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DIFFERENCES IN ACADEMIC ORIENTATIONS, EMOTIONAL PROCESSING DIFFICULTIES, AND TEST ANXIETY BETWEEN HIGH AND LOW-ACHIEVING COLLEGE STUDENTS

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Abstract:
This study aimed to investigate differences in positive academic orientations, emotional processing difficulties, and test anxiety between high- and low-achieving college students. The sample includes four hundred students from Kafrelsheikh University. The study also aimed to detect gender differences in these variables. Measures of academic orientations, emotional processing, and test anxiety were used to collect the required data. The descriptive approach and statistical analysis were relied upon using SPSS. The study revealed statistically significant gender and achievement differences between positive academic orientations among university students in favor of high-achieving females. The study also revealed statistically significant gender and achievement differences in emotional processing difficulties in the direction of low-achieving males. In addition, significant gender and achievement differences in test anxiety were found in the direction of low-achieving females. Some implications, suggestions, and limitations were addressed.

Keywords: academic orientations, emotional processing difficulties, test anxiety

1. Introduction and Literature Review

College students face many difficulties that affect their level of achievement. Educators are researching the variables that play a major role in challenging the students to address the obstacles they face, which leads to improvement in their academic achievement. This study will address positive academic orientation, emotional processing, and test anxiety as crucial variables that affect academic achievement.

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2. Academic Orientations

Academic orientations of university students are one of the modern concepts of positive psychology in the psychological and educational heritage, and they serve as a warning indicator provided to educational decision-makers by identifying students who are likely to be exposed to academic failure, low grades, and problems with academic and social adjustment in the university environment (Davidson & Beck, 2006). Academic orientations are one of the strongest indicators of learning outcomes that reveal how students learn? What did the students learn? What factors influenced and contributed to the learning outcomes (Beck& Davidson, 2001; Davidson & Beck, 2006). Educators did not pay enough attention to the perceptions and academic orientations of university students (Davidson *et al.*, 2003). Davidson and Beck (2006) found that students' daily academic orientations and responsibilities significantly influence academic engagement and persistence, with individual differences predicting grades, stress, and persistence, competence, and indifference attitudes significantly predict freshmen's grades. As well, the results by Ezeunara *et al.* (2023) indicated that there is a positive relationship between academic orientations and school compatibility. Further, the results by Vidnere (2019) found that positive academic orientations promote successful academic adjustment and engagement.

Davidson and Beck (2006) define academic orientations as students' perceptions of themselves, instructors, academic environment, and tasks, which include structure dependence, creative expression, reading for pleasure, academic efficacy, academic apathy, and mistrust of instructors. All these factors influence students' academic performance. Structure dependence requires clear guidance, creative expression prefers individual ideas, reading for pleasure is beyond course requirements, academic efficacy is belief in one's ability, and mistrust of instructors is a negative perception. Positive academic orientations are an indication that students have a high orientation toward learning and independence. They usually set achievement goals and benefit from self-regulated learning. They have the ability to achieve their academic goals and carry out assignments in courses and tests. They are also able to overcome failure and obstacles, and they have low levels of self-doubt. And they are not distracted by the fear of failure (Lemmens, 2010).

3. Emotional Processing Difficulties

Individual differences in processing emotional information are one of the most important predictors of an individual's success in all aspects of his life (Warwick & Nettelbeck, 2004). Emotions can help understand cognitive and social behavior (Leible & Snell, 2004). Rachman (1980) suggested that incomplete emotional processing can lead to signs of failure, such as fear recurrence and intrusive thoughts. Excessive avoidance or rigid inhibition of negative experiences can hinder their reintegration and resolution, resulting in stress symptoms. In addition, Cherniss (2000) pointed out that the individual's

emotional capabilities represent an important and influential factor in his performance of various cognitive tasks through their impact on his thinking and behavior. In the same context, the results by Abadi *et al.* (2018) indicated that training on emotional processing strategies increases academic self-efficacy and academic positive emotions and reduces negative emotions. Emotional processing is defined as the individual's ability to absorb and assimilate emotionally disturbing stimuli and reduce them to the extent that it allows his other experiences and usual behavior to continue without disruption or interruption (Rachman, 1980). Also, it was defined by Foa *et al.* (2006) as a modification of the structures of memory by modifying pathological beliefs associated with painful and traumatic events, weakening them, and replacing them with other healthy associations and beliefs. Thus, emotional processing difficulties can be attributed to dysfunctional emotional states resulting from inadequately processed emotional experiences (Faustino& Vasco, 2020).

Baker *et al.* (2010) developed a model of emotional processing that includes specific psychological mechanisms through which the emotional processing of stressful events can be facilitated or hindered. The model assumes that the process of emotional processing consists of three stages: the input of the emotional event (which includes perception, cognitive evaluation, memory, and schemas), the stage of emotional experience, which includes controlling and linking emotional states, and the expression stage verbally, physiologically, and behaviorally (Gay *et al.*, 2019). Barnard and Teasdale (1991) suggest that emotional processing involves storing implicit systems and integrating new and old information. To change implicit meaning, two strategies can be used: creating new meanings in memory and encoding them, and learning to shift from the emotional mind to the wise mind through mindfulness exercises. The "wise mind" mode of emotional processing leads to pervasive emotional changes, with the exchange and transformation of meaning playing a central role. Therefore, emotional processing is represented by the student's ability to control his emotions related to emotionally painful events and prevent them from affecting his daily activities.

4. Test Anxiety

College students frequently have psychological and behavioral issues, such as test anxiety, which can lead to subpar academic performance or even failure. According to Markman *et al.* (2011), test anxiety is prevalent across all subject areas and is worse in higher education. Its significance has mostly been established by its negative correlations with performance on tests and achievement (Von der Embse, 2018). According to the studies by Hjeltnes *et al.* (2015) and Badrian *et al.* (2022), test anxiety can negatively impact memory, cognition, and learning, or poor performance. Long-term anxiety can cause self-doubt, fear, and helplessness, affect physical and mental health, and may result in academic failure. Test anxiety is a condition characterized by excessive worry about test results, leading to physiological and psychological symptoms such as inattention, memory issues, confusion, and physical symptoms (Qin *et al.*, 2021). Test anxiety refers

to the psychological and behavioral responses individuals experience when they fear failure on an exam or similar assessment situation (Sarason, 1990). According to Spielberger and Vagg (1995), test anxiety is characterized as a situation-specific characteristic that is characterized by a stable inclination, or predisposition, to perceive situations that involve performance evaluation (i.e., situations in which one's performance is evaluated) as dangerous and to respond with high-state anxiety. Thus, college students' test anxiety can be reduced by actively implementing successful intervention strategies, which is crucial for the advancement of each person's physical and mental well-being.

Based on what was previously presented, it is clear that study variables are extremely important to college students. Therefore, this study seeks to fill the research gap with regard to the differences related to gender and achievement and their interaction in these variables that could affect students' academic achievement and their performance in exams, and then take preventive and remedial measures at the appropriate time.

5. Hypothesis

1) There are no statistically significant differences according to gender (males - females), achievement level (low - high), and their interaction on the academic orientation questionnaire between the scores of college students.
2) There are no statistically significant differences according to gender (males - females), achievement level (low - high), and their interaction on the emotional processing scale between the scores of college students.
3) There are no statistically significant differences according to gender (males - females), achievement level (low - high), and their interaction on the test anxiety scale between the scores of college students.

6. Materials and Methods

6.1 Participants

The sample includes 400 undergraduate students with an average age of 21.32 years and a standard deviation of 3.97± studied in the College of Education at Kafrelsheikh University in Egypt during the 2023–2024 academic year. There were 150 male students and 250 female students. Of the students in the sample, 120 had a GPA below good, and 280 had a GPA between very good and excellent. To give each participant an equal chance of being chosen, the study used random sampling.

6.2 Measures

6.2.1 Academic Orientations Questionnaire

Davidson *et al.* (1999) developed and validated a measure of the six academic orientations, three of which are positive contributions: creative expression (5, 11, 17, 23,

29, 35), reading for pleasure (1, 7, 13, 19, 25, 31), and academic self-efficacy (3, 9, 15, 21, 27, 33). And there are three negative ones: structure dependance (6, 12, 18, 24, 30, 36), academic apathy (2, 8, 14, 20, 26, 32), and mistrust of instructors (4, 10, 16, 22, 28, 34). The self-reported 36-item questionnaire seeks to understand students' attitudes towards courses, instructors, and classroom policies, focusing on their opinions rather than correct answers. Responses get 5 (strongly agree), 4, 3, 2, and 1 (strongly disagree) in positive items. The items 2, 3, 4, 6, 8, 10, 12, 13, 14, 15, 16, 18, 21, 22, 24, 26, 28, 33, 34, and 36 are in the reverse direction. In this study, the author relied on statements that measure positive academic attitudes only, and thus, the participant's score ranges between *18* and *90*. The author translated the scale into Arabic and ensured its translation by experts. As well as ensuring the psychometric properties, such as validity, internal consistency, and reliability coefficients, are higher than 0.75.

6.2.2 Emotional Processing Scale

The emotional processing scale is a 25-statement self-assessment measure of a person's emotional processing in the week prior to assessment, focusing on actual events in recent memory. It was developed by Baker *et al.* (2010) to evaluate the mechanisms and processes involved in emotional processing and identify any unprocessed emotional material. The scale includes five factors: Suppression refers to excessive control over the expression of emotional experience and consists of five phrases: 1, 6, 11, 16, 21; signs of unprocessed emotions, which refer to the intrusion, interference, and continuation of emotional experience 2, 7, 12, 17, 22: Unregulated emotion refers to the extent of a person's control over his emotions and feelings phrases: 3, 8, 13, 18, 23; avoidance: It refers to staying away and avoiding negative emotional stimuli and events, and it consists of 5 phrases: 4, 9, 14, 19, 24; and Impoverished emotional experience refers to the extent of an individual's ability to recognize and describe feelings, link them to events, and distinguish between different feelings 5, 10, 15, 20, and 25. The responses were modified to be on a 5-point Likert scale instead of 9, where the answer (completely applies) receives five marks, while the answer (completely does not apply) receives one mark. Thus, the student's score on the scale ranges from 25 to 125, and a high score on the scale indicates difficulties in emotional processing. The emotional processing scale was translated multiple times and tested on college of education students to determine its apparent validity, item validity, and internal consistency. The scale's clarity of instructions, response method, and understanding of statements were assessed. The correlation coefficient between item scores and the total scale score was calculated, ranging between 0.753 and 0.865. The Cronbach-alpha and half-split ranges were between 0.0782 and 0.887.

6.2.3 The Multidimensional Test Anxiety Scale (MTAS)

MTAS was developed by Putwain *et al.* (2020) to measure students' test anxiety. It consisted of 16 items, distributed based on four factors: Worry includes items 1, 5, 9, 13; cognitive interference includes items 2, 6, 10, 14; tension includes items 3, 7, 11, and 15; and physiological indicators include items 4, 8, 12, 16. The participant responded to the

scale on a five-point scale (1 = strongly disagree, 5 = strongly agree), and the total participant's score ranges between 16 and 80, and the higher score on the scale reflects a higher level of test anxiety. The translation process into Arabic involved many rounds until it reached a satisfactory level. The scale's internal consistency ranges between 0.821 and 0.895. Also, test-retest and Cronbach-Alpha reliability range between 0.795 and 0.898. In addition, validity was calculated by calculating the correlation coefficient between the item score and the total scale score after deleting the item score, and the correlations range between 0.643 and 0.833. Based on the previous, the scale has good psychometric properties to measure the sample's test anxiety.

7. Results and Discussion

Hypothesis 1: There are no statistically significant differences according to gender (males - females), achievement level (low - high), and their interaction on the academic orientations' questionnaire between the scores of college students.

To examine the validity of this hypothesis, "two-way analysis of variance" was used to indicate differences between independent groups, and the results are as follows in Tables 1 and 2.

Table 1: Means and standard deviations of college students according to gender (males - females) and group (high - low) and the interaction between them on the academic orientations' questionnaire

Variable	Gender	Group	Means	St. deviation	No
Academic Orientations	Males	Low	40.37	7.54	40
		High	55.00	10.16	110
		Total	**59.43**	**14.48**	**150**
	Females	Low	43.57	7.49	80
		High	81.52	7.58	170
		Total	**75.16**	**14.36**	**250**
	Total	Low	45.75	7.47	120
		High	69.52	8.70	280
		Total	**66.26**	**14.39**	**400**

Table 2: Analysis of variance of college students according to gender (males - females) and achievement level (low - high) and the interaction on the academic orientations' questionnaire

Source of Variation	Sum of Squares	df	Mean Square	F	Sig.
Gender	1541.17	1	1541.17	7.62	0.01
Achievement Level	1785.37	1	1785.37	8.83	0.01
Gender* Achievement Level	2452.20	1	2452.20	10.98	0.01
Error	28724.13	397	72.53		
Total	**82063.99**	**400**			

As shown in Tables 1 and 2,

1) There are significant differences according to gender (males- females) on the academic orientations' questionnaire in favor of female students.
2) There are significant differences according to achievement level (low- high) on the academic orientations' questionnaire in favor of high achievers' students.
3) There is an effect of the interaction between gender (males- females) and achievement level (low- high) on the academic orientations' questionnaire in favor of high achievers' female students.

These results are consistent with the results by Kelly and Daughtry (2007, 2008), which showed a correlation between academic orientations and both academic achievement and creativity, with creative expression and reading being significant factors. These findings are also in accordance with the results by Ayoub (2017), which indicated gender differences in academic orientations in favor of female students.

These results may be due to social and cultural motivation for females to achieve academic success, and it may be because females may see academic achievement as a means to achieve their professional and personal goals in the future. It may also be due to the challenges facing females in certain fields, which push them to strive towards academic excellence.

Hypothesis 2: There are no statistically significant differences according to gender (males - females), achievement level (low - high), and their interaction on the emotional processing scale between the scores of college students.

To examine the validity of this hypothesis, "two-way analysis of variance" was used to indicate the differences, and the results are as follows in Tables 3 and 4.

Table 3: Means and standard deviations of college students according to gender (males - females), achievement level (low- High), and the interaction on the emotional processing scale

Variable	Gender	Group	Means	St. deviation	No
Emotional Processing	Males	Low	74.17	11.93	40
		High	37.96	4.47	110
		Total	**42.50**	**10.43**	**150**
	Females	Low	54.97	8.85	80
		High	36.67	2.19	170
		Total	**62.82**	**10.12**	**250**
	Total	Low	63.57	11.83	120
		High	37.17	3.33	280
		Total	**62.51**	**10.78**	**400**

Table 4: Analysis of variance of college students according to gender (males - females), achievement level (low - high), and interaction on the emotional processing scale

Source of Variance	Sum of Squares	df	Mean Square	F	Sig.
Gender	595.39	1	595.39	104	0.01
Achievement Level	782.04	1	782.04	27	0.01
Gender* Achievement Level	982.54	1	982.54	12	0.01
Error	45484.48	396	114.57		
Total	**46268.57**	**400**			

As shown in Tables 3 and 4,

1) There are significant differences according to gender (males - females) in the direction of males on the emotional processing scale.
2) There are significant differences according to achievement level (low - high) on the emotional processing scale in the direction of low achievers.
3) There is an effect of the interaction between gender (males - females) and achievement level (low - high t) on the scale of emotional processing in the direction of low achievers' males.

This result is in accordance with the results by Kinner *et al.* (2014), which indicated that women are better than men at controlling their emotions in stressful situations. These results are also in line with the study by Hafiz (2015) and Sadeghi Bahmani *et al.* (2018), which found a connection between poor academic achievement and emotional dysfunction. On the other hand, the results by Staugaard and Berntsen (2021) revealed that both males and females did not exhibit any significant differences in the frequency of emotionally negative involuntary memories. This may be due to the fact that males have more difficulties with emotional awareness than females (Neumann *et al.*, 2010), which depends on difficulties in processing and regulating emotions. These results can also be interpreted as showing that the student who has difficulties in emotional processing hinders him from performing academic tasks and thus leads to a lower level of achievement, and this is consistent with Rachman's (1980) observation that a complete emotional treatment that takes place quickly and with less difficulty leads to the individual's absorption of disturbing stimuli to the extent that allows him to perform his current task without failure. Thus, these results support what Baker (2010) pointed out: an individual's attempt to perform a new task that includes stimuli related to repressed negative emotions was caused by previous stimuli that had incomplete emotional processing or in which he encountered great difficulties when performing it for the first time, leading to the feeling of these negative emotions as if they were occurring for the first time. This may affect the performance of the new task, and this is what actually happens in academic tasks.

Hypothesis 3: There are no statistically significant differences according to gender (males - females), achievement level (low - high), and their interaction on the test anxiety scale between the scores of college students.

To examine the validity of this hypothesis, "two-way analysis of variance" was used to indicate the differences, and the results are as follows in Tables 5 and 6.

Table 5: Means and standard deviations of college students according to gender (males - females), achievement level (low - High), and the interaction between them on test anxiety scale

Variable	Gender	Group	Means	St. deviation	No
Test Anxiety	Males	Low	47.35	8.62	40
		High	35.03	4.70	110
		Total	**46.98**	**6.79**	**150**
	Females	Low	57.51	6.57	80
		High	34.06	3.67	170
		Total	**66.71**	**6.88**	**250**
	Total	Low	42.35	8.55	120
		High	34.44	4.12	280
		Total	**56.81**	**6.84**	**400**

Table 6: Analysis of variance of college students according to gender (males - females), achievement level (low - high), and the interaction between them on test anxiety scale

Source of Variance	Sum of Squares	df	Mean Square	F	Sig.
Gender	5033.90	1	5033.90	24	0.01
Achievement Level	4457.07	1	4457.07	27	0.01
Gender* Achievement Level	5577.97	1	5577.97	12	0.01
Error	13740.80	396			
Total	**564821.00**	**400**			

As shown in Tables 5 and 6,

1. There are statistically significant differences according to gender (males - females) in the direction of females on test anxiety scale.
2. There are statistically significant differences according to achievement level (low - high) on test anxiety scale in the direction of low achievers.
3. There is an effect of the interaction between gender (males - females) and achievement level (low - high) on test anxiety scale in the direction of low achievers' females.

These results are in accordance with the results by Zaheri *et al.* (2012) and Núñez-Peña *et al.* (2016), which showed that females have a higher level of test anxiety. Also, these results are similar to those by Jerrim (2023), who detected that high levels of test anxiety are negatively related to academic achievement. And the results by Javed and Abiodullah (2021), which indicated a negative correlation between test anxiety and academic success, showed that females have higher scores in test anxiety in comparison to males. This may be due to the fact that females have high academic orientations and expectations for academic achievement and excellence, and this may cause anxiety in exams and fear that they will obtain lower scores than their expectations. Societal expectations and gender roles may play a role, as females may feel additional pressure to perform well academically due to cultural norms or expectations. Fear of not meeting these expectations can lead to increased anxiety during exams. Females also tend to

engage in more social comparison, which may lead to increased anxiety. In addition, perfectionistic tendencies may contribute to increased test anxiety in females.

8. Recommendation

The study suggests that the university provide academic counseling programs because of the importance in directing students towards increasing their positive academic orientations and the correct methods for emotional processing and managing test anxiety. The study also emphasizes the significance of early psychological intervention for students with low academic achievement and the need to develop skills to manage emotional processing and test anxiety.

9. Conclusion

The study examined academic orientations, emotional processing difficulties, and test anxiety among 400 Kafrelsheikh University students. Results showed significant gender and achievement differences in positive academic orientations, emotional processing difficulties, and test anxiety. High-achieving females had more positive academic orientations, while low-achieving males had more emotional processing difficulties. The study also revealed significant gender and achievement differences in test anxiety in the direction of low-achieving females.

Conflict of Interest Statement
The author declares no conflicts of interest.

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