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Research article

Relationship between Achievement Goal Orientation, Fear of Failure and Academic Performance

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Abstract

There is considerable empirical support for the study of factors that positively or negatively influence academic performance, including achievement goal orientation and fear of failure. According to research, fear of failure can, in some situations, threaten students' academic performance by affecting their engagement in learning activities. If remedial action is not taken to reduce it, this can affect students academic future. At the same time, earlier research has indicated that fear of failure influences thenature of achievement goals that students pursue. Nevertheless, there is a scarcity of studies that have explored the connection interplay between learning goal orientation, the fear of failure, and academic achievement. Based on data from 120 university students, we conducted correlational analyses to test the relationships between achievement goal orientation, fear of failure and academic performance. The findings showed significant correlations between fear of failure and mastery-avoidance goal, as well as between students' academic performance. Pedagogical implications and future research directions were discussed.

Keywords:
achievement goal orientation; fear of failure; academic performance.

Zusammenfasung

Es gibt zahlreiche empirische Belege für die Untersuchung von Faktoren, die sich positiv oder negativ auf die schulischen Leistungen auswirken, einschließlich der Lernzielorientierung und der Angst vor Misserfolg. Die Forschung zeigt, dass Versagensängste in bestimmten Situationen die akademischen Leistungen von Schülern gefährden können, da sie deren Engagement bei Lernaktivitäten beeinträchtigen. Werden keine Gegenmaßnahmen ergriffen, kann dies die akademische Zukunft der Schüler beeinträchtigen. Gleichzeitig haben frühere Studien gezeigt, dass Versagensängste die Art und Weise beeinflussen, wie Studierende ihre Lernziele verfolgen. Es gibt jedoch nur wenige Studien, die den Zusammenhang zwischen Lernzielorientierung, Versagensangst und Studienerfolg untersucht haben. Basierend auf den Daten von 120 Universitätsstudenten haben wir Korrelationsanalysen durchgeführt, um die Zusammenhänge zwischen Lernzielorientierung, Versagensangst und akademischer Leistung zu testen. Die Ergebnisse zeigten signifikante Korrelationen zwischen Versagensangst und dem Ziel der Meisterschaftsvermeidung sowie zwischen dem Mittelwert der Studierenden und dem Ziel der Leistungsorientierung. Pädagogische Implikationen und zukünftige Forschungsrichtungen wurden diskutiert.

Schlüsselworte:
Lernzielorientierung; Versagensangst; schulische Leistungen.

1. Introduction

Timely completion of academic tasks can be influenced by several factors, both internal, such as laziness, procrastination, task difficulty, and external, such as the characteristics of the work environment. Given the limited number of studies that have examined the interplay between achievement goal orientation, fear of failure, and academic performance, our study seeks to examine these associations and add valuable insights to the existing literature in this area. Therefore, we refer to the theory of achievement goal orientation (Dweck, 1986), recognized as one of the most popular and widely accepted frameworks of motivation in learning. In this context, the authors argue that individuals with a focus on mastery-approach goals are intrinsically motivated to enhance their abilities and show a higher level of confidence in their own abilities, whereas individuals oriented towards performance-avoidance goals are more likely to procrastinate due to fear of failure (Lin et al., 2021). A study by Solomon and Rothblum (1984) found that fear of failure leads to procrastination. Thus, individuals with low levels of confidence in their own abilities may have a greater fear of failure and therefore prefer to procrastinate academic tasks, which could lead to poor performance. The aim of this study was to investigate the association between achievement goal orientation, the fear of failure, and academic performance, as measured by the average of the previous academic year, using correlational analyses.

2. Theoretical foundation

Fear of failure arises from achievement goal theory and is an emotional and motivational trait that is

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expressed in the tendency to avoid situations that might lead to failure in order to avoid feelings of embarrassment or shame (Atkinson, 1957; Caraway & et al., 2003; Sagar & Stoeber, 2009). Along with hope to succeed, fear of failure falls into the category of achievement motives because it directs students towards possible positive or negative outcomes (Atkinson, 1957; McClelland, 1985). This feeling often arises in situations where individuals lack confidence in their own abilities or competencies necessary to achieve their goals (De Castella et. al., 2013). Previous experiences ending in success or failure guide an individual's future behaviour and decisions, creating an attitude to approach or avoid a particular event (Elliot & Covington, 2001). Some authors argue that fear of failure is not a genetic trait, but increases with age due to environmental influences (Meyza et al., 2011; Schayek & Maroun, 2015). Regarding the causes that determine this fear, Giel et al. (2020) argue that fear of failure can have both internal causes, resulting from personal characteristics, and external causes, resulting from interactions with the external environment. Authors such as Conroy et al. (2002) and Martin and Marsh (2003) argue that fear of failure can serve as a motivator for excellence, yet it can also inhibit individuals from attaining their maximum potential by inducing elevated levels of anxiety. For example, individuals with high levels of fear of failure tend to generalise failure across performance contexts (McGregor & Elliot, 2005). The literature shows that students' fear of failure has a significant impact on intrinsic motivation, academic procrastination, learning behaviour and student achievement (Caraway et al., 2003; Chen et al., 2009; Haghbin et al., 2012).

The authors first categorized achievement goal orientation into two distinct types: (1) learning goal orientation, which focuses on skill development through learning, and (2) performance goal orientation, which includes the desire to demonstrate skills to others and to avoid situations in which others might perceive him or her as incapable (Dweck, 1986). Seijts et al. (2004) argue that learning-goal orientated learners engage in challenging tasks that provide them with opportunities to develop their skills, whereas learners oriented toward performance-goals concentrate on achieving final outcomes, experience fear of failure, and focus on the repercussions of low performance (Button et al., 1996). Over time, the classification of learning goals has undergone several variations and has been a topic of interest to educational researchers. These have evolved from the two main categories – mastery-oriented and performance-oriented goal (Dweck & Leggett, 1988), to three categories - mastery goal orientation, performance-approach and performance-avoidance goal orientation (Elliot & Church, 1997), and finally to four categories – mastery-approach and mastery-avoidance goal, and performance-approach and performance-avoidance goal (Elliot & McGregor, 2001). In our research, we will utilize the categorization of learning goals as suggested by Elliot and McGregor (2001), encompassing the four distinct types of goal orientation and their abbreviations: (1) performance-approach goal (PAP), involving the demonstration and validation of competence by learners who are concerned with outperforming others; (2) performance-avoidance goal (PAV), relating to the prevention of situations that could lead to failure or underperformance by peers; (3) mastery-approach goal (MAP, which is reflected by students' concern to enrich their knowledge, develop their personal skills, abilities and aptitudes; and (4) mastery-avoidance goal (MAV), which involves the avoidance of misunderstandings and sometimes even tasks, due to lack of confidence in their ability to perform them successfully (Diaconu-Gherasim & Măirean, 2016; Wolters, 2004). Motivation theorists have included fear of failure in the category of antecedents of goal attainment, alongside the need for achievement or perfectionism (Maehr, 2001; Puente-Díaz, 2013).

Elliot and Pekrun (2007) argue that individuals with high levels of fear of failure engage in academic tasks with the fear that they might fail and that they might feel shame after the experience, which could lead to the adoption of a form of defensiveness focused on avoiding negative outcomes. Results from several previous studies confirm the connection between fear of failure and learning goal orientation (Conroy & Elliot, 2004; Elliot & Church, 1997). These authors argue that individuals who demonstrate a fear of failure are either focused on escaping underperformance compared to their peers or they are focused on avoiding falling behind their peers, thereby adopting PAV and MAV goals. For instance, the results of their studies showed positive correlations between fear of failure and MAP and PAV. Additionally, there were weaker but still notable correlations between fear of failure and PAP. Results from other studies (Dinger et al., 2013; Elliot & Murayama, 2008) showed that fear of failure was a predictor of both MAV and PAV goals. However, Caraway et al., (2003) argue that individuals

exhibiting high levels of fear of failure and low levels of self-efficacy are less able to set goals and work towards achieving them, and therefore less engaged in school tasks.

The relationship between achievement goals and academic performance has been explored in numerous studies, with MAP (Cerasoli & Ford, 2014; Keys et al., 2012), MAV (Elliot & McGregor, 2001; Luo et al., 2013) and PAP goals (Dinger et al., 2013) being positively associated with academic achievement. Conversely, other studies provide evidence of a negative association between PAP (Luo et al., 2013), PAV (Dinger et al., 2013; Elliot & Church, 1997; Luo et al., 2013) and academic performance. The findings regarding the connection between fear of failure and academic performance are mixed. Some studies found a significant correlation between fear of failure and academic performance (Alkhazaleh & Mahasneh, 2016), while others found no significant correlation between the two (Nair & Sutar, 2023). Furthermore, the findings of the study conducted by Dinger et al. (2013) indicate that fear of failure can have an indirect impact on academic performance. It has a positive influence through PAP and a negative influence through PAV goal.

3. Research methodology

The current study aims to investigate the relationship between learning goal orientation, fear of failure and academic outcomes in undergraduate students. Based on previous literature, the following research hypotheses were tested: (1) Fear of failure is expected to be positively correlated with PAP, MAV, and PAV goals; (2) Fear of failure is expected to be significantly correlated with academic performance; (3) PAV and MAP goal will be positively correlated with academic performance.

Research participants. 120 undergraduate students from a large Romanian university, aged 18-58 years (*M=21.3, SD=5.79*), participated voluntarily in this study. Of these, 15.8% were female and 84.2% were male. Participants in this study were recruited from a pedagogy course and, for their participation in the study, they were rewarded with extra credit in the course.

Instrument. To assess *fear of failure* we used the short version of the Performance Failure Appraisal Inventory (Conroy et al., 2002), which consists of 5 items (e.g. 'When I am failing, I worry about what others think of me') measured on a 5-point Likert scale (1 = I don't believe it at all, 5 = I believe it 100%). The Alpha Cronbach internal consistency coefficient is .820.

Learning goal orientation was measured using the Achievement Goal Questionnaire (AGQ; Elliot & McGregor, 2001) with four scales: mastery-approach goal (3 items; e.g., "My goal is to completely master the material presented in class"); mastery-avoidance goal (3 items; e.g., "My goal is to avoid learning less than I possibly could"); performance-approach goal (3 items; e.g., "My aim is to perform well relative to other students"); performance-avoidance goal (3 items; e.g., "My goal is to avoid learning less than I possibly could"). e.g. 'My goal is to avoid learning less than I could'); performance-approach goal (3 items; e.g. 'My goal is to perform well compared to other students'); performance-avoidance goal (3 items; e.g. 'My goal is to avoid performing poorly compared to others'). Participants responded to questions using a 7-point Likert scale (from 1 = *not at all true for me* to 7 = *very true for me*). Cronbach's alpha coefficient of internal consistency shows good values for all four scales (α_{PAP} = .891; α_{PAV} = .760; α_{MAV} = .703; α_{MAP} = .790).

Academic performance was assessed by the grade point average achieved in the last year of study and was self-reported by the students.

Data collection. The instruments were administered online, together with a questionnaire containing socio-demographic data (gender, age). The grade point average of the previous academic year was reported by the participants. Students were informed that participation was voluntary and that their responses would be kept confidential.

Data Analysis. The present study was descriptive-correlational and examined the relationship between learning goal orientation, fear of failure and academic achievement. IBM SPSS was used to analyse the data. T-test was used to compare variables between females and males, and Pearson's r-correlations were applied to analyse the relationships among learning goal orientation, fear of failure and academic achievement, as well as the relationships between age and study variables.

4. Results

4.1. Preliminary analyses

In Table 1 the means scores, standard deviations and scale reliabilities (Cronbach's α) for all variables are presented. All alpha coefficients exceeded .70, indicating a satisfactory level of scale reliability.

Table 1. Mean, Standard Deviation and Scale Reliabilities for All Variables

Variables	*M*	*SD*	*α*
Fear of failure	13.86	4.82	.820
MAp	12.05	2.60	.790
MAv	10.17	2.88	.703
PAp	9.78	3.22	.891
PAv	10.79	3.07	.760

Note: Map = mastery-approach goal, Mav = mastery-avoidance goal, Pap = performance-approach goal, Pav = performance-avoidance goal.

N=120

Table 2 displays the results of the independent samples t-tests, which indicate that there are no notable distinctions between females and males in terms of Fear of Failure, MAP, MAV and PAP goal. In contrast, the results show that there are significant differences between males and females on PAV, with girls scoring higher than boys.

Table 2. T-test results for variables in both males and females

Variables	*Males*		*Females*				
	M	*SD*	*M*	*SD*	*df*	*t*	*p*
1. Fear of failure	11.89	4.82	14.23	4.76	118	-1.964	.052
2. MAp	11.63	2.73	12.13	2.58	118	-.777	.439
3. MAv	9.36	3.09	10.32	2.83	118	-1.331	.186
4. PAp	9.36	3.45	9.86	3.19	118	-.609	.544
5. PAv	9.52	3.48	11.02	2.94	118	-1.980	.050

Note: MAp = mastery-approach goal, MAv = mastery-avoidance goal, Pap = performance-approach goal, PAv = performance-avoidance goal.

The correlations with age for each study variable are shown in Table 3. The results indicate only one significant correlation, between subjects' age and MAP (p = .038), in that subjects with high age scores have high MAP scores and reciprocally, subjects with low age scores have low MAP scores.

Table 3. Pearson correlation between age and study variables

	1	2	3	4	5	6
1. Fear of failure						
2. MAp	-.054					
3. MAv	.445**	.309**				
4. PAp	.124	.338**	.151			
5. PAv	.128	.302**	.315**	.470**		
6. Age	-.113	**.190***	-.030	.047	-.021	

* p < .05 , ** p < .01

4.2. Associations between main study variables

The Pearson correlations results between fear of failure, learning goal orientation, and academic performance are presented in Table 4.

Table 4. Pearson correlation between the study variables

	1	2	3	4	5	6
1. Fear of failure						
2. MAp	-.054					
3. MAv	.445**	.309**				
4. PAp	.124	.338**	.151			
5. PAv	.128	.302**	.315**	.470**		
6. Academic performance	-.091	-100	.034	.261**	.035	

Note: MAp = mastery-approach goal, MAv = mastery-avoidance goal, PAp = performance-approach goal, PAv = performance-avoidance goal.

**p<.05

Pearson correlation results indicate that fear of failure is not statistically significantly correlated with PAP, PAV, and MAP goal (p > .05). On the contrary, a statistically significant positive correlation was observed between fear of failure and MAV (p < .05), in that subjects with high fear of failure scores had high MAV scores, and reciprocally, subjects with low MAV scores had low fear of failure scores.

Regarding the connection between study variables and academic performance, the findings of the current study indicate that there is no statistically significant correlation between academic performance and fear of failure (p = .324), PAV (p = .705), MAV (p = .709), or MAP (p = .279). The only significant correlation observed was between academic performance and PAP (p = .004).

5. Discussions and conclusions

This study was aimed at exploring the association between learning goal orientation, fear of failure, and academic achievement. The first hypothesis of our study was partially confirmed, as fear of failure was only significantly correlated with the MAV, but not with the PAP and PAV goals. The results of the study by Chen et al. (2009) and Conroy and Elliot (2004) also indicate a significant correlation between fear of failure and the MAV. In contrast to our findings, the results of previous studies (Chen et al., 2009; Conroy & Elliot, 2004) indicate a significant correlation between fear of failure and PAV, and in Conroy and Elliot's (2004) study, fear of failure predicted PAP.

Avoidance of situations in which the student may not fully understand the information, as well as lack of confidence in their own abilities (Diaconu-Gherasim & Măirean, 2016; Elliot, 1999), may be caused by fear of failure. At the same time, Conroy & Elliot (2004) contend that fear of failure raises the probability that students will adopt avoidance goals, driven by their fear of experiencing shame or embarrassment or, as Elliot (1999) argues, a desire to avoid situations that may demonstrate a lack of competence. In addition, Chen et al. (2009) argue that individuals who experience fear of failure are more inclined to adopt avoidance goals that are worse than their previous performance (mastery-avoidance goal) or that of their peers (performance-avoidance goal). Additionally, Chen et al. (2009) suggest that fear of failure might motivate students to demonstrate their competence by pursuing a performance-approach goal, thereby potentially reducing the risk of failure.

In contrast to the findings of Nair and Sutar (2023), the results of our study indicate that there is no significant correlation between fear of failure and students' overall GPA. However, based on the study conducted, Berger and Freund (2017) argue that during exam preparation, fear of failure affects students' well-being and makes it difficult to pursue the set goals. Contrary to our findings, Alkhazaleh and Mahasneh (2016) identified a significant association between fear of failure and academic achievement. Regarding the relationship between academic performance and learning goal orientation, the results of our findings show only one significant correlation, which is between GPA and PAP. The results of the study by Dinger et al. (2013) similarly support the association between academic achievement and PAP. Consistent with our findings, Bipp and van Dam (2014) did not find a significant correlation of academic performance with PAV and MAP goals, respectively. In our study, no significant differences were found between girls and boys in their fear of failure.

Limitations and future research directions

One potential limitation of our study could be the correlational design, which does not allow causality to be established. Therefore, further studies with an experimental design are needed to verify causality. Another limitation of our study could be the small number of participants and their field of study, which could prevent the generalisations of the results to subjects of different age, education, culture, etc. Future research could include students from other faculties and disciplines, as well as international students, so that the data collected is as diverse as possible. The collection of data through self-report instruments and the optional nature of the participation in the study could be other limitations of our research, as it is possible that students with a fear of failure may not have wanted to participate in the study, thus reducing the sample size.

Regarding future research on this topic, we consider it necessary to conduct more studies that investigate the 2x2 theoretical framework of learning goal orientation in relation to students' fear of failure and academic performance, and also to identify practical solutions to reduce students' fear of failure and, in particularly, to support students' learning goal orientation. Increased confidence in competence levels could lead to increased engagement in academic tasks and reduced fear of failure. This can be achieved by providing constant positive feedback.

Authors note:

Roxana-Elena Leonte is a PhD student at the Faculty of Psychology and Educational Sciences of the Alexandru Ioan Cuza University of Iasi, Romania, Department of Educational Sciences. Her research interests include achievement goal orientation, self-regulated learning and academic engagement.

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