

Competitive Dominance among Graduate Students

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Abstract:

The study aimed to identify the level of competitive dominance among graduate students and to examine differences according to gender, specialization, and degree variables. To achieve the objectives of the study, a Competitive Dominance Scale was constructed based on Marx's Theory (1885). The psychometric properties of the scale were verified, with a test-retest reliability coefficient of (0.84) and a Cronbach's alpha coefficient of (0.93). The scale was administered to a sample of (564) male and female graduate students at the University of Kufa. The results indicated that the students possessed a level of competitive dominance. Statistically significant differences were found according to gender in favor of females and according to degree level in favor of Master's students, whereas no statistically significant differences were found according to specialization.

Keywords: Competitive Dominance, Graduate Students.

Research Problem

The problem of competitive dominance among postgraduate students appears in the gap between their academic abilities to excel and achieve distinction in scientific research and the capabilities required by the research process itself. The complexity of this problem is further increased by the inherently complex and highly competitive nature of the scientific research environment. Moreover, many postgraduate students possess the tacit knowledge required in their fields of specialization; however, they lack the mechanisms that transform this knowledge into competitive dominance that enables them to achieve academic excellence and publish high-quality research in reputable scientific journals (Ali, 2023, pp. 124–125). In addition, highly competitive students may display hostile behaviors due to feeling that their self-concept is threatened, as they constantly strive to prove themselves. Furthermore, competitiveness has been found to be negatively associated with social, academic, and professional adjustment (Al-Issawi, 2023, p. 2).

Therefore, the researcher believes that the research problem can be expressed in the following question:

Do postgraduate students possess competitive dominance?

Significance of the Research

Competitiveness is considered one of the psychological concepts that has attracted considerable attention from specialists, as it represents an important dimension of an individual's personality throughout different developmental stages and may continue throughout life (Morf & Torchetti, 2001, pp. 177–178).

Competitiveness also plays a significant role in performance. Individuals are exposed to stressful situations during their studies, work, family life, and competitive encounters, which require them to develop their performance and ideas through accumulated experiences in order to cope effectively with such situations. Competition is regarded as an important factor in enhancing professionalism and improving the quality of work. However, an individual's competitiveness has a rational dependency within a stable competitive environment because competition is considered a fundamental driver of development, as emphasized in economic models and social sciences (Bogoyavlenskaya & Klyueva, 2012, p. 275).

Research Objectives

This study aims to identify:

1. The level of competitive dominance among postgraduate students at the University of Kufa.

2. The statistically significant differences in competitive dominance among postgraduate students at the University of Kufa according to the following variables:
 - Gender (male, female).
 - Specialization (scientific, humanities).
 - Degree program (Master's, Ph.D.).

Research Limits

The current study is limited to postgraduate students at the University of Kufa, including both males and females, enrolled in Master's and Ph.D. programs across all twenty-two colleges of the University of Kufa. The study seeks to investigate competitive dominance and thinking styles (inductive and deductive) during the academic year 2025–2026.

Competitive Dominance

- **Marx's Definition (1885):** Competitive dominance is the pursuit of superiority through power and influence in social relationships, accompanied by a desire to achieve control at the expense of others (Marx, 1885, p. 320).
- **Al-Sulami's Definition (2001):** Competitive dominance refers to all efforts, procedures, innovations, pressures, and administrative, marketing, productive, creative, and developmental activities practiced by individuals in order to attain a higher status and a broader sphere of influence within society (Al-Sulami, 2001, p. 101).

Theoretical Framework of the Study

Sociological schools of thought, such as the psychological, Darwinian, and social schools, indicate that competition is an inevitable phenomenon in any society because it represents a justified form of struggle aimed at achieving success and improvement in the future. It is also considered one of the best incentives that can be offered to individuals (Bekhterev, 1994, p. 102).

Competitiveness emerges as a personality trait during childhood. There are two dimensions of the competitive personality: one dimension is relatively independent and tends to be more hostile, while the other is more effective and positive. The primary goal of both dimensions is to maintain an inflated self-image or competitive admiration. These dimensions manifest themselves across cognitive, emotional, social, and behavioral domains. Therefore, individuals who exhibit competitive traits develop strong motivations in competitive situations in order to preserve the self-image they have constructed internally, which is closely associated with feelings of self-grandiosity (Back et al., 2013, p. 21).

Nature of Competitive Dominance

Competition is a dominant behavior that reflects an individual's strong desire for uniqueness, greatness, distinction, self-protection, and avoidance of potential failure, while striving for academic and social status, often at the expense of others' values. Back et al. (2013) emphasized that individuals characterized by narcissistic competitiveness tend to possess positive and self-enhancing perceptions of themselves. Self-regulation is achieved through experiences acquired from the environment, and the self-regulatory function serves as a strategy for maintaining and enhancing this idealized positive self-view (Back et al., 2013, p. 109).

The primary objective of highly competitive individuals is the preservation of the self. Self-inflation among individuals with high levels of competitiveness may result from a combination of admiration, excessive ambition, persistent desires, and continuous efforts to seek achievement, power, superiority, creativity, beauty, and even the exploitation of others in pursuit of their goals (Back et al., 2013, p. 97).

Competitive behavior is manifested through continuous efforts to affirm one's self-worth and self-love, which may drive individuals to engage in competitive behaviors aimed at validating themselves, even at the expense of others. Such individuals strive to present themselves in the most distinguished manner through competition. They often perceive their roles and abilities as exaggerated, possess a persistent desire to demonstrate superiority over others, glorify themselves, and derive satisfaction from receiving admiration from others. They expect to be viewed as exceptional and are highly sensitive to those who fail to show them sufficient attention. They become distressed by

individuals who outperform them in competitive situations, leading to feelings of jealousy and envy that motivate them to exert every possible effort to prove themselves. Furthermore, they tend to reject criticism and feedback, perceiving such evaluations as threats that diminish their status and undermine their sense of self-worth (Back et al., 2013, pp. 102–103).

Research Methodology

Research Method

The researcher adopted the descriptive method in the present study due to its suitability for achieving the research objectives.

Research Population

The research population¹ consisted of postgraduate students (males and females) enrolled at the University of Kufa during the academic year 2025–2026. The population included students from both scientific and humanities disciplines offered by the university. The total research population comprised 1,412 postgraduate students distributed across 21 scientific and humanities colleges, as follows:

- Nine colleges with humanities specializations, comprising a total of 637 students, representing 45% of all postgraduate students at the university.
- Twelve colleges with scientific specializations, comprising a total of 775 students, representing 55% of all postgraduate students at the university.
- The number of male students was 519, representing 37% of the total postgraduate student population.
- The number of female students was 893, representing 63% of the total postgraduate student population.

Research Sample

The research sample included the following:

A. Pilot Sample (Item and Instruction Clarity Sample)

The pilot sample was selected using a simple random sampling technique. Male and female students were chosen according to the colleges from which they were randomly selected. The sample consisted of 30 students, and Table (1) presents the distribution of the sample.

Table (1)
Distribution of the Pilot Sample According to College, Gender, and Academic Specialization

College	Specialization	Male	Female	Total
College of Arts	Humanities	4	4	8
College of Administration and Economics	Humanities	3	4	7
College of Science	Scientific	4	4	8
College of Engineering	Scientific	3	4	7
Total	—	14	16	30

B. Item Analysis Sample

The sample used for item analysis was selected using a proportional random sampling technique from postgraduate students at the university. The sample consisted of 400 students, a size considered appropriate for the construction of psychological scales (Al-Zubaie et al., 1981, p. 73). The sample was selected according to the following criteria:

- All 21 colleges included in the research population were selected.
- The sample consisted of 147 male students and 253 female students.
- A total of 181 students were selected from the humanities specialization and 219 students from the scientific specialization.

¹ The researcher obtained the number of postgraduate students from the Department of Studies, Planning, and Follow-up / Statistics Unit at the Presidency of the University of Kufa. The data were provided through a copy of the university statistical report for the academic year 2025–2026, in accordance with the facilitation letter No. (58) dated January 14, 2025.

C. Main Research Sample

The main research sample was selected from the original population at a rate of 40%, resulting in a sample of 564 postgraduate students. The sample was selected using proportional random sampling. This method is appropriate when the research population can be divided into separate strata according to the study variables (gender and specialization), with each stratum treated as an independent unit from which participants are randomly selected (Melhem, 2000, p. 126).

The sample was distributed as follows:

- 254 students from the humanities specialization and 310 students from the scientific specialization.
- 204 male students and 360 female students.

Research Instrument

Construction of the Competitive Dominance Scale

Defining the Concept of Competitive Dominance

The researcher reviewed the previous literature related to the concept of competitive dominance and adopted Marx's (1885) definition because it reflects the original conception of dominant competition from both social and psychological perspectives. Competitive dominance is defined as "the pursuit of superiority through power and influence in social relationships and the desire to achieve control at the expense of others" (Marx, 1885, p. 320).

The researcher also reviewed the theoretical literature associated with Marx's (1885) perspective and established the operational definition of the construct as follows:

Competitive dominance is represented by the total score obtained by the respondent on the current scale, which serves as an indicator of the individual's level of understanding, interpretation, and interaction with competitive dominance.

Determining the Components of Competitive Dominance

Based on Marx's (1885) framework, the components of competitive dominance were identified as competence, choice, resources, and goal orientation. These components were organized into the following three dimensions:

- Neutral Competitive Dominance.
- Monopolistic Competitive Dominance.
- Productive Competitive Dominance.

Initially, 42 items were distributed across these dimensions according to the weighted mean and expert judgment. The researcher presented a separate questionnaire to determine the relative importance of the scale dimensions to a panel of 30 Iraqi and Arab specialists in educational and psychological sciences.

The purpose was to verify the appropriateness of the dimensions and the distribution of items among them. The experts confirmed the validity of the dimensions and determined their relative importance. The distribution of items for each dimension was then calculated using the weighted mean based on the specialists' evaluations, resulting in the following allocation:

- **Neutral Competitive Dominance:** 14 items, with a weighted mean of 14; items numbered (1–16).
- **Monopolistic Competitive Dominance:** 14 items, with a weighted mean of 14; items numbered (17–32).
- **Productive Competitive Dominance:** 14 items, with a weighted mean of 14; items numbered (33–48).

This distribution of items across the specified dimensions was derived from the theoretical framework of the construct and supported by the scientific expertise of specialists regarding the comprehensiveness of the sub-dimensions (components) of the scale. Accordingly, the researcher integrated both theoretical and empirical perspectives in determining the number and distribution of the scale items. Table (2) illustrates this distribution.

Table (2)

Relative Importance, Weighted Mean, and Distribution of Items Across the Components of Competitive Dominance

No.	Components of Competitive Dominance	Relative Importance According to Experts	Weighted Mean	Number of Items According to the Weighted Mean	Item Distribution
1	Neutral Competitive Dominance	33.34%	16	16	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16
2	Monopolistic Competitive Dominance	33.33%	16	16	17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32
3	Productive Competitive Dominance	33.33%	16	16	33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48
Total Distribution of Items Based on the Experts' Weighted Mean	100%	48	48	48	—

Scale Item Formulation

After defining the concept of competitive dominance theoretically, identifying its components, and determining the number of items allocated to each component, the researcher proceeded to develop and collect items for each dimension in a manner consistent with the definition of each component. This process also took into account the nature and characteristics of the population to which the scale would be applied. In addition, after reviewing relevant literature and previous studies, the researcher formulated a number of items while considering the following criteria:

- The item content should be clear, explicit, and direct (Al-Zubaie et al., 1984, p. 69).
- Each item should express a single idea and allow only one interpretation.
- Items should be appropriate to the nature of the respondents and their educational context.
- Avoid statements that may cause respondents to feel threatened or confused (Abu Allam, 2004, pp. 372–375).
- Items should not be suggestive or leading.
- Avoid double negation to prevent affirmative ambiguity (Samara et al., 1989, p. 81).

Based on these criteria, a total of 42 items were formulated across the three components of the scale.

Validity and Suitability of the Scale

The scale was presented to a group of experts and specialists in psychology, counseling, measurement, and evaluation. The researcher adopted two criteria for item acceptance:

1. A logical criterion based on the percentage of agreement, where items were accepted if they obtained 80% or more agreement from the experts.
2. A statistical criterion using Chi-square (χ^2), where an item was accepted if its calculated value exceeded the tabulated value of 3.84 at a significance level of 0.05 and one degree of freedom.

Items that did not meet both criteria (less than 80% agreement and less than the critical Chi-square value) were excluded. Accordingly, items (4, 14) from the first dimension, items (19, 30) from the second dimension, and items (36, 45) from the third dimension were removed. Thus, the final number of items in the scale became 42 at this stage.

Scale Instructions

The scale instructions were designed to serve as a clear guide for respondents. The researcher ensured that the instructions were precise and understandable. Respondents were asked to mark (✓) under the alternative that best describes their response from a five-point Likert scale:

(Strongly Agree – Agree – Moderately Agree – Slightly Agree – Strongly Disagree)

Participants were instructed to respond honestly and clearly for the purpose of scientific research. It was emphasized that there were no right or wrong answers, but rather responses reflecting their personal opinions. It was also assured that responses would remain confidential and would only be used for research purposes, and that there was no need to write their names to ensure anonymity (Al-Nabhan, 2004, p. 85).

To verify the clarity of the instructions, items, response options, and to identify any difficulties faced by respondents, the scale was administered to a randomly selected sample of students (the number was previously indicated in Table 2). It was found that the items and instructions were clear to the participants, and the time required to complete the scale ranged between (–) minutes, with an estimated mean time of (–) minutes.

Scoring the Scale

After preparing the items, the Likert method was adopted in constructing the scale due to its advantages, including:

- Allowing respondents to indicate the intensity of their feelings.
- Providing greater variability among individuals.
- Ensuring a more homogeneous scale.
- Covering a large number of items related to the behavioral phenomenon under study.
- Ease of construction and scoring.
- Relatively high reliability (Stanley & Hopkins, 1972, p. 288).

Respondents were asked to choose from a five-point Likert scale, with the following scoring system:

- Strongly Agree (5)
- Agree (4)
- Moderately Agree (3)
- Slightly Agree (2)
- Strongly Disagree (1)

Statistical Analysis of Scale Items

Item analysis is a fundamental procedure in scale construction (Anastasi, 1988, p. 192), aimed at identifying the psychometric properties of items, which largely depend on their characteristics. This procedure is also essential for distinguishing between individuals in the measured trait (Al-Imam et al., 1990, p. 114).

First: Item Discriminating Power

The discriminating power of the items was examined using the extreme groups method. The scale was administered to a statistical analysis sample of 400 postgraduate students. The total scores were computed for each response form, and then arranged in descending order from highest to lowest.

The upper 27% and lower 27% of the forms were selected, resulting in 216 students in each of the upper and lower groups. A t-test for two independent samples was used to determine the significance of differences between the two groups for each item (Edward, 1957, pp. 152–154).

All items showed good discrimination, as the calculated t-values were greater than the tabulated value of 1.96 at a significance level of 0.05 and 214 degrees of freedom. Table (3) illustrates these results.

Table (3)
Discriminating Power of the Items of the Competitive Dominance Scale Using the Extreme Groups Method

Item No.	Upper Group 27% Mean	Upper Group SD	Lower Group 27% Mean	Lower Group SD	t-value (Calculated)	Significance (0.05)
1	4.40	0.875	2.44	1.155	14.016	Significant item
2	4.08	0.958	2.22	1.202	12.580	Significant item
3	4.27	1.001	2.33	1.260	12.495	Significant item
4	4.27	0.933	2.40	1.184	12.896	Significant item
5	4.08	1.086	2.47	1.219	10.256	Significant item
6	4.38	0.828	2.51	1.227	13.132	Significant item
7	4.28	0.936	2.20	1.074	15.129	Significant item
8	4.20	0.862	2.50	1.219	11.859	Significant item
9	4.15	0.895	2.15	1.084	14.792	Significant item
10	4.23	0.923	2.20	1.125	14.477	Significant item
11	4.06	0.936	2.51	1.264	10.218	Significant item
12	4.29	0.958	2.29	1.176	13.702	Significant item
13	4.39	0.874	2.42	1.208	13.745	Significant item
14	4.27	0.973	2.42	1.276	11.994	Significant item
15	3.94	1.092	2.37	1.212	10.026	Significant item
16	3.70	1.284	2.31	1.115	8.544	Significant item
17	4.13	1.042	2.27	1.181	12.281	Significant item
18	3.90	1.215	2.22	1.026	10.953	Significant item
19	3.80	1.083	2.20	0.993	11.263	Significant item
20	3.33	1.629	2.44	1.376	4.331	Significant item
21	3.47	1.519	2.19	1.089	7.104	Significant item
22	3.12	1.545	2.08	1.137	5.619	Significant item
23	3.23	1.672	1.90	1.032	7.052	Significant item

24	3.37	1.351	2.16	1.153	7.098	Significant item
25	3.49	1.301	1.83	0.932	10.764	Significant item
26	3.99	1.089	2.31	1.139	11.109	Significant item
27	3.99	1.164	2.19	1.024	12.101	Significant item
28	3.85	1.221	2.21	1.068	10.496	Significant item
29	3.99	1.046	2.41	1.059	11.055	Significant item
30	4.22	0.813	2.29	1.051	15.141	Significant item
31	3.94	1.040	2.20	1.213	11.322	Significant item
32	4.30	0.920	2.55	1.300	11.422	Significant item
33	4.04	1.004	2.31	1.165	11.636	Significant item
34	4.20	0.873	2.48	1.329	11.257	Significant item
35	4.21	1.005	2.23	0.923	15.088	Significant item
36	4.21	1.042	2.24	1.013	14.108	Significant item
37	4.04	1.067	2.05	0.990	14.216	Significant item
38	4.14	1.045	2.37	1.235	11.359	Significant item
39	4.12	1.133	2.29	1.042	12.377	Significant item
40	4.32	0.915	2.16	1.095	15.776	Significant item
41	4.03	1.018	2.44	1.210	10.405	Significant item
42	4.17	1.037	2.54	1.278	10.290	Significant item

Second: The Relationship Between Item Score and Total Scale Score

This refers to calculating the correlation coefficient between the score of each item and the total score of the scale (Kaplan & Saccuzzo, 1982, p. 147). Items that are of higher quality and effectiveness in describing the trait are those that show a stronger correlation with the total scale score (Nunnally, 1967, p. 261). This method is considered one of the most accurate procedures used to assess the internal consistency of a scale (Al-Kubaisi, 2010, p. 46).

Guilford (1954) indicated that an item with a very weak correlation with the criterion is often measuring a different construct from the rest of the scale items and therefore should be excluded (Guilford, 1954, p. 415).

The correlation between each item score and the total scale score was computed using Pearson's Correlation Coefficient based on the responses of the statistical analysis sample mentioned previously.

The results showed that all items were statistically significant, as the obtained correlation coefficients were higher than the critical value of (0.098) at a significance level of (0.05) with (398) degrees of freedom. Table (4) presents these results.

Table (4)
Correlation Coefficients Between Item Scores and the Total Score of the Competitive Dominance Scale

Neutral Competitive Dominance	Item r	Monopolistic Competitive Dominance	Item r	Productive Competitive Dominance	Item r
Item 1	0.604	Item 15	0.482	Item 29	0.549
Item 2	0.566	Item 16	0.433	Item 30	0.630
Item 3	0.556	Item 17	0.527	Item 31	0.549
Item 4	0.624	Item 18	0.529	Item 32	0.590
Item 5	0.531	Item 19	0.452	Item 33	0.544
Item 6	0.580	Item 20	0.229	Item 34	0.608
Item 7	0.645	Item 21	0.390	Item 35	0.630
Item 8	0.550	Item 22	0.272	Item 36	0.581
Item 9	0.584	Item 23	0.322	Item 37	0.583
Item 10	0.619	Item 24	0.371	Item 38	0.563
Item 11	0.530	Item 25	0.457	Item 39	0.579
Item 12	0.623	Item 26	0.532	Item 40	0.646
Item 13	0.599	Item 27	0.512	Item 41	0.527
Item 14	0.551	Item 28	0.506	Item 42	0.529

Third: The Relationship Between Item Score and the Total Score of the Dimension to Which It Belongs

The researcher calculated the correlation coefficient between the score of each item and the total score of the dimension to which it belongs using Pearson's Correlation Coefficient. The results indicated that all items were statistically significant, as the obtained correlation coefficients were higher than the critical value of (0.098) at a significance level of (0.05) with (398) degrees of freedom. Table (5) presents these results.

Table (5)
Correlation Coefficients Between Item Scores and the Total Score of the Corresponding Dimension

Neutral Competitive Dominance					
Item No.	r	Item No.	r	Item No.	r
1	0.607	15	0.459	29	0.555
2	0.680	16	0.609	30	0.658
3	0.578	17	0.493	31	0.591
4	0.708	18	0.634	32	0.626
5	0.644	19	0.659	33	0.573
6	0.734	20	0.575	34	0.669
7	0.716	21	0.690	35	0.706
8	0.664	22	0.627	36	0.651
9	0.653	23	0.651	37	0.678
10	0.691	24	0.538	38	0.636
11	0.537	25	0.570	39	0.603
12	0.668	26	0.407	40	0.660
13	0.695	27	0.536	41	0.580
14	0.680	28	0.596	42	0.574

Fourth: The Relationship Between Component Scores and the Total Score of the Scale (Inter-Correlation Matrix)

The researcher extracted the inter-correlation matrix between the components of the Competitive Dominance Scale using Pearson's Correlation Coefficient. The results indicated that all correlations, whether between the components themselves or between each component and the total score of the scale, were statistically significant when compared with the tabulated value (0.098) at a significance level of (0.05) and (398) degrees of freedom.

This finding suggests that all components measure the overall construct of competitive dominance. Accordingly, a consistency was observed between the theoretical and statistical assumptions of the study. This result is considered an indicator of construct validity (Faraj, 1980, p. 315). Table (6) presents these results.

Table (6)
Inter-Correlation Matrix Between Sub-Dimensions and the Total Score of the Scale

No.	Scale and Components	Competitive Dominance Scale	Neutral Competitive Dominance	Monopolistic Competitive Dominance	Productive Competitive Dominance
1	Competitive Dominance Scale	1			
2	Neutral Competitive Dominance	0.881	1		
3	Monopolistic Competitive Dominance	0.739	0.391	1	
4	Productive Competitive Dominance	0.925	0.829	0.522	1

Psychometric Properties of the Competitive Dominance Scale

In order for a psychological or educational measurement tool to effectively measure a psychological or educational phenomenon and provide a quantitative description of that phenomenon, it must possess certain measurement properties, the most important of which are validity and reliability (Al-Imam et al., 1990, p. 241). These two properties were verified for the Competitive Dominance Scale as follows:

Validity Indicators of the Scale (Validity)

The validity of the current scale was established through the following types of validity:

1. Face Validity

Face validity was achieved through the procedures described in the section related to verifying the appropriateness of the scale items.

2. Construct Validity

Construct validity of the current scale was verified through the following indicators, which were previously presented in the item analysis section:

- The relationship between item scores and the total score of the scale.
- The relationship between item scores and the total score of the dimension to which they belong.
- The relationship between dimension scores and the total scale score (inter-correlation matrix).

Reliability Indicators of the Scale (Reliability)

To estimate the reliability of the current scale, the following methods were used:

A. Test-Retest Method

To calculate reliability using the test-retest method, the scale was administered to a randomly selected sample of 40 male and female students. The scale was then re-administered to the same sample after a two-week interval. Adams (1964) stated that the time interval should not be less than a few days and not exceed two to three weeks (Adams, 1964, p. 8).

The correlation between the first and second administrations was calculated using Pearson's Correlation Coefficient, yielding a reliability coefficient of 0.84.

B. Cronbach's Alpha Coefficient

Cronbach's Alpha measures the internal consistency of an individual's responses across items and indicates the extent to which all items of a scale measure a specific trait (Thorndike & Hagen, 1980, p. 79). This method provides an index of internal consistency and is also referred to as the homogeneity coefficient (Allam, 2000, p. 165).

To estimate reliability using this method for both the sub-dimensions and the overall scale, Cronbach's Alpha formula was applied to the responses of the statistical analysis sample consisting of 400 participants. The reliability coefficient for the scale was found to be 0.93. Cronbach (1964) confirmed that a scale with a high reliability coefficient is considered precise (Cronbach, 1964, p. 639).

Statistical Indicators of the Competitive Dominance Scale

The researcher calculated the statistical indicators of the responses of the main study sample, and the results indicated that the distribution of scores on the Competitive Dominance Scale was approximately normal. Table (13) and Figure (1) illustrate this distribution.

Table (13)
Statistical Indicators of the Competitive Dominance Scale

Statistical Indicator	Value
Mean	133.912
Standard Error of Mean	1.463
Median	135
Mode	134
Standard Deviation	29.270
Variance	856.747
Skewness	-0.368
Standard Error of Skewness	0.122
Kurtosis	-0.222
Standard Error of Kurtosis	0.243
Range	137.00
Minimum	58.00
Maximum	195.00
Sum	53565

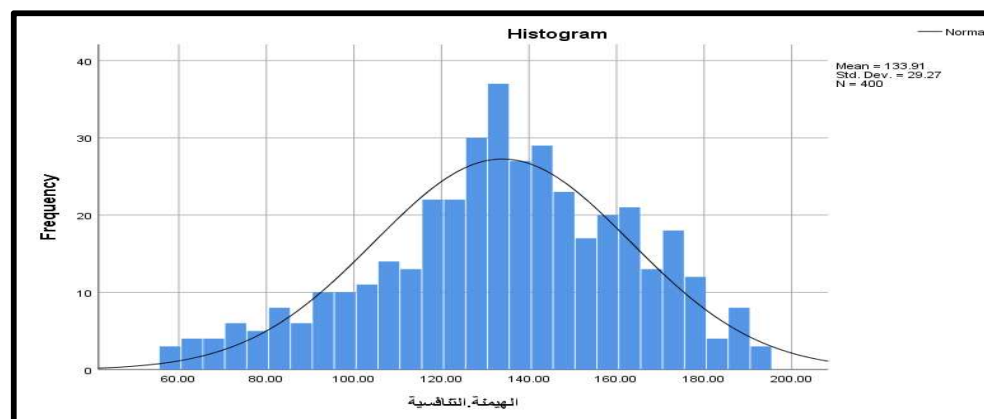


Figure (1): The Frequency Distribution (Histogram) of Participants' Scores on the Competitive Dominance Scale

Final Description of the Competitive Dominance Scale

After verifying the psychometric properties of the scale, including validity, reliability, and item analysis, the Competitive Dominance Scale in its final form consists of 42 items distributed across a five-point Likert scale. The response options are: (Strongly Agree, Agree, Moderately Agree, Slightly Agree, Strongly Disagree). Scoring is assigned as follows: the lowest score is (1) and the highest score is (5). Therefore, the maximum possible score that a respondent can obtain is (210), while the minimum possible score is (42). The hypothetical mean of the scale is (126). Accordingly, the scale is now ready for administration to the main research sample.

Presentation, Interpretation, and Discussion of Results

First Objective: Competitive Dominance among Postgraduate Students

To achieve this objective, the Competitive Dominance Scale was administered to the main research sample consisting of 564 postgraduate students (males and females). The results showed that the calculated t-value was (12.343), which is greater than the tabulated t-value of (1.96) at a significance level of (0.05) and with (563) degrees of freedom. This indicates that postgraduate students possess a level of competitive dominance, as presented in Table (7).

Presentation, Interpretation, and Discussion of Results

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Table (7)

One-Sample t-Test Results for Competitive Dominance

Variable	Sample Size	Mean	SD	Hypothetical Mean	df	t-value (Calculated)	t-value (Table)	Significance
Competitive Dominance	564	133.324	14.227	126	563	12.343	1.96	Significant

The table shows that the mean score of the sample on the Competitive Dominance Scale (133.324) is higher than the hypothetical mean (126), with a standard deviation of (14.227). A one-sample t-test was used to examine the significance of differences between the sample mean and the hypothetical mean. The calculated t-value (12.343) exceeded the tabulated value (1.96) at a significance level of (0.05), indicating statistically significant differences in favor of the sample mean.

The researcher interprets this finding as an indication that postgraduate students possess competitive dominance, which may be attributed to their deep academic knowledge, research and innovation capabilities, and heightened self-awareness. These factors provide them with advantages in facing academic challenges. In addition, advanced research and intellectual skills enhance their scientific value, while a high level of cognitive understanding reduces susceptibility to external pressures, thereby strengthening their confidence and competitive stance.

Second Objective: Differences in Competitive Dominance According to Gender, Specialization, and Study Level

To examine differences in competitive dominance according to gender (male/female), specialization (scientific/humanities), and study level (Master's/PhD), a three-way ANOVA was used, as shown in Table (8). The analysis was conducted at a significance level of (0.05) with degrees of freedom (1, 556), and the critical F-value was (3.84).

The results showed that:

- The calculated F-value for gender was (5.169), which is greater than the tabulated value (3.84), indicating statistically significant differences in competitive dominance in favor of females.
- The calculated F-value for specialization was (1.302), which is less than the tabulated value (3.84), indicating no statistically significant differences between scientific and humanities specializations.
- The calculated F-value for study level was (9.032), which is greater than the tabulated value (3.84), indicating statistically significant differences in favor of Master's students.

Table (8)
Three-Way ANOVA Results for Competitive Dominance by Gender, Specialization, and Study Level

Source of Variation	Sum of Squares	df	Mean Square	F-value (Calculated)	F-value (Table)	Significance
Gender	9874.848	1	9874.848	5.169	3.84	Significant (females higher)
Specialization	2486.950	1	2486.950	1.302	3.84	Not significant
Study Level	17254.881	1	17254.881	9.032	3.84	Significant (Master's higher)
Error	1062172.857	556	1910.383	—	—	—
Total	11126603.000	564	—	—	—	—

1. Gender Differences (Male vs Female)

The calculated F-value (5.169) exceeds the tabulated value (3.84), indicating statistically significant differences in competitive dominance between males and females. By referring to the mean scores, it was found that males had a mean score of (129.862) with a standard deviation of (13.133), while females had a higher mean score of (135.271) with a standard deviation of (14.772), indicating that the difference is in favor of females.

The researcher explains this result by suggesting that females tend to engage in self-oriented and achievement-based competition, focusing on academic excellence and detail-oriented performance. In addition, females often demonstrate higher emotional intelligence and communication skills, enabling them to manage competitive situations effectively in academic environments that require both cooperation and competition. Their persistence and commitment further enhance their competitive dominance.

2. Differences According to Specialization (Scientific vs Humanities)

The calculated F-value (1.302) is lower than the tabulated value (3.84), indicating no statistically significant differences between scientific and humanities specializations. The mean score for scientific students was (135.171) with a standard deviation of (13.477), while humanities students had a mean of (131.070) with a standard deviation of (15.110).

The researcher attributes this convergence to the unification of research methodologies in postgraduate studies, where both groups rely on similar analytical tools and statistical software. Moreover, essential academic skills such as research proposal writing and conference presentations have become transversal competencies across disciplines. The increasing trend toward interdisciplinary research has further reduced differences between specializations, as both fields now require a combination of technical and analytical thinking. Consequently, competitive dominance is increasingly defined by academic impact and innovation rather than field of specialization.

3. Differences According to Study Level (Master's vs PhD)

The calculated F-value (9.032) exceeds the tabulated value (3.84), indicating statistically significant differences between Master's and PhD students in favor of Master's students. The mean

score for Master's students was (139.365) with a standard deviation of (17.654), whereas PhD students recorded a mean of (126.719) with a standard deviation of (19.050).

This finding can be explained by several factors. Master's students are typically in a stage of self-affirmation, with a strong desire to prove their academic competence before progressing to doctoral studies, which increases their competitive behavior. Additionally, the structure of Master's programs, which often includes coursework and examinations, creates a more competitive academic environment focused on grades and ranking.

In contrast, PhD studies are more independent and research-oriented, which reduces direct competition. Furthermore, PhD students are generally more mature and psychologically stable, with a greater focus on knowledge production rather than interpersonal competition. Differences in career stability and academic pressure also contribute, as Master's students often experience stronger pressure to excel within limited time frames, which intensifies competitive dominance.

References

1. Abu Allam, R. M. (2004). *Research methods in psychological and educational sciences* (5th ed.). University Publications House, Cairo.
2. Adams, G. S. (1964). *Measurement and evaluation in education, psychology and guidance*. Holt, Rinehart and Winston.
3. Al-'Issawi, H. H. J. (2023). *Narcissistic competition and its relationship with neuropsychological learning styles and thinking control among university students* (Unpublished doctoral dissertation). Al-Mustansiriya University.
4. Al-Ali, N. J. (2023). Intellectual capital and its relationship to competitive dominance among outstanding students. *Journal of Intelligence Research*, 17(36).
5. Al-Imam, M. M., Al-Ajili, S., & Abdul Rahman, A. H. (1990). *Measurement and evaluation*. Ministry of Higher Education and Scientific Research, University of Baghdad.
6. Al-Kaabi, W. M. (2010). *Psychological measurement between theory and application* (1st ed.). United International House, Beirut.
7. Al-Nabhan, M. (2004). *Fundamentals of measurement in behavioral sciences* (2nd ed.). Dar Al-Shorouk, Amman.
8. Al-Salmi, A. (2001). *Competitive excellence management*. Cairo.
9. Al-Samara, A., Ibrahim, M. A., & Al-Nimr, I. (1989). *Principles of measurement and evaluation in education* (2nd ed.). Dar Al-Fikr.
10. Al-Zubaie, A. J. I., Baker, M. I., & Al-Kinani, I. A. (1984). *Psychological tests and measures*. University of Mosul Press, Mosul.
11. Anastasi, A. (1988). *Psychological testing*. Macmillan Publishing.
12. Back, M. D., Küfner, A. C. P., Dufner, M., Gerlach, T. M., Rauthmann, J. F., & Denissen, J. J. A. (2013). Narcissistic admiration and rivalry: Disentangling the bright and dark sides of narcissism. *Journal of Personality and Social Psychology*, 105(6), 1013–1037.
13. Bekhterev, V. M. (1994). *Selected works in social psychology*. Nauka.
14. Bogoyavlenskaya, D. B., & Klyueva, O. A. (2012). Discovering the nature of competitive personality. *Psychology in Russia: State of the Art*, 5, 67–80.
15. Cronbach, L. J. (1964). *Essentials of psychological testing*. Harper & Row.
16. Edwards, A. L. (1957). *Techniques of attitude scale construction*. Appleton-Century-Crofts.
17. Faraj, S. (1980). *Psychological measurement*. Dar Al-Fikr Al-Arabi, Cairo.
18. Guilford, J. P. (1954). *Psychometric methods*. McGraw-Hill.
19. Kaplan, R. M., & Saccuzzo, D. P. (1982). *Psychological testing: Principles, applications, and issues*. Brooks/Cole.
20. Morf, C. C., & Rhodewalt, F. (2001). Unraveling the paradoxes of narcissism: A dynamic self-regulatory processing model. *Psychological Inquiry*, 12(4), 177–196.
21. Nunnally, J. C. (1978). *Psychometric theory* (2nd ed.). McGraw-Hill.
22. Stanley, J. C., & Hopkins, K. D. (1972). *Educational and psychological measurement and evaluation*. Prentice-Hall.
23. Thorndike, R. L., & Hagen, E. P. (1980). *Measurement and evaluation in psychology and education*. Dar Al-Fikr, Amman.