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Biased Aggressive Attribution Among Department Heads

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Abstract

The interest of studies has increased in the process of realizing the reasons that led to aggressive behaviors among some towards others and understanding their intentions as hostile, especially in ambiguous situations, and that this bias in interpreting the intentions of others made individuals respond with an aggressive response in the social situations they face. In light of the above, the current research seeks to measure the biased aggressive attribution among department heads on the research sample of (300) department heads, male and female, who were chosen using a random stratified method and a proportional approach. In order to achieve the two research objectives, the researchers built a scale to measure the biased aggressive attribution according to Dodge's theory (2006). In its final form, it consisted of (15) phrases. The researchers adopted the method of verbal situations, which somewhat represent the life situations of department heads, with two alternatives for answering in the form of answers for the biased aggressive attribution position. The department head chooses one of these answers, and when correcting, the answer that measures the biased aggressive attribution is given (2) degrees. As for If the department head chooses the second answer, which represents neutral attribution, he is given (1) point. After verifying their validity and reliability and analyzing their paragraphs statistically, the research results indicated that department heads do not have biased aggressive attribution, and there are no differences between department heads in biased aggressive attribution according to the gender variable (male, female) and specialization (scientific, humanities).

Keywords: *Biased Aggressive Attribution, Department Heads.*

Introduction

Human existence, as a social being, is inherently linked to interaction with others. Such interactions may be positive when individuals dedicate a significant portion of their lives to supporting others, or negative and self-serving when personal interests override all social engagements. These interactions are influenced by various psychological and social conditions, as well as expected or unexpected threats. One key factor that shapes these responses is the perception of others' intentions as hostile, which can lead to aggressive reactions (Mohammed & Hassan, 2023, p. 317).

Some individuals interpret others' behavior as aggressive due to either a bias in processing social information or a failure to process it effectively. This results in a negatively skewed perception of others' actions and triggers aggressive reactions—especially when the individual perceives a threat to their self-concept (Wagels & Hernandez-Peña, 2024, p. 1).

In this context, Dodge (1980) emphasized that biased aggressive attribution often leads individuals to engage in harmful aggressive behaviors that negatively affect both the individual and society. When people interpret others' behaviors as socially inappropriate or intentionally

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harmful, they may respond with aggression (Dodge, 1980, p. 162).

Similarly, Jones and Keith (1965) noted that biased aggressive attribution does not always reflect reality accurately. Individuals who are biased in their attributions are more prone to perceptual errors due to their limited objectivity, which leads to distorted interpretations of the social world. Heider (1985) also confirmed that biased aggressive attribution stems from perceptual errors in evaluating or interpreting others' behaviors (Abdul-Hussein & Jasim, 2023, p. 23).

Research Significance

There has been growing interest among psychologists and researchers in studying aggressive behavior and violence to gain a better understanding of the negative behaviors that directly impact society and its institutions. In this regard, Farver et al. (1997) emphasized that such negative behaviors should be investigated through the study of attributional biases, including *biased aggressive attribution* (Farver et al., 1997, p. 295). Inferring intentions from behavior is critically important for interpreting adaptive social performance, and a tendency to interpret intentions as hostile is a key predictor of interpersonal conflict and aggressive tendencies. Therefore, interpreting social situations as intentionally hostile is referred to as *biased aggressive attribution*, which is believed to reflect a distorted system of evaluations and expectations that influence social judgments. A tendency to infer hostile intent motivates individuals to respond aggressively to others' behavior (Lyu et al., 2024, p. 1).

A previous study by Dodge and Newman (1981) identified two primary cognitive mechanisms behind biased aggressive attribution:

1. **Rapid response to events** without attending to relevant social cues. Individuals prone to this type of attribution quickly assign aggressive intent to others, overlooking contextual signals—unlike individuals who are not characterized by this bias.

2. **Selective recall of hostile cues**, wherein individuals exhibiting biased aggressive attribution often demonstrate aggressive behavior by recalling cues they perceive as hostile, while ignoring non-hostile ones. In other words, rapid responses and selective memory function as two cognitive pathways contributing to biased attribution (Dodge & Newman, 1981, p. 378).

Strack and Deutsch (2004) also emphasized that perception is one of the key factors influencing biased aggressive attribution, as it shapes behavioral responses. A person's beliefs are shaped by how they perceive social situations, which in turn informs their behavioral responses. These responses are based on their interpretation of events and social cues, which are influenced by prior beliefs and the perceived social context. This perceptual bias often leads to hostile interpretations and consequently aggressive responses (Strack & Deutsch, 2004, pp. 230–235). Klein (2020), after reviewing the Social Information Processing (SIP) model, particularly the first two steps—*encoding* and *interpretation (attribution)*—highlighted that unrealistic social perceptions stem from the inability to distinguish between hostile and non-hostile intentions. This is especially true when individuals interpret ambiguous social behaviors as deliberate acts of hostility (Klein, 2020, p. 97).

The significance of this research lies in the psychological importance of studying biased aggressive attribution, as numerous studies have revealed its correlations with various psychological and social variables. For example, Fontaine et al. (2010) examined the mediating role of *responsive decision-making skills* in the relationship between biased aggressive attribution and antisocial behavior. The results indicated that underdeveloped decision-making

skills make cognitive processing of ambiguous social cues more complex. This, in turn, leads antisocial individuals to interpret others' responses in a biased manner and react aggressively (Fontaine et al., 2010, p. 625).

Regarding the variables of gender and academic specialization—both included in the current study—Mohammed and Hassan (2023) found statistically significant differences in biased aggressive attribution based on gender, with males exhibiting higher levels of bias. Similarly, differences were found based on academic specialization, favoring scientific disciplines over humanities, with statistical significance (Mohammed & Hassan, 2023, pp. 335–336).

Research Objectives

This study aims to:

1. Measure the level of biased aggressive attribution among department heads.

2. Identify statistically significant differences in biased aggressive attribution among department heads according to:

- Gender (male/female)
- Academic specialization (scientific/humanities)

Research Limits

This research is limited to department heads (including department chairs, assistant deans, and unit heads) in the universities of Al-Qadisiyah, Babylon, and Kufa. It includes both males and females, and covers both scientific and humanities disciplines during the academic year 2024–2025.

Definition of Terms

Biased Aggressive Attribution:

Defined by:

- **Kahneman (1972):** "A pattern of judgmental deviation that occurs under specific circumstances, leading to distorted perception and inaccurate or illogical judgments and interpretations" (Kahneman, 1972, p. 430).
- **Dodge (2006):** "A bias in social information processing that reflects a tendency to interpret others' behaviors as having hostile intent, particularly when such behaviors are ambiguous or unclear. This misinterpretation drives the individual to act aggressively" (Dodge, 2006, p. 791).

Theoretical Background

1. The Social Information Processing Model by Dodge (2006)

Building upon a series of studies dating back to 1990, Dodge proposed a theoretical model to explain biased aggressive attribution known as the *Social Information Processing (SIP) Model*. This model outlines how individuals process social interactions through a series of cognitive steps triggered by their reactions to others. These cyclical steps include:

1. Encoding social cues
2. Interpreting the cues

3. Clarifying goals
4. Constructing possible responses
5. Selecting a response
6. Enacting the behavior

Negative reactions to ambiguous situations often stem from dysfunction in one or more of these stages (Senol & Metin, 2021, p. 125).

Cognitive structures, such as stored experiences in memory, function automatically. When these cognitive frameworks revolve around aggression, individuals are more likely to interpret situations aggressively and respond accordingly. Dodge observed that aggressive individuals employ two forms of aggression:

- **Proactive aggression**, which is deliberate and goal-oriented, and
- **Reactive aggression**, which is an impulsive response to perceived provocation.

Reactive aggression is linked to response evaluation, while proactive aggression is tied to encoding and interpretation stages, both shaped by the individual's expectations (Crick & Dodge, 1994, p. 83).

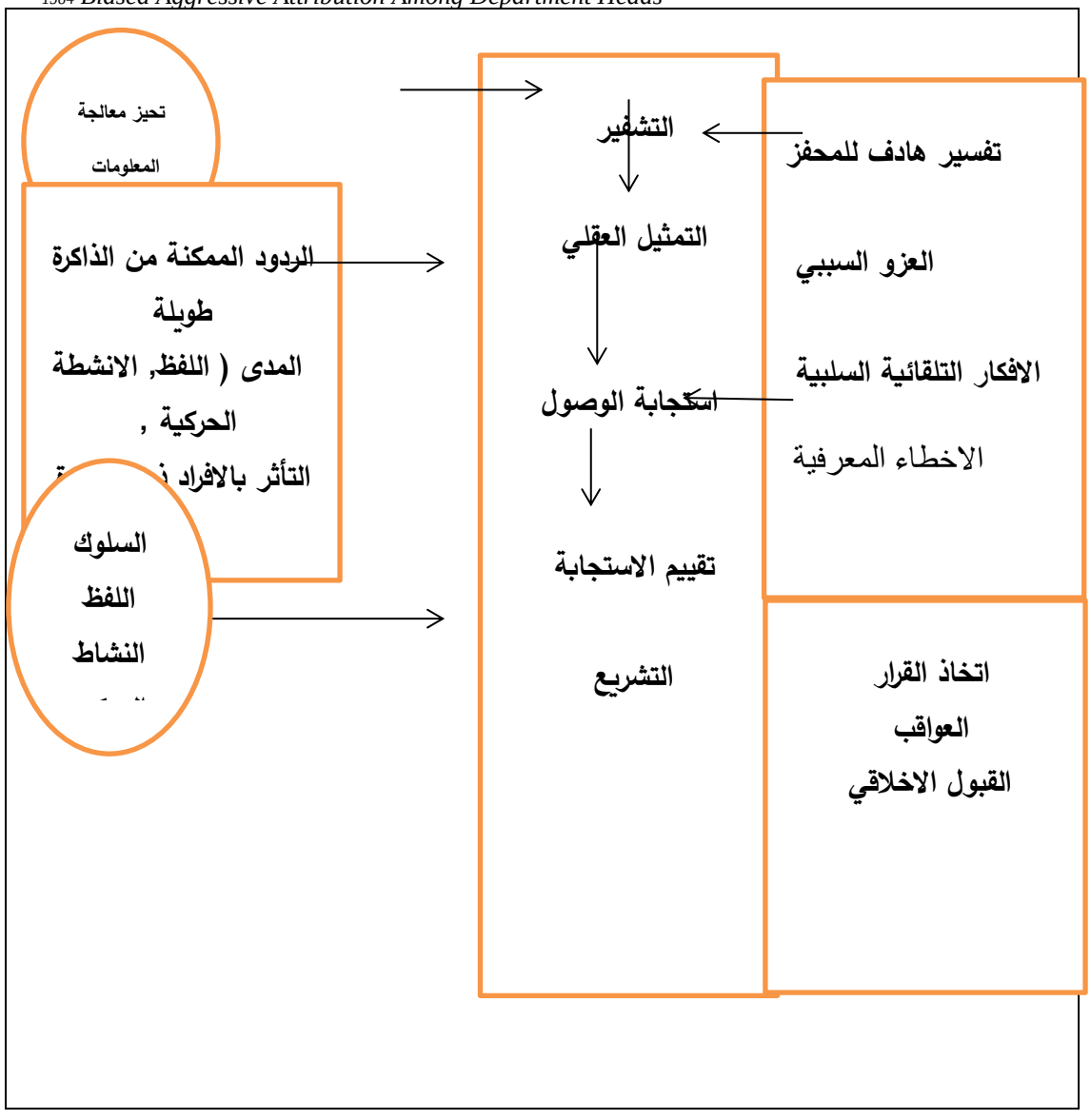
Dodge's early studies identified several causes behind the link between physical aggression and biased attribution, including:

- Deficits in encoding social cues
- Limited access to prosocial response options
- Greater accessibility of aggressive responses
- Biased interpretations of ambiguous signals (Dodge et al., 1990, p. 87)

Later, Dodge revised his model by emphasizing the role of cognitive structures such as memory, social schemas, social roles, and social perception. He added a sixth step—**Goal Clarification**—which follows interpretation and precedes response selection (Hamad, 2022, p. 33).

According to Dodge, the SIP model is based on the premise that processing at each stage evolves over time as a result of biological and experiential factors. These cognitive processes are thought to occur in real time in response to social cues and are shaped by both biological states and acquired social knowledge. Deviations in SIP patterns have been linked to aggressive and antisocial behaviors, particularly due to selective attention to hostile cues and biased interpretation (Crozier et al., 2008, pp. 253–254).

Another key process in biased attribution is **motivation**, as suggested by **Festinger's Cognitive Dissonance Theory (1957)**. This theory asserts that inconsistencies among elements within an individual's cognitive system generate dissonance, which the individual attempts to reduce by eliminating the dissonant elements. Consequently, individuals display **confirmation biases**, engaging in biased attribution processes to affirm pre-existing schemas or hypotheses, even in the face of contradictory evidence. This confirmation occurs by **ignoring contradictory cues** and exaggerating the weight of supportive cues (Dodge, 2006: 802).



Research Methodology

The researchers adopted the **descriptive method** as the scientific approach for their study, as it aims to describe psychological phenomena in general by collecting data, presenting it, and analyzing it statistically. This approach focuses on studying variables as they naturally occur in individuals, describing the psychological phenomenon under investigation in a precise manner and expressing it quantitatively or qualitatively (Ubaidat et al., 1996: 286).

Research Population:

The current study population consists of **department heads**, **assistant deans**, and **unit supervisors** at the Universities of **Al-Qadisiyah**, **Babylon**, and **Kufa** for the academic year 2024–2025. The total number of individuals in this population is **656**, distributed as follows: **427**

males and **229 females**; with **256 males** in scientific disciplines and **171** in humanities, while **134 females** are in scientific disciplines and **95** in humanities.

Research Sample

The researchers selected the sample using the **stratified random sampling method** and applied the **proportional allocation technique**, which is considered the most appropriate for heterogeneous populations, as it ensures representation of all segments of the study population (Melhem, 2002: 251). A total of **300 department heads** (both male and female) were selected, representing **45.731%** of the total population. The sample included **195 male** and **105 female** department heads. Males made up **65%** of the sample, while females accounted for **35%**. As for specialization, **178** participants were from scientific disciplines (**59.333%**) and **122** from humanities (**40.666%**).
Table (1) presents this distribution.

University	Position	Male – Scientific	Male – Humanities	Female – Scientific	Female – Humanities	Total
University of Al-Qadisiyah	Department Head	10	13	5	3	31
	Assistant Dean	5	3	5	3	16
	Unit Supervisor	16	15	10	13	54
	Subtotal	**31**	**31**	**20**	**19**	**101**
University of Babylon	Department Head	15	7	3	2	27
	Assistant Dean	10	3	4	2	19
	Unit Supervisor	19	14	8	11	52
	Subtotal	**44**	**24**	**15**	**15**	**98**
University of Kufa	Department Head	13	4	11	4	32
	Assistant Dean	6	6	4	2	18
	Unit Supervisor	23	13	11	4	51
	Subtotal	**42**	**23**	**26**	**10**	**101**
Total		**117**	**78**	**61**	**44**	**300**

Table (1): Distribution of the Research Sample According to Gender and Specialization

Research Instrument

To measure the research variable — *biased aggressive attribution among department heads* — the researchers constructed a scale based on the theory of Dodge et al. (2006).

By reviewing the theoretical framework adopted in this study, namely the **Social Information Processing Model**, as well as previous studies that addressed this variable, and in accordance with the theoretical basis, the researchers formulated **15 preliminary items** to assess biased aggressive attribution among department heads.

The researchers adopted the **verbal scenarios method**, which approximates real-life situations that department heads may encounter. Each item presented two possible responses reflecting either **biased aggressive attribution** or **neutral attribution**. When scoring, the response indicating biased aggressive attribution was assigned **2 points**, while the neutral attribution response was assigned **1 point**.

To verify the clarity of the instructions and the items for the target population, the scale was piloted with an exploratory sample of **32 department heads** in the presence of the researchers. Participants were asked to provide feedback regarding the clarity and formulation of the items and how to respond. The results indicated that the items were clear and did not require modification. The time needed to complete the scale ranged between **8–11 minutes**.

Statistical Analysis

Two procedures were used for item analysis:

(A) The Extreme Groups Method (External Consistency)

To calculate the **discriminatory power** of each item, the scale was applied to the full research sample of **300 department heads**. After scoring the responses and computing total scores for each form, scores were ranked in descending order. The top **27%** (i.e., 81 forms scoring between 18–22) were selected as the **high group**, and the bottom **27%** (i.e., 81 forms all scoring 15) formed the **low group**, making a total of **162 forms** used in this analysis.

To determine the discriminative strength of each item and its two response options (A–B), frequency counts for each response were calculated for both the high and low groups. Then, **Chi-square tests (χ^2)** were applied to test the significance of the difference in frequencies. If the calculated χ^2 value exceeded the critical value of **3.84** at a significance level of **0.05** and **1 degree of freedom**, the item was considered valid.

Additionally, **Phi coefficients** were calculated to measure the strength of association between item responses and group membership. The statistical significance of the Phi values was tested using the **Z-test**. The results showed that all Phi values were statistically significant, as their calculated Z-values exceeded the critical value of **1.96** at the **0.05 significance level**, as shown in **Table (2)** below:

No.	High Group (2 pts)	Low Group (2 pts)	χ^2 Value	Critical χ^2	Phi Value	Z Value	Significance
1	41	0	54.893	3.84	0.582104	7.40436	Significant
2	58	0	90.346		0.746787	9.49913	Significant
3	14	0	15.324		0.307559	3.91215	Significant
4	50	0	72.321		0.668151	8.49888	Significant
5	28	0	33.851		0.457117	5.81453	Significant
6	18	0	20.250		0.353553	4.49719	Significant

7	17	0	18.993		0.342404	4.35538	Significant
8	26	0	30.971		0.437240	5.56169	Significant
9	23	0	26.806		0.406778	5.17422	Significant
10	49	0	70.248		0.658505	8.37619	Significant
11	26	0	30.971		0.437240	5.56169	Significant
12	22	0	25.457		0.396411	5.04235	Significant
13	36	0	46.286		0.534524	6.79914	Significant
14	12	0	12.960		0.282842	3.59775	Significant
15	16	0	17.753		0.331038	4.21080	Significant

Table (2): Item Discrimination of the Biased Aggressive Attribution Scale Using the Extreme Groups Method

(B) Correlation Between Item Scores and Total Scale Score

To further validate the items, the **point-biserial correlation coefficient** was used to assess the relationship between each item score and the total score of the biased aggressive attribution scale. All correlation coefficients were statistically significant when compared with the critical value of **0.138** at the **0.05 level** and **298 degrees of freedom**, as shown in **Table (3):**

Item	Correlation	Item	Correlation
1	0.500	9	0.415
2	0.408	10	0.457
3	0.367	11	0.496
4	0.493	12	0.381
5	0.598	13	0.554
6	0.451	14	0.480
7	0.560	15	0.474
8	0.460	–	–

Table (3): Point-Biserial Correlations Between Each Item and the Total Scale Score

Based on the results of both procedures presented in Tables (2) and (3), all 15 items were retained in the final version of the Biased Aggressive Attribution Scale.

Confirmatory Factor Analysis (CFA):

To ensure that the fifteen items measure a single, unidimensional construct (i.e., not multidimensional), the goodness-of-fit indicators show that the items reflect one factor. The indicator values fall within the accepted cutoff thresholds (Tigza, 2012, p.179). Table (4) presents these values:

No.	Indicators	Indicator Value	Cutoff Threshold
1	Ratio of Chi-square (χ^2) to Degrees of Freedom	3.052	Less than 5
2	Root Mean Square Error of Approximation (RMSEA)	0.083	Between 0.05 – 0.08
3	Comparative Fit Index (CFI)	0.898	Between 0 and 1

4	Goodness-of-Fit Index (GFI)	0.864	Between 0 and 1
5	Parsimony-Adjusted Normed Fit Index (PNFI)	0.614	0.50 or higher

Table (4): Goodness-of-Fit Indicators for the Biased Aggressive Attribution Scale

Accordingly, the Biased Aggressive Attribution Scale retained its final form with **15 items**.

Validity and Reliability:

A. Validity:

The validity of the Biased Aggressive Attribution Scale was verified through the following methods:

- **Face Validity:**

This type of validity was established by presenting the scale to a panel of experts and incorporating their feedback regarding the appropriateness of the items.

- **Construct Validity:**

This was examined using several methods:

- The extreme groups method.
- The correlation of each item with the total score.
- Confirmatory factor analysis procedures.

B. Reliability:

The reliability of the scale was verified using the following indicators:

- **Test-Retest (External Consistency):**

The scale was administered to a sample of 38 department heads. Two weeks later, it was re-administered to the same participants. Using Pearson's correlation coefficient between the two administrations, the reliability coefficient was found to be **0.75**, which is considered acceptable for research purposes. The squared correlation ($0.75^2 = 0.5625$) exceeds the acceptable threshold of 0.50, indicating good reliability.

- **Kuder-Richardson Formula 20 (KR-20):**

This method, suitable for dichotomous response items, was applied using responses from the entire research sample (300 department heads). The reliability coefficient calculated using KR-20 was **0.73**, which is also deemed acceptable for scientific research as its squared value exceeds 0.50.

10. Descriptive Statistics of the Biased Aggressive Attribution Scale:

Descriptive statistics were calculated based on the responses of the department heads, as shown in Table (5):

Statistical Indicators	**Values**
Hypothetical Mean	22.5
Arithmetic Mean	17.0667

Standard Error of the Mean	0.11424
Median	17.0000
Mode	16.00
Standard Deviation	2.51329
Variance	6.31662
Skewness	0.808
Kurtosis	-0.420
Range	7.00
Minimum Score	15.00
Maximum Score	22.00

Table (5): Descriptive Statistics of the Biased Aggressive Attribution Scale

The statistical indicators for the scale show consistency with those of standardized scientific scales. The distribution of department heads' scores on the scale approximates a normal distribution, as indicated by the close values of the mean, median, and mode. This supports the generalizability of the results.

Final Administration:

After completing the development of the Biased Aggressive Attribution Scale and confirming its psychometric properties (validity and reliability), the final version of the scale was administered to a sample of **300 department heads** from universities in the Middle Euphrates region (Babylon, Kufa, and Al-Qadisiyyah) for data analysis and results extraction.

Research Results:

First Objective: Identifying the Level of Biased Aggressive Attribution Among Department Heads

The statistical analyses revealed that the **mean score** of department heads on the scale was **17.066**, with a **standard deviation** of **2.513**, while the **hypothetical mean** was **22.5**. A one-sample t-test was used to compare the sample mean with the hypothetical mean. The **calculated t-value** was **-37.444**, which is greater than the **critical t-value** of **1.96** at the **0.05 significance level** with **299 degrees of freedom**, in favor of the hypothetical mean. This indicates that department heads **do not exhibit biased aggressive attribution**. Table (6) illustrates this:

Group	**Mean**	**Std. Deviation**	**Hypothetical Mean**	**df**	**Calculated t-value**	**Critical t-value**	**Significance Level**
Department Heads	17.066	2.513	22.5	299	-37.444	1.96	0.05 (Significant)

Table (6): Significance of the Difference Between the Sample Mean and the Hypothetical Mean on the Biased Aggressive Attribution Scale

This result can be interpreted, according to the adopted theoretical framework, as indicating that both male and female department heads tend to interpret ambiguous intentions positively—i.e., they do not attribute hostile intent to their subordinates. This may be due to their cognitive schemas and institutional culture, which rejects hostile bias. Self-awareness may also play a role,

along with cognitive structures stored in memory that are not centered around aggression. These findings align with **Dodge & Somberg (1987)**, who found a **positive correlation between biased aggressive attribution and aggression**, as well as with **Klein (2020)**, whose meta-analytic survey of 25 prior studies confirmed a statistically significant **positive correlation between biased aggressive attribution and aggression**.

Second Objective: Statistical Differences in Biased Aggressive Attribution Among Department Heads According to Gender and Academic Specialization

To examine the statistical significance of differences in biased aggressive attribution scores based on gender (male vs. female) and academic specialization (scientific vs. humanities), the means and standard deviations were calculated, followed by **two-way ANOVA** at the **0.05 significance level**. Tables (7) and (8) present the results.

Gender	Specialization	Mean	Std. Deviation
Male	Scientific	16.7949	2.33245
	Humanities	17.2564	2.59588
	Total	16.9795	2.44519
Female	Scientific	17.1311	2.57860
	Humanities	17.3636	2.74574
	Total	17.2286	2.63941
Total	Scientific	16.9101	2.41764
	Humanities	17.2951	2.64009
	Total	17.0667	2.51329

Table (7): Means and Standard Deviations of Department Heads' Scores on the Biased Aggressive Attribution Scale

Source of Variation	Sum of Squares	df	Mean Square	F-value	Critical F	Significance Level
Gender	3.252	1	3.252	0.514	3.84	0.05
Specialization	7.963	1	7.963	1.258		
Gender × Specialization	0.867	1	0.867	0.137		
Error	1873.081	296	6.328			
Total	89270.000	300				

Table (8): ANOVA Results: Significance of Differences in Biased Aggressive Attribution by Gender and Specialization

Interpretation:

A. Gender Differences:

There were no statistically significant gender-based differences in biased aggressive attribution, as the calculated F-value (0.514) was less than the critical F-value (3.84) at the 0.05 level with (1, 299) degrees of freedom. This indicates that male and female department heads interpret ambiguous subordinate intentions similarly. This result contradicts the findings of Mohammed & Hassan (2023), who reported gender differences in biased aggressive attribution favoring

males.

B. Differences by Academic Specialization:

No statistically significant differences were found between scientific and humanities department heads, as the F-value (1.258) was lower than the critical value (3.84). This may be explained by the shared organizational context and similar cognitive components and regulatory environments across disciplines.

C. Interaction between Gender and Specialization:

The interaction effect of gender and academic specialization was not statistically significant ($F = 0.137 < 3.84$), indicating no combined effect on biased aggressive attribution.

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