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The Defensive Pessimism for University Students

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ABSTRACT

The study aimed to investigate and assessing prevalence The Defensive Pessimism for University Students. The sample comprised N=600 university students with a mean of M=74.29 and SD=16.67. The sample included (300) females and (300) males. The stratified random sampling was selected using simple random method. A defensive pessimism scale was constructed of 20 items in its final version after verifying the psychometric its properties as exploratory factor analysis, discriminative power of items, and reliability using Cronbach's alpha = 0.89 The paragraphs of the scale remained unchanged without any paragraphs being deleted. the hypothetical mean against which the sample mean was compared was (60), The results showed, using a one-sample t-test t(600)= 20.998, p = 0.000, that university students have statistically significant defensive pessimism.

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1. INTRODUCTION

University students face numerous difficulties and problems that may obstruct their academic progress. These problems and difficulties generate anxiety and inability to progress and continue, which in turn leads them to failure, as excessive anxiety negatively affects their educational level and inability to predict a good future. This results from their failure to use the defensive pessimism strategy, which is a strategy used by anxious people to help them manage their anxiety so they can work productively. Individuals sometimes use low expectations to deal with their anxiety so it doesn't become exhausting. Generally, high anxiety levels tend to interfere with performance in test situations. Many scientific studies have indicated the extent of anxiety's impact on students, especially when this anxiety is high, and its negative effects on their academic level. Moreover, its impact on their personality and adjustment (Adams, 2023; Norem, 2008; Wilt, Oehlberg, & Revelle, 2011).

Research Gap and Urgency: Since previous studies have dealt with students from diverse samples and different countries, the researchers decided to address the gap in studying this variable within the local academic environment in Iraq, given that it is going through difficult circumstances in terms of combating extremism and terrorism, as well as difficult economic and living conditions.

Based on the above, due to the lack of studies that have addressed the concept of defensive pessimism among university students (study sample), the study problem is explicit on the academic level, which addressed an important segment of society, university students. They face stress and anxiety and the negative impact of these pressures and anxiety on their academic level. ***Consequently, the researcher posed the following question: Do university students have a defensive pessimism?***

The Importance of the Study

University students are future leaders and the foundation upon which society depends on during its development. They represent a tremendous source of energy that enriches and develops society. They build society and work on educating future generations as they are future teachers and through their efforts, nations are built, Therefore, defensive pessimism is important for developing the abilities of these students, as they are the rising generation that will lead society. University students bear great responsibility during their education

and are exposed to stress and anxiety, but through their use of the defensive pessimism strategy, which works to set low expectations for future events. Defensive pessimists are individuals who set low expectations for an upcoming event, although they acknowledge that they have performed well in similar situations in the past (Spencer & Norem, 1996). This plays a role in accepting potential negative effects in the future.

The defensive pessimism strategy is supposed to work in two ways working together:

First: It works on self-protection as it keeps anxiety under control.

Second: Harnessing individual anxiety, although thinking about negative results may raise anxiety, it works to motivate their fears to exert extra effort in thinking and planning for events.

Theoretical Importance

- The present study is an attempt to highlight the university stage as it is the end of the academic journey and has great benefit and importance for society.
- The scarcity of researches and studies that addressed the concept of defensive pessimism makes this study a pioneering one in the field of psychology.
- Based on the study results and subsequent proposals, this study is considered an invitation to researchers and scholars to enrich this subject in the educational aspect through conducting other studies to provide greater and deeper understanding of this concept since it is a newly emerged concept.

Practical Importance

- This study serves as a new scientific addition to university studies and researches in psychology.
- This study provides a knowledge database that enriches university libraries by contributing to scientific topics.
- Defensive pessimism helps reduce anxiety, which motivates students to prepare well for difficult academic situations and helps raise their academic level for the better.
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Study Objectives

The current study aims to identify:

1. University students' defensive pessimism.
2. Statistical differences are significant in defensive pessimism for university students according to gender variables (male-female) and specialization (scientific-humanitarian).

Study Limitations

The present study is limited to Al-Qadisiyah University morning study students of both scientific and humanitarian specializations, the academic year (2024-2025).

- *Defining Terms*

Defensive Pessimism was defined by various researchers:

- Norem & Cantor (1986): "A cognitive strategy involving unrealistically low expectations and thinking about worst-case scenarios regarding upcoming achievement performance outcomes. It is used by high-achieving, highly anxious individuals in performance situations that feed both strong desire for success and fear of failure, despite past success having been tested" (Norem & Cantor, 1986).
- Norem (1987): "The process of setting lower expectations to establish less difficult achievement standards and the reflective process of thinking about different possible outcomes before an event or performance" (Norem, 1987).
- Showers & Rubin (1990): "A strategic approach that protects self-worth from potential failure by setting a lower level of expectation that is realistic and helps harness anxiety. A strategic approach that protects self-worth from potential failure by setting a lower level of expectation that is realistic and helps harness anxiety" (Showers & Ruben, 1990).
- Spencer & Norem (1996): A strategy used by individuals to manage their anxiety. They feel anxious and out of control when thinking about an upcoming situation, and in response to

these feelings, they set pessimistic expectations about how things will go, mentally rehearsing all possible future leaders scenarios (Spencer & Norem, 1996).

- Norem (2008): A motivated cognitive strategy that works to manage individuals' anxiety and achieve their goals. People who use defensive pessimism set low expectations (Norem, 2008).

Theoretical Definition of Defensive Pessimism:

The researcher adopted Norem & Cantor's (1986) definition as the theoretical definition of defensive pessimism.

Operational Definition of Defensive Pessimism

The score that students obtain for their responses to the defensive pessimism scale items prepared by the researcher. Which is A cognitive strategy involving unrealistically low expectations and thinking about worst-case scenarios regarding upcoming achievement performance outcomes. It is used by high-achieving, highly anxious individuals in performance situations that feed both strong desire for success and fear of failure, despite past success having been tested.

Literature Review

First Section: Defensive Pessimism

The concept of defensive pessimism is a newly emerged concepts in psychology in 1986 by Norem & Cantor as a type of strategy individuals use to set low performance expectations for future events (Norem & Cantor, 1986). It indicates that many individuals use strategies to deal with risky situations as they provide ways to protect them from the harmful negative effects of potential failure and possible threats to self-esteem (Ekezie & Hong, 2024).

Fear of failure can be interpreted as a self-evaluative framework that affects how individuals define failure in achievement situations. This motivation is common in competitive achievement fields. Students are more likely to remember events related to negative information and their self-evaluations are more affected by failures than successes. Therefore, fear of failure may be a strong driving force behind individuals choosing better performance (Norem & Illingworth, 1993). The urgency of research emphasized by examining the real impact of academic anxiety on student achievement and well-being, Academic anxiety is a cause of defensive pessimism, so students who experience high levels of anxiety about their studies often resort to defensive pessimism as a psychological means of protecting themselves from disappointment.

Smith, Snyder, and Handelsman (1982) "showed evidence suggesting that highly anxious individuals may use their anxiety symptoms as a self-handicapping strategy in situations where displaying these symptoms provides viable excuse for poor performance. There is more data supporting the argument that individuals can strategically respond to various situations in self-protective ways" (Adams, 2023; Jassim & Mohammed, 2022).

Self-protective element of defensive pessimism stems from low expectations, as low expectations set reasonably achievable performance standards. Norem and Cantor (1986) also suggested that low expectations help defensive pessimists prepare themselves for the possibility of bad outcomes. If they imagine in advance how they might handle bad outcomes, they may feel prepared to adapt, which works to protect the self from unexpected failure and thus should keep anxiety under control. Moreover, the optimal level of anxiety may contribute to motivation without becoming overwhelming despite its protective components (Showers & Ruben, 1990).

Eronen et al. (1998) view that defensive pessimists lower their expectations to help prepare for the worst, working mentally through all the bad things that might happen. Although it may seem frustrating, defensive pessimism actually helps anxious people focus away from their emotions so they can plan and act effectively (Eronen, Nurmi, & Salmela-Aro, 1998). The suggestion of this strategy works on losing self-esteem in case of failure. The defensive pessimists use their anxiety about potential failure to fuel efforts to do good work (Norem & Andreas, 2006).

Second Section: Previous Studies on Defensive Pessimism

- (Norem & Illingworth, 1993) study entitled "Strategy-dependent effects of reflecting on self and tasks: Some implications of optimism and defensive pessimism" The study aims to identify defensive pessimism of graduate students at the College of Nursing, Northeastern University. The study sample was 196 male and female students. Pearson correlation coefficient, t-test for one and two samples, and factor analysis were used. The result showed that they had defensive pessimism (Norem & Illingworth, 1993).

(Elliot, 2003) study entitled A Motivational Analysis of Defensive Pessimism and Self-Handicapping This study connects defensive pessimism with self-handicapping. It examines the relationship between these two cognitive strategies and performance achievement. The sample was 170 students from the University of Rochester. The results indicated that defensive pessimism and self-handicapping have similar motivational features, with the key difference being that self-handicapping represents the absence of approach motivation in achievement, along with the presence of avoidance motivation (Elliot & Church, 2003).

2. METHOD

First: The Study Methodology

The study adopted a descriptive approach because it is suitable for the current educational and psychological study, as it is a scientific approach through which the researcher describes the phenomenon in terms of quantity.

Second: The Study Population The study population represents all individuals to whom the researcher seeks to generalize their study results (Sileyew, 2019). The present study population includes (19139) students from the Al-Qadisiyah University (morning studies). They were distributed according to gender (male-female) and specialization (scientific-humanitarian).

Third: Study Sample

The study sample represents a group of individuals and is part of the studied population. The sample must truly represent the population for the researcher to generalize results (Sileyew, 2019). The current study sample comprises 600 Al-Qadisiyah University students, that is, 3% of the total research community. selected using Random proportional stratification sampling from the study population.

Fourth: The Study Scale

The study scale is an objective method for measuring the study sample. Determining and selecting a good tool plays a role in identifying the characteristic to be measured in the sample (Pandey & Pandey, 2021). The defensive pessimism scale was built based on Norem and Cantor (1986) theory that includes 20 items in its final version.

- Validity of Defensive Pessimism Scale Items

To verify the validity of the defensive pessimism scale items, the initial scale of 22 items was presented to psychology arbitrators 20 arbitrators who hold doctoral degrees and have more than five years of experience. It included the theoretical definition adopted by the researcher, presentation of items, answer alternatives, and instructions. Arbitrators were asked to express their opinions and observations about the validity of the items, and modify, delete, or add items when necessary. After analyzing their opinions, the Chi-square test was used.

- Factorial Analysis of Defensive Pessimism Scale Items

The researcher used Exploratory Factorial Analysis to reveal the nature of the subscales of the general scale and item belongingness. This is considered one of the finest statistical methods in interpreting the studied phenomenon. It is defined as "a statistical method aimed at studying multiple phenomena to extract influencing factors through analyzing correlation coefficients between phenomenon variables, seeking to extract the minimum possible number of factors that express the maximum amount of observed variance between these variables (Fabrigar & Wegener, 2012).

Steps of Factorial Analysis

To extract the results of factor analysis for the data from the construction sample's responses to the subscale items that make up the general scale, the following steps were adopted:

Finding the Kaiser-Meyer-Olkin Measure of Sampling Adequacy value

Estimating the initial solution (determining factors before rotation)

Estimating the final solution (determining factors after rotation) (Williams, Onsman, & Brown, 2010).

Accordingly, the researcher made an Exploratory Factorial Analysis on (22) items of the defensive pessimism scale using SPSS-26 statistical package. The researcher used the Principal Component method, followed by Varimax Rotation, based on these two criteria:

First: The item's substantial loading on the factor should be greater than (0.30) based on Clifford's criterion, Bartlett's test of Sphericity (Approx. Chi-Square) are: (4480.264).

Second: The factor substantiality criterion should have more than (3) substantial loadings.

A: Kaiser-Meyer-Olkin (KMO) Measure Value: Kaiser-Meyer-Olkin (KMO) scale and the scale of Sampling Adequacy value for the entire matrix was (0.93). It means that the scale is good since its value is above (0.50) (Hill, 2011).

B: Finding Out the Ecological Correlations Matrix The researcher used Principal Component Analysis to analyze the inter-correlation matrix. A factor with an eigenvalue > 1 is considered significant (Yong & Pearce, 2013). It was found that the 22 factors were sorted and reduced to (3) factors controlling defensive pessimism with different loading percentages. They were arranged in descending order, but with a large difference between the first factor, which had an eigenvalue of (7.395) explaining (33.612) of the total variance, followed

by the second factor with an eigenvalue of (1.734) explaining (41.494) of the total variance, then the third factor with an eigenvalue of (1.166) explaining (46.796) of the total variance. Table (1) and Figure (1) show the factor reduction using principal component analysis.

Table 1. factor reduction using principal component of defensive pessimism scale

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Componen t	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulativ e %
1	7.395	33.612	33.612	7.395	33.612	33.612	6.019	27.359	27.359
2	1.734	7.882	41.494	1.734	7.882	41.494	2.662	12.100	39.459
3	1.166	5.302	46.796	1.166	5.302	46.796	1.614	7.337	46.796
4	.984	4.474	51.270						
5	.963	4.377	55.646						
6	.915	4.161	59.807						
7	.885	4.021	63.828						
8	.794	3.610	67.439						
9	.748	3.400	70.839						
10	.664	3.020	73.859						
11	.628	2.856	76.715						
12	.608	2.763	79.478						
13	.579	2.632	82.110						
14	.542	2.465	84.575						
15	.521	2.370	86.945						
16	.489	2.224	89.169						
17	.457	2.079	91.248						
18	.439	1.994	93.242						
19	.422	1.920	95.161						
20	.404	1.837	96.999						
21	.375	1.704	98.703						
22	.285	1.297	100.000						

Extraction Method: Principal Component Analysis.

Figure (1) shown that.

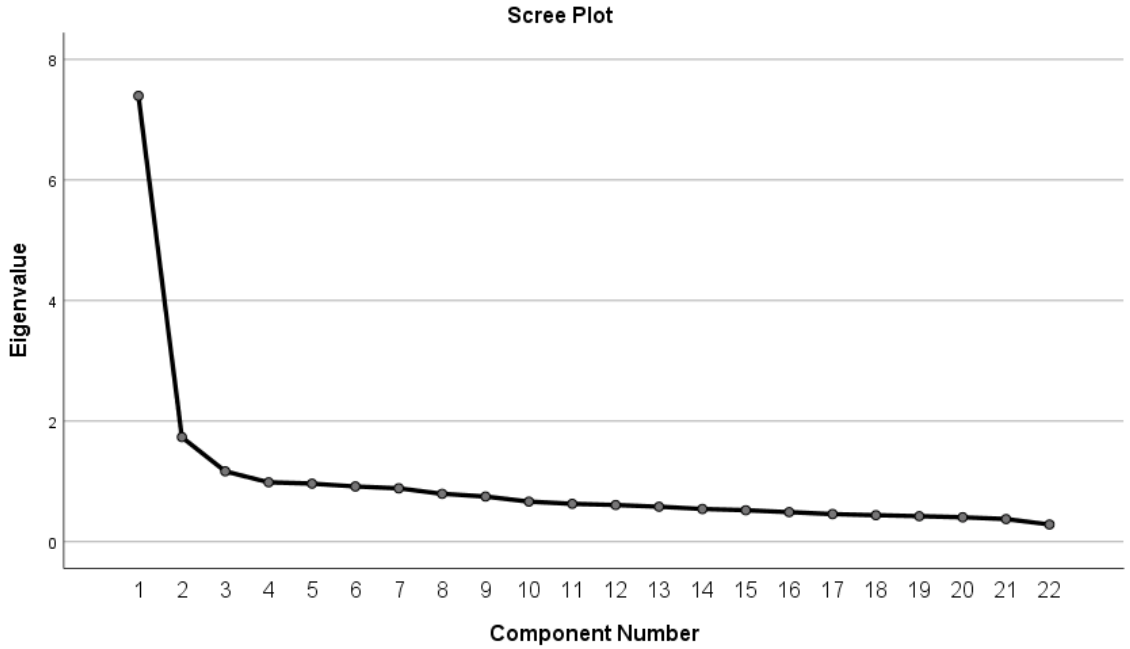

Figure 1. Factor reduction using principal component of defensive pessimism scale

Interpreting Resultant Factors: The researcher adopted certain conditions for accepting the interpretation of factors extracted from the factorial analysis process, which are as follows:
A factor with fewer than three item loadings is eliminated. Four domains were indeed excluded from the analysis for not obtaining sufficient item loadings (received less than three items) (Bandalos & Finney, 2018). Adopting the rotated factor matrix in interpreting results.
3- Following Thurstone's instructions in focusing on meaningful aspects for interpretation purposes (Ertel, 2011).
Table (2) shows the item loadings on the retained components and those components that were excluded due to not having three or more item loadings.

Table 2. Pattern Matrix for the Defensive Pessimism Scale after rotation

Component Matrix[a]

	Component		
	1	2	3
VAR00001	.512	.329	
VAR00002	.454		
VAR00003	.584	.368	
VAR00004	.540	.417	
VAR00005	.551		-.452-
VAR00006	.302		.645
VAR00007	.627		
VAR00008	.592		
VAR00009	.620		
VAR00010	.543		
VAR00011	.628		
VAR00012	.410		
VAR00013	.546		

VAR00014	.683		
VAR00015	.743		
VAR00016	.718		
VAR00017	.662	-.301-	
VAR00018	.718		
VAR00019	.699		
VAR00020	.689		
VAR00021	.678		
VAR00022	.424	.495	-.341-

Extraction Method: Principal Component Analysis.

a. 3 components extracted.

Based on Table (2), it is evident that the first factor was loaded with (20) items, while the second factor was loaded with (1) item, and the third factor was loaded with (1) item. Since the second and third factors were each loaded with only one item, they were eliminated, thus leaving the scale consisting of (20) items in a single factor.

Discriminatory Power of Defensive Pessimism Scale Items

To retain good items in the scale and to verify their ability to discriminate between individuals in the measured trait, we use discriminatory power. It refers to the item's ability to discriminate between the upper and lower groups of individuals regarding the characteristic that the items measure (Shaw & Wright, 1967) using the Extreme Groups Method.

To conduct item analysis using this method, the researcher followed these steps:

a- Identifying the total score for each form after scoring.

b- Arranging the scores obtained by the sample from the highest to the lowest, which ranged between (23-110) degrees.

c- The higher is 27% and lower is 27% of the scores were chosen to represent the extreme groups. Since the analysis sample consisted of (600) male and female students, the number of forms for the upper group members was (162) forms with scores ranging between (83-110) degrees. The forms of the lower group were (162) one with scores ranging between (23-57). Therefore, it gives us the largest possible size and maximum variance, and their distribution approximately normal one (Kline, 2013).

d- The Independent Samples t-test was applied to test the significance of differences between the higher and the lower groups for each item. The t-value was considered an indicator to distinguish each item. It was found that all items were distinctive.

Table 3. The discriminatory power of defensive pessimism scale items using the extreme groups method

SN	Upper Group		Lower group		t- Value	Sig. (2-tailed)
	Mean	Std. Deviation	Mean	Std. Deviation		
1	3.6049	1.40256	2.5123	1.28168	7.319	0.000
2	3.7037	1.26535	2.5123	1.19646	8.707	0.000
3	3.8827	1.07128	2.6235	1.22609	9.844	0.000
4	4.2407	1.02639	2.9321	1.30991	10.009	0.000
5	4.1914	1.10073	2.5185	1.24722	12.800	0.000
6	Its fell					
7	4.1852	1.04687	2.1235	1.21464	16.365	0.000
8	4.1728	1.12333	2.0617	1.23957	16.063	0.000
9	4.3580	0.94978	2.4691	1.31486	14.822	0.000
10	4.4074	0.90242	2.6914	1.33414	13.561	0.000
11	4.3765	1.03369	2.3333	1.20558	16.376	0.000
12	3.6667	1.40981	2.4444	1.13663	8.590	0.000

SN	Upper Group		Lower group		t- Value	Sig. (2-tailed)
	Mean	Std. Deviation	Mean	Std. Deviation		
13	4.3333	1.10897	2.7346	1.29401	11.941	0.000
114	4.5185	0.97307	2.4074	1.23889	17.057	0.000
15	4.5062	0.85063	2.2222	1.20041	19.759	0.000
16	4.7222	0.67105	2.7222	1.32464	17.143	0.000
17	4.6049	0.74231	2.5432	1.32393	17.289	0.000
18	4.6420	0.66517	2.4383	1.27050	19.558	0.000
19	4.4877	0.71573	2.2778	1.18610	20.304	0.000
20	4.5741	0.72921	2.5247	1.22703	18.275	0.000
21	4.4568	0.95942	2.2716	1.25121	17.640	0.000
22	It's fell					

Based on Table (3), it appears that all items were statistically significant except for items (6) and (22), which were dropped during exploratory factor analysis. So, the final number of items in the defensive pessimism scale settled at (20) items.

- **Scale Validity:** Validity represents the extent to which the tool performs the function for which it was designed (DeVon et al., 2007). To verify the validity of the defensive pessimism scale, the following was adopted:
- **Face Validity:** It represents the extent of the test's ability to measure the characteristic we want to measure. This type of validity was achieved by presenting the scale in its initial version to a number of arbitrators specialized in psychology. They judge the validity of the scale items to measure the characteristic we want to measure among university students, as mentioned in the procedures for building the defensive pessimism scale.
- **Construct Validity:** This type of validity is responsible for achieving study objectives in terms of the scale's loading with general meaning. The scale is considered valid if it measures the theoretical construct of the scale. The construct validity of the defensive pessimism scale was verified through using the extreme groups method and internal consistency (Mohammed, Habeeb, & Al-Muhja, 2022).
- **Reliability:** Reliability is one of the important psychometric properties in psychological measures. A reliable scale is one that gives the same results if reapplied again to the same group under the same conditions (Mohammed & Abd Oun, 2020). To verify the reliability of the defensive pessimism scale, the researcher adopted two methods:

Reliability using Cronbach's Alpha equation: It's one of the important equations used to estimate reliability (Agbo, 2010) (Agbo, 2010). To calculate reliability using this method, scores of (600) male and female students were used, and the reliability coefficient reached (0.89). Split-half: Correlation Between form is (0.731) Sperarman-Brown Coefficient is (0.845).

Ethical approval: The consent of the sample individuals for the examination was obtained by informing them of it.

3. RESULTS AND DISCUSSION

The First Objective: Identifying defensive pessimism of university students.

To verify this objective and after applying the defensive pessimism scale to a sample of (600) male and female university students, the students' responses were analyzed using One Sample t-test to compare the hypothetical mean of the scale (60), (scale midpoint) with the sample mean (74.288), and standard deviation (16.66). It showed that One sample t-test: $t_{(600)} = 20.998$, $p = 0.000$, indicating that university students have statistically significant defensive pessimism, as shown in Table (4).

Table 4. One sample t-test results for the significance of defensive pessimism

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean	T	Sig. (2-tailed)
Student of University	600	74.2883	16.66748	.68045	20.998	.000

This result can be interpreted as university students placing negative evaluations in their calculations and expecting that future life may expose them to harm, therefore their defensive pessimism always helps them develop plans and strategies to avoid harm and reduce their anxiety. So, they always plan strategies to avoid the harm caused by their different expectations in life, which is consistent with what (Norem & Cantor, 1986) theory proposed about defensive pessimism. This result was consistent with (Elliot & Church, 2003) study, which showed that students have defensive pessimism, while the result differed from the rest of the study because the sample was different.

Second Objective: Identifying the differences of statistical significance in defensive pessimism of university students according to gender variables (male-female) and specialization (humanities-scientific). To verify this objective, the researcher used Two Way ANOVA for unweighted means, and the results were as shown in Table (5).

Table 5. Results of two-way ANOVA for unweighted means showing differences in cognitive pessimism according to gender (male-female) and specialization (humanities-scientific) variables

Tests of Between-Subjects Effects

Dependent Variable: Defensive pessimism

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	20437.193[a]	3	6812.398	27.816	.000
Intercept	3113319.183	1	3113319.183	12711.959	.000
Gander	12544.661	1	12544.661	51.221	.000
Specialization	7186.846	1	7186.846	29.345	.000
Gander * Specialization	5713.257	1	5713.257	23.328	.000
Error	145967.925	596	244.913		
Total	3477659.000	600			
Corrected Total	166405.118	599			

a. R Squared = .123 (Adjusted R Squared = .118)

From Table (5), the following can be concluded:

Gender: ($F_{(1, 598)}$= [51.221], p = 0.000) When reviewing the arithmetic means, it was found that the mean for females (79.98) was higher than the mean for males (70.433). It indicates that females have higher defensive pessimism. This result can be interpreted as females generally making more negative assessments compared to males, as they tend to depend more heavily on intuition. This result is consistent with (Norem and Illingworth, 1993)(Adams, 2023) in that students have defensive pessimism, and females have higher defensive pessimism than males. This result differed from other studies in that it revealed differences in defensive pessimism according to gender (male vs. female), whereas previous studies did not address this issue.

Specialization: ($F_{(1, 598)}$ = [23.328], p = 0.000) When reviewing the arithmetic means, it was found that the mean for humanities (79.98) was higher than the mean for scientific specialization (71.593). It shows a higher defensive pessimism for students of humanities. This result can be interpreted as students of humanities tend to be psychologically flexible and have long-term expectations even if negative, more than scientific specialization students who tend to be more serious and complex, possibly due to the nature of their coursework.

Gender with Specialization Interaction: ($F_{(1, 598)}$ = [29.345], p = 0.000) This indicates differences in defensive pessimism of university students due to the interaction between gender and specialization. To identify the source of difference, the researcher used the Least Significant Difference (LSD) post-test, with a calculated value of (8.55). It means female humanities students have higher pessimism than male science students. The results are shown in Table (6) and Figure (2).

Table 6. Results of Post Analysis Comparing in comparison with the calculated LSD Values for Mean Differences in Defensive Pessimism Based on Gender-specialization Interaction

Gander	Gander Specialization	Mean	Female Humanities 86.816	Female Scientific 73.145	Male Humanities 70.824	Male Scientific 70.041	LSD
Female	Humanities	86.816	-	13.670	15.991	16.775	8.55
	Scientific	73.145	-	-	2.321	3.104	
Male	Humanities	70.824	-	-	-	0.783	
	Scientific	70.041	-	-	-		

Figure (2) Shown

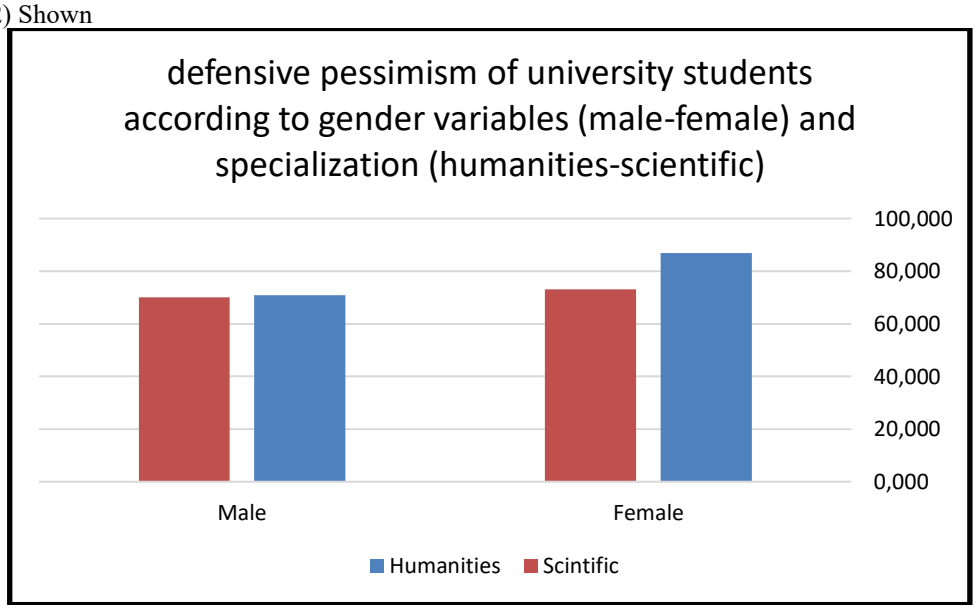

Figure 2. Defensive Pessimism According to Gender-specialization Interaction

4. CONCLUSION

Based on the study results, the researcher reached several conclusions:

1. University students generally develop strategies to avoid feeling hurt from their expectations.
2. Females show higher levels of defensive pessimism and expectation of harm compared to males who show less pessimism.
3. Results show that humanities students display higher defensive pessimism than scientific students, possibly due to the difficulty of situations they face.
4. Conduct a study on defensive pessimism with other age groups.
5. Study the correlational relationship between defensive pessimism and other variables.

5. RECOMMENDATIONS

Based on the study results, the researcher made several recommendations:

1. Psychology and counseling specialists should help students reduce defensive pessimism through seminars and workshops on this topic.
2. The measurement tool developed in this study (defensive pessimism) can be utilized in future studies.
3. Develop training programs to increase student confidence regardless of circumstances and help them overcome difficulties.

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