson and Seligman (2004) have the leading researches on character properties, as a result of their analyses, they made the definition of grit as "voluntary continuation of a goal-directed action in spite of obstacle, difficulties, or discouragement" (to continue a purposive action despite of the hindrances, troubles, or despair). Duckworth, Peterson, Matthews, and Kelly (2007) defined grit as determination in the character and ambition for long-run targets. Grit requires a resistance to maintain the attempt and involvement in the projects which takes too long to be completed (Duckworth & Quinn, 2009) and regardless of the fact that the person encounters difficulties or stressful conditions, this resistance is maintained as a personal strength and exhibited as uninterrupted attempt for the targets (Singh & Jha, 2008). Despite of the difficulties or unfavorable judgments, grit is maintained as the continuous energy over time. The individual who has grit is never tired. In situations others may give up, this person moves on. Gritty people are also more flexible, self-reflective, and they can conceptualize problems abstractly (Wilis, 2008).

Being one of the most essential character traits in an academic environment, grit is defined as the maintained attempt in case of a trouble or a duty with no solution (Ayres, Cooley & Dunn, 1990; Rudkin, 2003). When the previous studies are analyzed, it is seen that there is a relation between grit and academic success (Dubey, 1982; Duckworth et al., 2007; Duckworth & Quinn, 2009). In a research on the relation between grit and productivity, it was concluded that gritty students were more successful in academic life than those who were less gritty (Dubey, 1982). When students make an effort to specialize in a new area of knowledge or strategies to solve problems, they encounter short-term difficulty or experience demoralization. Those who cannot push on despite of difficulties or demoralization may generally fail (Ayres et al., 1990; Torgesen & Licht, 1983). When studies are examined, it is seen that there is a relationship between grit and academic difficulties. Individuals who achieve things in their jobs are generally perseverant and it was proved that achievement is more about being patient when compared to being talented (Duckworth et al., 2007). In a study by Tyler and Small, it was seen that people with perseverance were generally content with their academic domain. Henry and Smith found (1994) that students who are successful in their academic lives endure more than those who are not and environmental variables are thought to have an important direct influence on decisions regarding endurance.

The present study

Even though the connection between achievement goals and some psychological and educational variables have attracted broad scholarly attention, showing their relationship with motivational variables has attracted less attention. In addition, so far, research on achievement goal orientations has investigated learning-approach, performance-approach, and performance-avoidance goals. On the other hand, achievement goal theorists have described a fourth goal orientation: learning-avoidance (Elliot & McGregor, 2001).

It has been regarded that achievement goals may play a significant role on grit, whereas different kinds of achievement goals may play different roles. Based on the 2X2 achievement goal orientations model, the current study aims to investigate the possible association between grit and four achievement goals. Learning-approach goal orientation pertain is related to an intrapersonal/self-referenced competence. Thus, students, adopting learning-approach goals try to enhance their abilities, they give preference to effortful tasks, they do not give up when they confront with a problem, and they behave in an adaptive way when they encounter with a failure. Therefore, in the current study it was hypothesized that learning-approach goal orientation would be positively related to grit. As opposed to learning-approach goal orientation, performance-approach goal orientation focuses on following achievement, which requires that an individual is trying not to do anything, which hinders his or her performance (Arslan & Çardak, 2012; Arslan, Akın, & Çitemel, 2013; Chen, Wu, Kee, Lin, & Shui, 2009; Elliot, Cury, Fryer, & Huguet, 2006) and students who adopt performance-approach goals do not interested in challenging tasks because those tasks threaten the representation of their ability, and they give up when they face with a failure (Ames, 1992; Dweck & Leggett, 1988), in this study it was hypothesized that performance-approach goal orientation would negatively associate with grit. Similarly, the present study hypothesizes that the performance-avoidance goals would negatively associate with grit. However, it is unlikely to recommend a hypothesis based on the association between learning-avoidance goal orientation and grit because learning-avoidance goal orientation is consist of both a positive definition and a negative value of competence (Chen, et al., 2009). Nevertheless, considering previous data which indicated that learning-avoidance goal orientation is linked to avoidance of and executive help seeking (Karabenick, 2003, 2004), it was hypothesized that learning-avoidance goal orientation would be related negatively to grit.

Method

Participants

Participants were 509 (304 (60%) were male and 205 (40%) were female) students from Sakarya university. In terms of participants of the current study, 129 (25%) of them were freshmen, 111 (22%) of them were sophomores, 136 (27%) of them were juniors, and 133 (26%) of them were seniors. Their ages ranged from 19 to 27 (20.45 ± 1.06).

Instruments

2X2 AGOS. The 2X2 AGOS (Akın, 2006) is a 26-item self-report inventory and has four sub-scales: learning-approach goal orientation, learning-avoidance goal orientation, performance-approach goal orientation, and performance-avoidance goal orientation. Internal consistency of four factors scores were .92, .97, .97, and .95, respectively.

The Revised Turkish Version of Grit Scale. This scale has been developed by Duckworth and Quin (2009) and adapted into Turkish by Akın, Abacı, Arıcı, Uysal and Uysal (2011). It has 8 items and two subscales; consistency of interest (four items, e.g., I often set a goal but later choose to pursue a different one) and perseverance of effort (four items, e.g., I finish whatever I begin). Each item was rated on a 5-point Likert scale (1=strongly disagree to 5= strongly agree). Results of language equivalency showed that the correlations between Turkish and English forms were high (.81 for consistency of interest and .62 for perseverance of effort). The results of confirmatory factor analysis indicated that the model was well fit (x^2= 41.72, df= 20, x^2/df= 2,08, RMSEA=.059, CFI=.93, IFI=.93, GFI=.97, AGFI=.94, SRMR=.061). The internal consistency coefficients of two subscales were .63 for consistency of interest and as .60 for perseverance of effort. The test-retest reliability coefficients were .76 for consistency of interest and .79 for perseverance of effort. The corrected item-total correlations of the scale ranged from .31 to .46. For current study, internal consistency reliability coefficient was .74.

Procedure

In participant selection, convenience sampling was used. Convenience sampling is a non-probability sampling technique in which the researcher selects participants because they are convenient and accessible for him or her. Because of sampling selection technique, the results of this study could not be generalized to the whole population, which means that convenience sampling decreases the external validity. Students they completed the scales anonymously.

Results

Correlation analysis in Table 1 showed that learning-approach goals (*r*= .47) related positively and learning-avoidance (*r*= -.38), performance-approach (*r*= -.37), and performance-avoidance goals (*r*= -.55) related negatively to grit.

Table 1. Descriptive Statistics and Inter-Correlations of the Cariables

Variables	LPGO	LVGO	PPGO	PVGO	Grit
LPGO[a]	1				
LVGO[b]	.05	1			
PPGO[c]	-.07	.37**	1		
PVGO[d]	-.24**	.53**	.65**	1	
Grit	.47**	-.38**	-.37**	-.55**	1
Mean	31.17	15.91	18.73	16.01	27.31
SD	4.34	3.82	6.17	5.19	5.64
Range	23	20	28	23	25
Skewness	-.40	-.14	.14	.02	-.14
Kurtosis	-.35	-.40	-.77	-.64	-.26
α	*.93*	.84	.87	.81	.74

Note. [a]LPGO= Learning-approach goal orientation, [b]LVGO= Learning-avoidance goal orientation, [c]PPGO= Performance-approach goal orientation, [d]PVGO= Performance-avoidance goal orientation

*$p < .01$

Multiple Regression Analysis

A stepwise multiple regression analysis has applied to determine which dimensions of achievement goals were the best predictors of grit. Table 2 showed the results of multiple regression analysis where the independent variable were dimensions of achievement goals and the dependent variable was grit.

Table 2. Summary of Stepwise Multiple Regression Analysis for Variable Predicting Grit

Variables	B	Standard Error of B	*β*	*t*
Step 1				
LPGO	.08	.01	.47	12.05*
Step 2				
LPGO	.08	.01	.49	14.05*
LVGO	-.08	.01	-.41	-11.62*
Step 3				
LPGO	.08	.01	.47	13.91*
LVGO	-.06	.01	-.32	-8.86*
PPGO	-.03	.00	-.23	-6.30*
Step 4				
LPGO	.07	.01	.41	11.84*
LVGO	-.04	.01	-.23	-5.71*
PPGO	-.01	.01	-.10	-2.27*
PVGO	-.04	.01	-.26	-5.26 *

p< .05

According to the results of multiple regression analysis, summarized in Table 2, LPGO entered the equation first, accounting for 22% of the variance in predicting grit (R^2= .22, adjusted R^2= .22, $F(1, 507)$= 144.145, p<.01). LVGO entered on the second step accounting for an additional 17%

variance (R^2= .39, ΔR^2= .17, adjusted R^2= .38, F(2, 506)= 158.678, p< .01). PPGO entered on the third step accounting for an additional 4% variance (R^2= .43, ΔR^2= .04, adjusted R^2= .43, F(3, 505)= 127.160, p<.01). PVGO entered last, accounting for an additional 3% variance (R^2= .46, ΔR^2= .03, adjusted R^2= .46, F(4, 504)= 107.311, p<.01). The last regression models involved LPGO, LVGO, PPGO, and PVGO as predictors of grit and accounted for 46% of the variance in grit. The standardized beta coefficients indicated the relative influence of the variables in last model with LPGO (β= .41, p< .01), LVGO (β= –.23, p< .01), PPGO (β= –.10, p< .01), and PVGO (β= –.26, p< .01) all significantly influencing grit and LPGO was strongest predictor of grit.

Discussion

The purpose of the present study was to determine the relationship between achievement goal orientations and grit. Results showed that learning-approach goal orientation was positively related to grit. On the other hand, learning-avoidance goal orientation, performance-approach/avoidance goal orientations were negatively related to grit. The results also show that achievement goal orientations were important determinants of grit. Some details of the results should be further addressed.

Firstly, in line with the hypothesis, the positive correlation between learning-approach goal orientation and grit is compatible with the previous research which emphasizes that the learning-approach goals foster the achievement, task persistence, and attitude. Studies (Roeser, Midgley, & Urdan, 1996) on the relationships between learning-approach goal orientation and some educational and as psychological variables mostly represented that this motivational pattern hold strong connections with various adaptive outcomes in terms of motivation and academy, which is linked to grit, such as self-sufficiency, perceived ability, engaging in a task, attributing success to performance, utilization of cognitive and self-regulatory strategies, success in academy, and internal locus of control in academy. Students, interiorizing learning-approach goal orientation are willing to diminish the factors that prevent them from being successful instead of blaming or criticizing themselves when they confront with failures . Besides, these students think that it is necessary to make enough effort to be successful and that success or failure is directly associated with them. In addition, if students are willing to learn new skills and they aim to improve their understanding and competence (characteristics of learning-approach goal orientation), grit is an important factor that is highly related to success and motivation. Therefore it is not wrong to suggest that learning-approach goal orientation is a strong predictor of positive math attitudes.

Secondly, the negative correlation between learning-avoidance goal orientation and grit supports the hypothesis of the study. This partly may be due to the fact that learning-avoidance goal orientation is related to maladaptive variables and therefore, as compared to learning- approach goal orientation, this orientation is less adaptive. Moreover, students, adopting learning-avoidance goal orientation are worried about not being capable of learning the new subject deeply, and not remembering what they learned before (Elliot & McGregor, 2001). In addition, these students represent perfectionist behaviors, such as trying not to fail, and in terms of failure they blame themselves (Conroy, Elliot, & Hofer, 2003). As a result students who adopt learning-avoidance goal orientation can experience negative outcomes and this situation can lead not to be a gritty individual.

Third as anticipated, findings demonstrated that grit was explained negatively by performance-approach goal orientation. Grit is an important factor highly associated with success and motivation. Students with low level of grit are less likely to sustain their efforts and have the desire to be involved in the learning tasks. In conjunction with this suggestion studies demonstrated that Performance-approach goal orientation was positively related to maladaptive outcomes such as absence of grit, negative affection, and increase in anxiety. And last performance-avoidance goal orientation predicted grit in a negative way. When interpreting this result it is important to consider that, Students, who have performance-avoidance goal orientation, are in tendency to escape seeming ineffective and good for nothing (Elliot & Church, 1997). Hence, they take care of other students or peers than they do for themselves and they determine their value by giving importance to others'

success. The negative focus of performance-avoidance goals may drive people to experience anxiety and fear of failure (Elliot & Church, 1997). In fact performance-avoidance orientations are the least adaptive and are associated with low academic performance (Harackiewicz, Barron, Carter, Lehto, & Elliot, 1997; Tuominen-Soini, Salmela-Aro, & Niemivirta, 2008). This means that the grit and performance-avoidance goals don't share the same motivational properties and the negative relationship between these two variables is quite reasonable.

The present study has some limitations. First of all, the sample was composed of only university students, so that it is ambiguous to generalize the findings to different age groups. Secondly, correlation analyses do not allow inferring causality. Finally, the use of self-report scales instead of qualitative measures of achievement goals and grit may be a limitation in terms of socially desirable answers. Nevertheless, despite these limitations, the findings of the current study emphasize the importance of the goals orientations in relation to grit. Therefore, teachers should give more importance to foster the development of high supportive classrooms, which put emphasis more on the learning-approach goal orientations and less on the other goal orientations.

In conclusion, the present study indicates that the achievement goal orientations are significantly related to grit. Students, adopting learning-approach goal orientation are more likely to have grit whereas students, adopting learning-avoidance and performance-approach/avoidance goal orientations are less likely to have grit. Therefore, current study is important in terms of furthering our understanding of the motivational process of grit. Nonetheless, future studies should extend the findings of the current study to fully understand the antecedents of the grit.

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