

COGNITIVE DISTORTIONS AMONG UNIVERSITY STUDENTS IN LIGHT OF SOME VARIABLES.

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Abstract:

This study aims to uncover the level of prevalence of cognitive distortions among students at the University of Sidi Bel Abbès.", in addition to detecting differences in the level of cognitive distortions based on variables such as gender and educational level.

A descriptive approach was used, relying on Al-Tamouni (2019) Cognitive Distortions Scale. The study was conducted at the College of Humanities and Social Sciences, Sidi Bel Abbès University, and involved a sample of 152 students.

The results indicated that the prevalence of cognitive distortions is moderate. Furthermore, the results showed no significant differences in the level of cognitive distortions related to the gender variable, while there were differences in the level of cognitive distortions related to the educational level variable.

Keywords: Thinking; Cognitive distortions; mental health; university students.

Introduction

In recent times, there have been numerous changes, most notably those imposed by the spread of the coronavirus, and the resulting negative effects on individual health, especially mental health. In 2019, psychological disorders affected one in every eight individuals, with anxiety and depression being the most common. However, in 2020, the rates increased significantly due to the COVID-19 pandemic. Initial data showed a 26% increase in anxiety disorders and a 28% increase in major depressive disorders within just one year (WHO, 2020).

Furthermore, alarming news about wars and natural disasters in various countries and regions, along with social, academic, and professional changes, surround individuals from all sides, making it difficult for some to cope and adapt.

These changes have compelled some individuals, especially university students, to adopt certain ways of thinking, which vary from one student to another. Some of these ways are healthy and balanced, while others are distorted and skewed, affecting daily life. Thinking is a highly complex cognitive activity that enables students to deal with various environmental stimuli and social situations they encounter in their lives. It also contributes to acquiring knowledge, developing different behavioral strategies, understanding the nature of things, offering logical explanations for them, and assisting in making sound decisions related to their lives.

In this research, we will attempt to identify the distorted aspect of thinking in university students, manifested in cognitive distortions.

1. Problematic

When discussing thinking, many studies have revealed that we have between 70,000 and 90,000 thoughts rushing through our heads daily: 80% of them freely circulate in the unconscious mind, and 80% are negative, limiting, and demeaning towards us (Quach, 2022). We attract what we think about. If we think positively, we attract positive events. If we think negatively, difficulties will come more easily, and psychological problems will begin to appear, often as a reaction to how we deal with stressful life events.

Considering university students as individuals within society, they are among those affected by changes and the pressures imposed by the pandemic. Feelings of fear, frustration, and despair may dominate students, sometimes evolving into mental health problems such as anxiety or depression. The results of a recent survey conducted by Wang and al (2020) ; during the initial stages of the COVID-19 outbreak to assess the psychological impact of the virus on a sample of 1210 individuals from the general population, half of whom (639; 52.8%) were students, mostly university students, showed that 16.5% reported moderate to severe symptoms of depression, 28.8% reported moderate to severe anxiety symptoms, and 8.1% reported moderate to severe levels of stress (Aladdin& al, 2021,p.456)

Based on the cognitive model, which is considered one of the latest explanatory models for mental disorders, it is suggested that psychological disorders and problems arise in individuals due to cognitive factors. Thinking plays a significant role in directing an individual's behavior, as some scholars have emphasized the importance of cognitive factors in guiding individuals' responses to their surrounding circumstances, thus affecting their mental and physical health. Some students, during this period, and as a result of experiencing a series of unpleasant and stressful experiences, along with numerous negative emotions, often engage in distorting the information received by them through a fixed negative cognitive bias. Their thinking becomes rigid and overly generalized, usually resulting from maladaptive and distorted beliefs activated during negative emotional experiences (Rimawi & Almasri, 2021), cognitive distortions arise from the student's daily experiences both at home and at university, negatively impacting them and their personal and academic decisions. Al-Khaza'i and Al-Yabawi (2016) pointed out that cognitive distortion impedes the student's awareness, thus hindering proper judgment and decision-making. Therefore, the student in this case harbors negative biases about the situation, burying negative motivations and information that is not properly judged. The results of this study showed a negative relationship between cognitive distortions and decision-making skills among students at Al-Quds University.

Beck was the first to contribute to the emergence of the concept of cognitive distortions. They are akin to negative and erroneous thoughts, perceptions, and beliefs that an individual holds about themselves, the surrounding world, and the future. These distortions affect their professional, academic, and social lives, hindering their adaptation and serving as a pathway to psychological disorders (Al-Basousi, 2013, p.77). They are

also defined, as mentioned by Dozois, Ogniewicz, and Covin (2011), in Al-Mu'ayyata (2016), as "a set of cognitive errors practiced by the individual in two areas of their life. One is related to their social relationships with family and friends, while the other is related to their personal performance and success or failure in the workplace." In other words, cognitive distortions are a set of thinking errors that individuals engage in these areas, which can affect their self-esteem, their view of social relationships, and their performance in the workplace

The social distancing and virtual communication created a disruption in communication, as poor communication skills in individuals increase misunderstandings that may occur between them and their peers and those around them. This misunderstanding is exacerbated when we become accustomed to thinking in a coercive manner, leading to negative thinking towards people, relatives, and the world as a whole. Moreover, excessive focus on negative matters increases the risk of mental illnesses (Black, 2023).

Therefore, Beck's cognitive model posits that what an individual thinks and says about themselves, their attitudes, and opinions are related to their behavior, whether pathological or normal. One of the important factors in the formation of pathological emotions is the previous experiences that have been cognitively encoded in the mind as pre-verbal thoughts. Thus, psychological disorders result from the inconsistency between the individual's internal cognitive system and the analysis and interpretation of external stimuli. We may find different responses to the same situation due to this interference and inconsistency in thinking and disturbance, leading to the emergence of automatic thoughts that appear to the client as acceptable and reasonable (Beshir, 2008,p.93-94)

Cognitive processes play a vital role in human thinking and understanding various circumstances. Cognitive distortions are a type of psychological factor that may have a negative impact on students' behaviors because they can affect their way of thinking, understanding, and decision-making. Beck and Alford (2009), as cited in Rimawi and Almasri (2021), emphasized that cognitive distortions largely stem from the fact that individuals distort facts and evidence based on false premises and assumptions resulting from incorrect learning that occurred at some stage of the individual's cognitive development.

In summary, individuals do not develop disorders because of events, but because of the thoughts associated with these events. The focus is on the role of thoughts, expectations, and beliefs in shaping an individual's psychological structure. The presence of cognitive distortions in university students may predict the emergence of future psychological disorders and impact their academic achievement. A study by Buğa and Kaya (2022) titled "The Role of Cognitive Distortions related to Academic Achievement in Predicting the Depression, Stress, and Anxiety Levels of Adolescents" evaluated the predictive power of cognitive distortions related to academic success regarding depression, stress, and anxiety levels in adolescents. The study sample consisted of 411 individuals, with 203 (49.4%) continuing their education in academic high schools, while 208 (50.6%) were from vocational high school students. It was observed that cognitive distortions

related to academic achievement were statistically significant predictors of depression, anxiety, and stress.

Additionally, the results of the study by Al-Aqoun, Lhassane, and Salatnia (2021) on "General Mental Health Levels among Youth in Algerian Society – Through Psychological Distress as an Indicator of Mental Health," revealed that more than 23% of the study sample suffer from high levels of psychological distress as an indicator of mental health disturbance, with a high risk of developing anxiety and depression disorders, which is a very high percentage.

The study conducted by Khalafawi Fatima Zohra and Bouroub Amal (2022) titled "Cognitive Distortions Among First-Year High School Students" found a moderate level of cognitive distortions among first-year high school students.

Similarly, the study titled "The Big Five Personality Factors, Cognitive Distortions, and Their Relationship with Achievement Motivation Among Eleventh Grade Students in North Al Sharqiyah Governorate, Oman" (2022) by researcher Khawja bint Hamad bin Hameed Al-Masrouriyah concluded that the level of cognitive distortions was generally low among the study sample.

Based on the aforementioned studies, an individual's knowledge and thinking style are considered cornerstones of personality. Therefore, university students require a balanced psychological aspect free from any cognitive distortions or biases to help them successfully navigate this crucial stage. Hence, the idea of addressing cognitive distortions among university students at the University of Sidi Bel Abbès in Algeria emerged, aiming to answer the following questions:

- What is the prevalence level of cognitive distortions among university students?.
- Are there differences in the level of cognitive distortions among university students attributed to gender?
- Are there differences in the level of cognitive distortions among university students attributed to educational level (bachelor's vs. master's)?

2. Hypotheses:

- There are no differences in the level of cognitive distortions among university students attributed to gender.
- There are no differences in the level of cognitive distortions among university students attributed to educational level (bachelor's vs. master's).

3. Significance of the Study:

The importance of the study lies in:

- Shedding light on the topic of cognitive distortions due to the scarcity of local studies on it, as per the researcher's knowledge.
- Utilizing the study results to assess the prevalent cognitive distortions among students and to develop suitable therapeutic programs.
- Its significance stems from its target audience, which is university students, who are considered the backbone of society.

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4. Study Objectives:

To determine the prevalence level of cognitive distortions among university students.

- To uncover differences in the level of cognitive distortions among university students based on gender and educational level.

5. Procedural Concepts:

5.1 Cognitive Distortions: Defined by Aaron Beck and others as a system of erroneous thoughts that appear under psychological pressure (Salahuddin, 2015,p.653). Procedurally, it is the degree obtained by the student at the Faculty of Humanities and Social Sciences at Sidi Bel Abbes University on the Cognitive Distortions Scale by Abderrahmane Tammouni (2019).

5.2 University Students: They are students enrolled in the Faculty of Humanities and Social Sciences at Sidi Bel Abbes University for the academic year 2021/2022.

6. Methods and Tools:

6.1 Method: The descriptive method was adopted according to the nature of the study.

6.2 Tools: Cognitive Distortions Scale:

The Cognitive Distortions Scale by Abderrahman Ahmed Mahmoud Tammouni (2019) was used in this study. This scale was developed during his study on the effectiveness of a cognitive counseling program in reducing cognitive distortions among students at Al-Quds Open University. The scale consists of 64 items distributed across eight dimensions. Each dimension comprises eight items as follows:

1. All-or-Nothing Thinking: Items 1-8
2. Overgeneralization: Items 9-16
3. Selective Abstraction: Items 17-24
4. Jumping to Conclusions: Items 25-32
5. Should Statements: Items 33-40
6. Emotional Reasoning: Items 41-48
7. Personalization: Items 49-56
8. Magnification and Minimization: Items 57-64

6.2.1 Correction Method:

Participants respond to the scale by selecting the option that best corresponds to their beliefs on a five-point scale (Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree), with scores ranging from 5 to 1. For instance, if a student selects "Strongly Agree," they receive a score of 5 points (Tammouni, 2019).

6.2.2 Psychometric Properties of the tool:**6.2.2.1 Original Psychometric Properties of the Cognitive Distortions Scale:**

The author of the scale, Tammouni Abderrahman, assessed the scale's validity by consulting expert judges, resulting in the deletion of 4 items based on their opinions (from 68 items in its initial form to 64 items in its final form). Then, the construct validity was assessed, and the inter-item correlation coefficients ranged from 0.32 to 0.81, all of which were positive and statistically significant. As for reliability, it was calculated using

Cronbach's alpha coefficient, with a total value of 0.85, indicating high internal consistency. The reliability coefficients for the dimensions ranged from 0.74 to 0.84, which are high values indicating that the tool is suitable for measuring what it was designed to measure (Tammouni, 2019, pp. 42-44).

6.2.2.2 Psychometric Properties of the Cognitive Distortions Scale in the Current Study:

The psychometric properties of the Cognitive Distortions Scale were recalculated on a sample of 40 students from the Faculty of Humanities and Social Sciences, Sidi Bel Abbes University

Scale Validity:

The validity of the scale was verified by calculating its internal consistency reliability, which indicates the strength of the relationship between the scores of each dimension with the total score of the scale, as well as the score of each item with the dimension to which it belongs, and the strength of the relationship between the score of each item and the total score of the scale, using Pearson correlation coefficient. The table01illustrate this:

Table 01: the correlation coefficients of items with their respective dimension and with the total score.

Item	Correlation with the Dimension	Correlation with Total Score	Item	Correlation with the Dimension	Correlation with Total Score
All-or-Nothing			Must Statements		
10	0.52**	0.30**	33	0.69**	0.32**
12	0.60**	0.35**	33	0.54**	0.32**
13	0.53**	0.15	33	0.76**	0.45**
13	0.55**	0.42**	33	0.68**	0.41**
13	0.51**	0.32**	33	0.72**	0.43**
13	0.54**	0.31**	33	0.59**	0.40**
13	0.42**	0.20**	33	0.58**	0.18*
13	0.46**	0.30**	31	0.69**	0.36**
Overgeneralization			Emotional Reasoning		
13	0.30**	0.29**	30	0.70**	0.61**
01	0.41**	0.19*	32	0.78**	0.64**
00	0.60**	0.46**	33	0.73**	0.59**
02	0.48**	0.39**	33	0.59**	0.50**
03	0.59**	0.52**	33	0.63**	0.52**
03	0.52**	0.47**	33	0.66**	0.55**
03	0.51**	0.41**	33	0.73**	0.65**
03	0.57**	0.37**	33	0.70**	0.59**
Selective Abstraction			Personalization		
03	0.48**	0.45**	33	0.62**	0.48**
03	0.53**	0.40**	31	0.75**	0.48**
03	0.67**	0.53**	30	0.78**	0.58**
21	0.69**	0.58**	32	0.65**	0.54**

20	0.57**	0.43**	33	0.76**	0.40**
22	0.61**	0.43**	33	0.64**	0.47**
23	0.70**	0.49**	33	0.68**	0.50**
23	0.72**	0.50**	33	0.69**	0.33**
Jumping to Conclusions			Personalization		
23	0.45**	0.35**	33	0.56**	0.21**
23	0.67**	0.54**	33	0.56**	0.17*
23	0.69**	0.60**	33	0.52**	0.13
23	0.64**	0.49**	31	0.46**	0.45**
23	0.65**	0.55**	30	0.44**	0.34**
31	0.66**	0.61**	32	0.54**	0.31**
30	0.42**	0.27**	33	0.47**	0.46**
32	0.57**	0.39**	33	0.66**	0.41**

** Significant at $p < 0.01$

* Significant at $p < 0.05$

Based on table 01, we observe that all items are significantly correlated with their respective dimensions at a significance level of 0.01, ranging from 0.30 to 0.78. Additionally, regarding the correlation of each item with the total score of the scale, most items were significantly correlated with the total score at a significance level of 0.01, ranging from 0.20 to 0.65. However, items 10, 39, and 58 were significant at the 0.05 significance level, except for items 3 and 59, which were not significant. Nevertheless, we will retain them due to their association with their respective dimensions and their relevance to the scale's content.

Table 02: Correlation Coefficients of Dimensions with Total Score

Dimension	Correlation with Total Score
All-or-Nothing	0.57**
Overgeneralization	0.78**
Selective Abstraction	0.76**
Jumping to Conclusions	0.80**
Must Statements	0.55**
Emotional Reasoning	0.69**
Personalization	0.84**
Magnification/Minimization	0.59**

** Significant at $p < 0.01$

Furthermore, table (02) illustrates the correlation of each dimension's score with the total score of the scale at a significance level of 0.01, ranging from 0.55 to 0.84. Thus, the scale demonstrates good validity.

Scale reliability: To assess reliability, Cronbach's alpha and split-half reliability were utilized, with the results shown in the table below

Table 03: Reliability Analysis (Cronbach's Alpha) and Split-Half Reliability of Cognitive Distortions Scale

Dimension	Cronbach's Alpha	Split-Half Reliability	
		Reliability coefficient	Correcting the Length
All-or-Nothing	0.61	0.39	0.56
Overgeneralization	0.58	0.39	0.56
Selective Abstraction	0.77	0.57	0.73
Jumping to Conclusions	0.74	0.58	0.74
Must Statements	0.81	0.67	0.80
Emotional Reasoning	0.84	0.67	0.80
Personalization	0.84	0.74	0.85
Magnification/Minimization	0.62	0.44	0.61
Total Scale	0.92	0.70	0.82

From table 03, it is evident that the Cronbach's alpha values are high for all dimensions, ranging between 0.58 and 0.84. The Cronbach's alpha value for the entire scale is 0.92, indicating high reliability. Moreover, the split-half reliability was acceptable, with values ranging from 0.39 to 0.74. After correcting the length, these values increased to range between 0.56 and 0.85. Therefore, after confirming the validity and reliability of the scale, it is deemed suitable for use in the current study.

6.3 Study Limitations The study was conducted in March 2022 at the Faculty of Humanities and Social Sciences, University of Sidi Bel Abbès Algeria.

6.4 The Study Sample: The sample of the study comprised 152 students, distributed as follows

Table 04: Distribution of Study Sample Participants by Gender and Educational Level

Gender Variable	Frequency	Percentage (%)	Educational Level Variable	Frequency	Percentage (%)
Male	34	22.4	Bachelor's Degree	92	60.5
Female	118	77.6	Master's Degree	60	39.5
Total	152	100	Total	152	100

From table 04, we observe that the proportion of females is higher than males in the study sample, with 118 females and 34 males. Furthermore, undergraduate students constitute the majority, accounting for 60.5% of the sample, while master's students represent 39.5%..

6.4 Statistical Methods Used: The statistical methods employed include percentages, frequencies, Pearson correlation coefficient, standard deviation, mean, and the t-test for differences between two independent samples.

7. Results of the Study

7.1 Presentation and Discussion of the First Research Question

The first research question asks: What is the prevalence level of cognitive distortions among university students?

To answer this question, the prevalence rate was calculated, and the results are presented in the table below.

Table 05: the prevalence rates of cognitive distortions among university students.

Cognitive Distortions	Mean	Standard Deviation	Cut-Off Score	Number	Spread Percentage
All-or-Nothing Thinking	25.07	5.10	30.17	19	12.5%
Overgeneralization	20.25	5.00	25.25	21	13.8%
Selective Abstraction	21.03	6.30	27.33	22	14.4%
Jumping to Conclusions	22.65	5.66	28.31	30	19.7%
Musturbation	28.73	5.74	34.47	26	17.10%
Emotional Reasoning	17.86	6.53	24.39	42	27.63%
Personalization	20.77	6.62	27.39	13	8.55%
Magnification/Minimization	24.59	4.92	29.51	25	16.44%
Total Scale	181.01	32.49	213.5	23	15.13%

The results from table (05) indicate that the prevalence rate of cognitive distortions among the study sample was 15.13%, which is considered a moderate level. Regarding the dimensions, the highest prevalence rate was observed in the emotional reasoning style at 27.10%, followed by jumping to conclusions at 19.7%. Additionally, the prevalence rates for the other dimensions were as follows: "should" statements, magnification and minimization, selective abstraction, overgeneralization, all-or-nothing thinking, and finally, personalization. Consequently, the prevalence of cognitive distortions among university students is considered moderate

Discussion of the First Research Question:

Based on the findings, which indicated a moderate prevalence of cognitive distortions among university students, this may signal the presence of such thoughts among students. This could be attributed to cognitive distortions arising from a range of negative experiences and frustrations that individuals go through in their lives. These include various psychological, academic, and social pressures experienced by university students, compounded by the negative effects of the ongoing COVID-19 pandemic. These effects include feelings of insecurity, instability, and confusion regarding safety, along with a negative self-view in the absence of psychological support, counseling programs, or therapy, contributing to the reinforcement of such thoughts, posing a risk to individuals.

Beck also emphasizes that cognitive thoughts and schemata are always associated with performance and the pursuit of perfection. If a student fails in a task, faces criticism from peers, or fails to complete homework assignments, they may generate negative thoughts about themselves, others, and their environment. This leads to a decrease in self-

esteem and confidence, with distorted thoughts interpreting events based on these. The emotional inference and jumping to conclusions are the most prevalent cognitive distortions. During the period of lockdown amid the COVID-19 pandemic, the world shifted towards virtual communication, especially university students transitioning to remote learning. This type of communication leads to misunderstandings due to the absence of body language and face-to-face interaction, often resulting in misinterpretation of events due to insufficient information or misunderstanding of context. Consequently, individuals continue to interpret subsequent events from a specific standpoint. The most common thinking errors are related to the negative interpretation of others' ideas, making individuals feel unwanted, unsuccessful, or disrespected based on their distorted and erroneous thoughts. Therefore, the presence of cognitive distortions may indicate susceptibility to psychological disorders such as anxiety and depression, according to Beck's cognitive theory (Al-Adli & Al-Qurayshi, 2016), and individuals may interpret events based on their feelings and emotions as evidence of truth (Tamoni, 2019). This could also be attributed to the low level of religiosity among students and neglect in activating the role of religious or educational institutions.

These findings are consistent with the studies of Al-Muaayatah (2016), Khawaja, Fatima, and Bouroubah (2022), and Rimawi & Almasri (2021) but differ from the study of Al-Masroriyah (2022), which found a generally low level of cognitive distortions among the study sample, and from the study of Al-Adli & Al-Qurayshi (2016).

7.2 Presentation and Discussion of the Second Research Question:

The second research question aimed to investigate whether there are differences in the level of cognitive distortions among university students attributed to the gender variable.

To answer this question, an independent samples t-test was conducted to compare the cognitive distortions between male and female students. The results are presented in the table below:

Table 06: Gender Differences in Cognitive Distortions

Cognitive Distortions	Gender	N	Mean	Standard Deviation	D F	t Value	Significance Level
All-or-Nothing Thinking	Female	118	25.27	4.78	150	0.86	Not significant
	Male	34	24.41	6.11			
Overgeneralization	Female	118	20.38	5.17		0.61	Not significant
	Male	34	19.79	4.43			
Selective Abstraction	Female	118	21.04	6.70		0.01	Not significant
	Male	34	21.02	4.75			
Jumping to Conclusions	Female	118	22.86	5.93		0.83	Not significant
	Male	34	21.94	4.65			
Musturbation	Female	118	28.70	5.88		-0.13	Not significant
	Male	34	28.85	5.30			
Emotional Reasoning	Female	118	21.19	6.94		1.45	Not significant
	Male	34	19.32	5.20			

Personalization	Female	118	17.94	6.87		0.28	Not significant
	Male	34	17.58	5.29			
Magnification/Minimization	Female	118	24.41	4.85		-0.85	Not significant
	Male	34	25.23	5.18			
Total Scale	Female	118	181.83	34.63		0.57	Not significant
	Male	34	178.17	23.82			

Through table (06), it is evident that the t-values for differences in cognitive distortions between genders among university students ranged from 0.01 to 1.45, with a degree of freedom of 150. These values were not significant at the 0.05 significance level, indicating no statistically significant differences in cognitive distortions attributed to gender. Therefore, the hypothesis was not supported.

Discussion of the Second Research Question:

The results indicated no differences in the level of cognitive distortions attributed to gender. This suggests that both male and female students possess moderate levels of cognitive distortions. These findings can be explained by the fact that all students, regardless of gender, have experienced similar circumstances that likely contribute to the formation of distorted thoughts, such as the impact of the COVID-19 pandemic, academic pressures, and academic responsibilities.

Additionally, both male and female students may share concerns about securing employment opportunities given the current economic conditions. Furthermore, they belong to the same age group and face similar university-related challenges.

These findings contrast with the results of studies by Abu Hilal (2020) and Al-Muayyitah (2016) but align with the findings of the study by Khalafawi Fatimah Al-Zahraa and Boruba Amal (2021).

7.3 Presentation and Discussion of the Results of the Third Research Question:

The third research question aims to investigate whether there are differences in the level of cognitive distortions among university students attributed to the educational level variable.

To answer this question, independent samples t-tests were conducted, and the results are presented in the table below

Table 07: differences in cognitive distortions based on the educational level variable.

Cognitive Distortions	Educational Level Variable	N	Mean	Standard Deviation	DF	t Value	Significance Level
All-or-Nothing Thinking	Bachelor's	92	25.85	4.83		2.36	Significant at p < 0.01
	Master's	60	23.88	5.31			
Overgeneralization	Bachelor's	92	20.88	5.50		1.91	Not significant
	Master's	60	19.30	3.99			
Selective Abstraction	Bachelor's	92	22.05	6.95		2.50	Significant at p < 0.01
	Master's	60	19.48	4.79			
Jumping to Conclusions	Bachelor's	92	23.31	6.18	1.78	Not	

	Master's	60	21.65	4.63	150		significant
Musturbation	Bachelor's	92	29.20	5.63		1.25	Not significant
	Master's	60	28.01	5.88			significant
Emotional Reasoning	Bachelor's	92	22.15	7.04		3.27	Significant at $p < 0.01$
	Master's	60	18.66	5.31			
Personalization	Bachelor's	92	18.68	7.04		1.92	Not significant
	Master's	60	16.61	5.49			
Magnification/Minimization	Bachelor's	92	24.48	5.30		-0.33	Not significant
	Master's	60	24.76	4.31			
Total Scale	Bachelor's	92	186.64	35.47		2.69	Significant at $p < 0.01$
	Master's	60	172.38	25.21			

According to table 07, the t-test coefficients for differences in the level of cognitive distortions among university students based on the educational level variable ranged from 0.33 to 2.69, with a degree of freedom of 150. These coefficients were non-significant at the 0.05 significance level for the following dimensions: exaggeration and minimization, personalization, must statements, jumping to conclusions, and overgeneralization. However, they were significant for the overall score and in each dimension: emotional reasoning, all-or-nothing thinking, and selective abstraction, with a significance level of 0.05. Hence, it can be concluded that there are differences in the level of cognitive distortions among university students attributed to the educational level variable in favor of bachelor's degree level, thus confirming the hypothesis.

Discussion of the Results of the Third Research Question:

The results indicate the existence of differences in the level of cognitive distortions among university students attributed to the educational level variable in favor of bachelor's degree level. This can be interpreted by considering the experience gained by master's degree students compared to bachelor's degree students, which helps them understand events accurately and interpret them in a logical and realistic manner free from distortion. Additionally, master's degree students tend to be older and more mature, whereas many bachelor's degree students are still in the late adolescent period and may struggle to make sound decisions independently. Moreover, the transition to university education, especially for students residing in university dormitories, can pose challenges, as they require guidance and support to meet their academic needs and achieve academic alignment, which is essential for university success. Maslow also emphasizes the importance of alignment for ensuring good mental health and preventing cognitive distortions. Therefore, achieving alignment involves effective perception of reality, self-acceptance, spontaneity, problem-centeredness, self-reliance, continuous renewal of appreciation for things or values, important primary experiences, strong social interest, healthy social relationships, and feelings of love towards others, while maintaining balance between different aspects of life. All of these factors aim to ensure good mental health and prevent cognitive distortions

Conclusion

Ensuring the cognitive well-being of individuals in general, and university students in particular, is essential for them to lead a healthy life free from psychological disorders. It helps them achieve good mental, psychological, academic, and professional. This was the underlying motivation behind this study, which aimed to explore the prevalence of cognitive distortions among university students.

Based on a sample of students from Sidi Bel Abbes University and utilising a descriptive method, the study found a moderate level of cognitive distortions among students at the Faculty of Humanities and Social Sciences. Furthermore, the results indicated no significant differences in the level of cognitive distortions between genders among university students. However, significant differences were found in the level of cognitive distortions based on the educational level variable (bachelor's vs. master's), favoring the bachelor's degree level.

To mitigate the severity of cognitive distortions, it is imperative to enhance efforts and attention towards providing facilities, counseling and academic guidance centers, conducive study environments led by competent professors, interactive climates, and continuous communication among students and professors.

In conclusion, we propose:

- Conducting similar studies across different disciplines and with different samples.
- Linking the variable of cognitive distortions with other variables such as psychological alignment or ambition.
- Providing spaces for students to meet their diverse needs.
- Organizing informative days for new students about higher education and the specifics of scientific research.

By implementing these suggestions, universities can contribute to fostering a healthier and more conducive academic environment for their students.

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