

Comparison Between Achievement Goal, Perfectionism and Anxiety in High School Male and Female Students

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Background: Most people experience anxiety in attempting to reach their goals in life and confronting the existential challenges.

Objectives: The purpose of this study is to compare the achievement of goals, perfectionism and anxiety among high school students.

Materials and Methods: This cross-sectional study comprised 200 female and male students selected from six high schools using cluster random sampling method. Achievement goal scale for public texture, Frost multidimensional perfectionism scale and DASS scale were used to collect data, analyzed by multivariate variance analysis (MANOVA), and multiple regression.

Results: The results showed that in the proficiency-oriented achievement goal subscales and function-oriented achievement goal subscales girls had higher scores than boys, indicated by ($P < 0.021$) and ($P < 0.007$), respectively. In parental expectations subscale of perfectionism girls had higher scores than male students ($P < 0.013$). But there were no significant differences between male and female students in the scores of the subscales of concern over mistakes, personal standards, parental criticism, parent's expectations and organization. In the stress subscale, girls (34.39) obtained higher scores ($P < 0.004$) than boys (30.16). However, there was no statistically significant difference in the subscales of anxiety and depression, between the two genders. The students' anxiety can be predicted using two subscales of function-oriented achievement goal ($P < 0.002$) and work avoidance oriented achievement goal ($P < 0.0001$).

Conclusions: Considering the prediction of students' anxiety by achievement goal sub-scales, similar research findings can be used to design training programs in order to prevent anxiety and negative perfectionism in students.

Keywords: Achievement; Anxiety; Depression; Students

1. Background

Today, achievement goal is one of the controversial topics in the field of achievement motivation and drawn attentions of theorists and researchers. Therefore, in describing the construct, authors stated that achievement goal represents a consistent pattern of individuals' beliefs, emotions and documents which make them more oriented towards certain situations and act under some circumstances. This helps people understand the elements that excite or motivate them to involve in activities (1). It seems that there are four primary goals so called achievement goal frameworks. These include: 1) Mastery-Approach (MAP), by which an individual is motivated to learn or improve his/her learning and skills; 2) Mastery-Avoidance (MAV), which individual motivated to avoid failure or decrease in learning and skills; 3) Performance-Approach (PAP), reflect the person who is motivated to outperform or appear better than others; and 4) Performance-Avoidance (PAV), which points to individual who is motivated to avoid doing worse than others. The concept could impact behaviors of people toward targets and progress of tasks (2). All people are trying to reach

perfection and progress; but those who are having trouble dealing with the realities of life and build unrealistic frameworks might tend to become perfectionist. Studies indicate that the construct could correlate with psychopathology (3, 4) manifested as a mediator between life experiences and psychological distress (5). There are beliefs that perfectionism is an urgent need for progress, tends to appear unrealistic with respect to high personal standards and correlated mostly with dysfunctional adaption (6). Psychological and physical distress create anxiety which is an unpleasant emotion that people experience in their lives; some researchers stated that people confront with social anxieties because of their high personal standards (7). In this regard, some authors believe that anxiety is resulting from improved performance in order to attract attention (8), and this is more profound in female with mastery-avoidance goals (9); the issue followed by exciting the emotions and competitive behaviors, features that are closely correlated to perfectionism; for example a study showed that perfectionistic concerns are correlated with mastery-avoidance, performance-ap-

proach, and performance-avoidance goals (10). McGregor and Elliot (2002) identified in a study that performance avoidance orientation is correlated with the fear of failure and related traits such as anxiety (11). Learning information about anxiety is important for planners as well as students and their families to understand how to encounter difficulties.

2. Objectives

Therefore, in the present study authors intended to compare achievement goals, anxiety and perfectionism among male and female students; and having explored the background of the research the following hypotheses were examined: 1- There is significant difference between male and female student on achievement goals, 2 - There is significant difference between male and female student perfectionism, 3- There is significant difference between depression, anxiety, and stress among male and female students, 4- Students' anxiety can be predicted by perfectionism subscale scores, 5- The students' anxiety can be predicted from achievement goal test subscales scores.

3. Materials and Methods

This cross-sectional research comprised 200 male and female students selected through random cluster sampling. The schools and classes to be studied considered as clusters from which 183 students were ultimately selected. Since the authors predicted that some of the students might refuse to complete the questionnaire, 210 students recruited of whom 200 who agreed to cooperate completed the questionnaires. The Achievement Goal Questionnaire (AGQ) for General Context consisting 15 questions (12), was designed to measure students' goal orientation in their academic setting (13). The scale contained four achievement goal orientation subscales so called mastery-approach (MAP), mastery-avoidance (MAV), performance-approach (PAP), and performance-avoidance (PAV). A fifth subscale, work-avoidance (WAV), was subsequently added to the general version of the AGQ, suggested as a possible fifth goal orientation (12). The questionnaire was designed based on a 7-point Likert scale which ranged from 1 (not at all true of me) to 7 (very true of me). All subscales consisted of three items, with possible subscale scores ranging from 3 to 21. The scale in this study, showed appropriate Cronbach's alpha coefficient for the subscales of MAP, MAV, PAP, PAV, and WAV were 0.78, 0.39, 0.82, 0.75, and 0.63, respectively. Also construct validity of the questionnaire was studied previously in undergraduate psychology students in USA (1). Frost Perfectionism Scale contained 35 items that measured inherent qualitative levels of perfectionism of the individual. The 5-point Likert scale scoring method was used in this scale from a score of 1 (strongly disagree) to score 5 (totally agree). The total score with a Cronbach's alpha was 0.797. The last questionnaire was Depression Anxiety

Stress Scale (DASS) (14). Each question is scored from zero (not at all is true for me) to 3 (very much true in my case). It was found that reliability, assessed using Cronbach's alpha, was acceptable for the depression, anxiety and stress scales (0.91, 0.84 and 0.90, respectively). Formal and content validity of the questionnaires were confirmed by adviser and consultant of the thesis.

4. Results

Results of the hypotheses are displayed in the following tables. The data obtained were based on objective of the study and presented in detail for each groups, and analyzed by MANOVA and multiple regression methods. Table 1 demonstrates Pillai's trace (0.04) is significant which indicate that the difference between the groups might be semantic; Also, M-Box value (78.264) of dependent variable covariance matrices for independent variable levels used to analyze the result of multivariate variance. As shown in Table 2, all achievement goal subscales and mean scores of female students was higher than boys, and there is a significant difference between boys and girls on MAP ($F = 3.953$, $df = 2.198$, $P > 0.021$); and in PAP ($F = 2.471$, $df = 2.198$, $P > 0.007$). According to descriptive data on both subscales, females showed higher mean scores than male students. On the other hand, no significant difference was found between the groups on MAV, PAV, and WAV. Table 3 demonstrate the Pillai's trace and M-Box values of dependent variable covariance matrices for independent variable levels used to analyze the result of multivariate variance. Also in all perfectionism subscales, female students mean scores was higher than males. As shown in Table 4, the mean and standard deviation of each subscale are calculated separately. In all three subscales of depression, anxiety and stress, the female mean scores are higher than male students. In addition, there are significant differences between girls and boys on some subscales of perfectionism, and between groups on subscale of Parental Expectations (PE) ($F = 4.44$; $DF = 2,198$; $P > 0.013$); surprisingly, parental expectations mean scores are higher in girls than males. There were no significant differences between groups on other subscales. Due to the significance of M Box and covariance matrices inequalities, Pillai's trace was used for independent variable levels (Table 5). The results of the analysis of variance can be analyzed considering the significance of this Pillai's trace. As shown in Table 6, it is obvious that in stress subscale, there is a significant difference between the groups ($F = 5.7$, $df = 2.198$, $P > 0.004$), revealing higher stress in girls than boys. However, there was no significant difference in depression and anxiety subscale between boys and girls. Considering the aim of the study, only anxiety subscale of the DASS test was used as dependent variable, and a multiple regression was performed to examine the predictability of perfectionism and achievement separately. Adjusted R (0.017) in Table 7 shows that the model used in this thesis (i.e.

the test subscales of perfectionism) has taken into account 0.017 change in anxiety scores, considering the low score, this model is not satisfactory. This indicates that students' anxiety rate cannot be predicted by perfectionism test subscale scores. Table 7 shows that because $P > 0.159$, the model is not significant probably the subscales cannot predict anxiety, thus to clarify this issue Table 1 may be consulted. According to Table 8, none of the beta coefficients are significant for each subscales of perfectionism. In other words, none of the subscales of perfectionism in this study can predict students' anxiety. In the last hypothesis, students' anxiety were predicted by subscale scores of the achievement goal. According

to Table 9 which there is 1 regression equation, R_{adj} values (0.132) shows that the model used in this thesis (i.e. achievement goals test subscales) has taken into account 0.132 change in anxiety scores that is a weak value. The overall model is significant at ($P < 0.0001$), hence regression coefficients introduced in Table 10 is used to identify which subscale can predict anxiety. Two of the subscales of the achievement goals test marked with an asterisk are significant. Using regression ($0.132 = \text{adjusted } R \text{ square } P > 0.0001; 194 \text{ and } DF = 5; F = 7.074$) in prediction variables, MAP (beta - 0.251; $P = 0.002$) and WAV (beta 0.253; $P = 0.0001$) are significant and could predict anxiety in students (Table 10).

Table 1. M-Box for for Testing Covariance Matrices Homogeneity of Subscales of Achievement Goal and Multivariate Tests

Source of Change	Value	Significant Level	Independent Variable	Source of Change	Value	Significant Level
M box	78.264	0.5	sex	Pillai's trace	0.04	0.03

Table 2. Subscales of Multivariate Analysis of Variance of Achievement Goal Questionnaire ^a

Groups	Mean ± SD	Sum of Squares	Df	Mean Square	F	Sig	Eta
MAP		108.649	2	54.325	3.952	0.021	0.039
Girl	17.863 ± 3.032						
Boy	16.417 ± 4.271						
MAV		136.422	2	68.211	2.471	0.087	0.024
Girl	15.733 ± 3.632						
Boy	14.077 ± 6.471						
PAP		187.964	2	93.982	5.097	0.007	0.049
Girl	234/17 ± 3.958						
Boy	15.389 ± 4.602						
PAV		23.973	2	11.987	0.768	0.465	0.008
Girl	15.822 ± 3.865						
Boy	15.347 ± 4.032						
WAV		16.616	2	8.308	1.558	0.213	0.016
Girl	10.071 ± 2.067						
Boy	9.947 ± 2.525						
Error							
MAP		2707.486	198	13.744			
MAV		5438.778	198	27.608			
PAP		3632.352	198	18.438			
PAV		3074.363	198				
WAV		1050.242	198				

^a Abbreviations: MAP; mastery-approach, MAV; mastery-avoidance, PAP; performance-approach, PAV; performance-avoidance, WAV; work-avoidance.

Table 3. M-Box for for Covariance Homogeneity Matrices of Subscales of Perfectionism and Multivariable Tests

Source of change	Value	Significant Level	Independent Variable	Source of Change	Value	Significant Level
M box	41.026	0.8	sex	Pillai's trace	0.037	0.04

Table 4. MANOVA of Perfectionism

Groups	Mean ± SD	Df	Sum of Squares	Mean Square	F	Sig	Eta
Concern Over Mistakes		2	8.715	4.357	0.194	0.824	0.002
Girl	30.126 ± 4.675						
Boy	30.051 ± 4.805						
Personal Standards		2	39.94	19.97	1.226	0.296	0.012
Girl	22.398 ± 3.83						
Boy	21.502 ± 4.23						
Parental Expectations		2	92.83	46.416	4.44	0.013	0.043
Girl	17.036 ± 2.781						
Boy	15.69 ± 3.621						
Parental Criticism		2	1.437	0.718	0.11	0.896	0.001
Girl	11.24 ± 2.321						
Boy	11.116 ± 2.762						
Doubts about Action		2	43.725	21.863	2.573	0.079	0.025
Girl	14.984 ± 2.385						
Boy	14.18 ± 3.358						
Organization		2	31.363	15.618	1.358	0.26	0.014
Girl	18.88 ± 3.205						
Boy	18.25 ± 3.578						
Error							
Concern over Mistakes		198	4428.66	22.481			
Personal Standards		198	3209.471	16.292			
Parental Expectations		198	2056.043	10.437			
Parental Criticism		198	1283.65	6.516			
Doubts about Action		198	1674.04	8.498			
Organization		198	2275.09	11.549			

Table 5. M-Box for Testing Homogeneity of Covariance Matrices of Subscales of Depression, Anxiety and Stress and Multivariable Test

Source of Change	Value	Significant Level	Independent Variable	Source of Change	Significant Level	Value
M box	10.99	0.094	sex	Pillai's trace	0.01	0.04

Table 6. The Results of MANOVA of Depression, Anxiety, and Stress

Groups	Mean ± SD	df	Sum of Squares	Mean Square	F	Sig	Eta
Depression		2	22.814	11.407	0.175	0.839	0.002
Girl	25.255 ± 8.145						
Boy	24.728 ± 7.988						
Anxiety		2	226.714	113.357	1.458	0.235	0.015
Girl	29.148 ± 8.95						
Boy	27.597 ± 8.67						
Stress		2	951.483	475.742	5.7	0.004	0.055
Girl	34.395 ± 9.007						
Boy	30.161 ± 9.26						
Error							
Depression		198	12820.920	65.081			
Anxiety		198	15311.901	77.725			
Stress		198	16441.374	83.459			

Table 7. Summary of the Model

Model	R	R ²	R _{adj}	Estimated Standard Error	Sig
1	0.215	0.046	0.017	8.762	0.159

Table 8. of of Regression Coefficients of Perfectionism on Anxiety

Model	Nonstandard Coefficients		Standard Coefficient	t	Sig
	β	Standard error	β		
constant	28.830	4.533		6.360	0.0001
Concern over Mistakes	-0.203	0.196	-0.108	-1.035	0.302
Personal Standards	-0.364	0.22	0.167	1.658	0.09
Parental Expectations	0.05	0.251	0.019	0.201	0.841
Parental Criticism	0.406	0.304	0.117	1.335	0.183
Doubts about Action	-0.318	0.261	-0.106	-1.218	0.225
Organization	-0.168	0.241	-0.065	-0.697	0.487

Table 9. Model Summary of Regression

Model	R	R ²	R _{adj}	Estimated Standard Error
1	0.393	0.154	0.132	8.23

Table 10. Regression Coefficients

Model	Nonstandard Coefficients		Standard Coefficient	t	Sig
	β	Standard error	β		
constant	46.831	3.775		12.406	0.001
MAP	-0.59	0.187	-0.251	-3.151	0.0028
MAV	0.106	0.119	0.064	0.897	0.371
PAP	-0.145	0.178	-0.072	-0.819	0.414
PAV	0.133	0.181	0.059	0.731	0.465
WAV	-0.967	0.26	-0.253	-3.712	0.0001

^a Abbreviations: MAP; mastery-approach, MAV; mastery-avoidance, PAP; performance-approach, PAV; performance-avoidance, WAV; work-avoidance.

5. Discussion

The results of this study show that there are significant differences between male and female students in MAP and PAP subscales, showing higher mean scores in girls than boys. This finding is consistent with the report of Middleton and Midgley, 1997 (15) and contrary to the findings of others (16). This is probably due to a culture-related factor in Iranian female students which receive more attention from their parents to achieve life objectives. Achieving the performance goals means doing better than others and achieving the mastery goals is indicative of learning the skills for being efficient in life. The other reason could be that in modern societies, girls are more involved in the areas of education, job and improved performance than ever and in their greater role in society, a condition making them more competitive and outperforming the others; this difference can also be the result of cultural discrepancies. Other results of this research hypothesis suggest that parental expectations (PE) are

higher among girls. Surprisingly this finding could explain why girls obtain higher scores in MAP and PAP. These outcomes stem from socialization and parental atmosphere. These findings are consistent with other studies (17). Our results indicated significantly different level of stress between groups. In other words, the stress scores are higher among female students. The effect of micro stressors such as parental expectations, social demands and etc. which indirectly or directly predispose the female students to anxiety; this finding is supported by the findings of another study (17). In regard to the hypothesis of anxiety among students, we conclude that in our study sample, none of the perfectionism subscales could predict students' anxiety. This finding is in conflict with findings where perfectionism could predict worries and anxiety in clinical sample (18). The results of the research is related to the fact that perfectionist people have feelings of insecurity and anxiety and are more vulnerable

because of some of their personal characteristics such as urgent need to succeed, avoid imperfections and any failure or criticism (2). Also the hypothesis that perfectionists wish to interpret their daily events as threatening and stressful (19) are inconsistent with the results of present research. As a whole, results of the present study showed that only WAV could predict anxiety in students. WAV indicates that this type of goal orientation is associated with negative outcomes (20); students with WAV attempt to accept easier tasks, strive to get by doing as little work as possible, make little use of effective learning strategies, and are likely to have lower course grades than those not adopting work-avoidance goals (WAV) (21). In the present study, it was found that female students had higher mean scores in achievement goals, perfectionism, and anxiety variables. Also according to the hypothesis that compared these three variable subscales we found that female students placed higher emphasis on performance goals than their male counterparts, hence they suffered higher stress than boys. Based on findings of our studied sample, female students are confronted with higher standards of parents which implicitly prepare them to build more mastery and performance orientations to success. We believe that while the parents encourage their girls to fully achieve their goals, they should also be aware of paying attention to psychological status of their children to prevent anxiety symptoms and other dysfunctional issues. Authors believe that more studies are needed to clarify the role of the variables in both genders. The studies to be conducted should be more comprehensive with a greater sample size in order to achieve complementary results.

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