



ISSN 1989 – 9572

DOI: 10.47750/jett.2023.14.01.060

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Journal for Educators, Teachers and Trainers, Vol. 14 (1)

<https://jett.labosfor.com/>

Date of reception: 14 Nov 2022

Date of revision: 10 Jan 2023

Date of acceptance: 20 Feb 2023

**Dr. Sadiq Kazem Jrio, Waad Hamza Abdel-Kadhim (2023). Circular thinking among university students
Journal for Educators, Teachers and Trainers, Vol. 14(1). 642- 652**

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ABSTRACT

The basic concept in the current research is Circular reasoning . Circular reasoning means the use of an individual's cognitive beliefs as premises that assume their reliability for the purpose of reaching conclusions, in other words that it is used as an introduction to prove the validity of its results, for the purpose of justifying the reliability of the individual for a specific cognitive belief resorting to another belief that has been previously proven reliable, and the latter depends on its credibility on the validity of a third reliable belief, which originally depends on the original cognitive belief, and so we fall into a cognitive circle (210-209 :2005 Alston) .

In order to achieve the objectives of the research, the researcher used the descriptive and associative approach. The current research sample reached (380) students from the University of Babylon and the Humanities. The sample was chosen in a random and stratified way. The researcher adopted the Circular reasoning test prepared by (Al-Okaidi 2020). The researcher verified the validity of the scale in a manner of apparent validity and sincerity of the construction and verified its construction. The researcher verified the reliability of the Circular reasoning test in a way of retesting and Keudar Richardson method, and reached a number of results, the most important of which

The current research seeks to identify:

1.Circular reasoning among university students.

Research Findings:

1.University students generally do not have the ability to think circularly .

Keywords: Circular reasoning among university students

Chapter 1 : Definition of Research

First , the research problem.

It is the nature of work in mental matters and the work of thinking and deduction that there are vacuums that can only be filled by diligence, as the relationship of our emotions with our brains is not a relationship of agreement and we find in many cases that our emotions control our minds and we start thinking under the influence of desire and motivation, which takes us away from the truth, as well as the shortcomings of the human mind, which is unable to perceive the macro issues sometimes, which makes us when we deal with these issues we fall into a lot of error and miscalculation, so the purification of thinking must precede the provision of our minds with the correct ways of thinking and cultural principles, and in fact the journey of correct thinking begins with three main axes: knowledge, skill and behavior (Zeid, 2009, 5-6).

Decades of research have shown that individuals easily violate the most basic logical, mathematical, or probabilistic rules when a task calls for an intuitive response that conflicts with this policy. Thus, most individuals will adhere to the intuitive response that comes to mind quickly and fail to think logical ideas. Individuals are biased because they do not discover that their intuition conflicts with logical considerations. So, the individuals using analysis will be the few who succeed in giving the logical response and have the motivation and strength to complete the deliberate calculations and go beyond the intuitive response initially created.

(DeNeys, 2019 , 503)

Significance of the Research

It has become the function of education to teach students the process of thinking, that is, how to think and warn them of the pitfalls of thinking, and train them in his right methods,so that they can make their way in life successfully and support the construction of civilization and may ask individuals does man need to learn how to think? Isn't man a thinker by nature? The answer is that a person needs to learn ways of thinking and practice his various skills, such as learning how to talk and how to deal with people. etc.

(Al-Amiri, 2008, 15-16).

The importance of universities is highlighted in particular by the importance of developing patterns of thinking and moving from traditional education to education that focuses on solving problems, finding solutions and relying on mental processes, to enhance thinking skills (Saasela, 174/2011).

The question of thinking in psychology, in other sciences and in all life occupies a major place because the importance of thinking lies in finding appropriate solutions to the necessary theoretical and practical problems faced by man in nature and society, which are constantly changing, prompting him to always search for new and modern methods and methods that enable him to overcome the difficulties and obstacles that he faces and that are likely to appear in the future. This will constitute an opportunity for progress and advancement (Ghabari and Abu Shaira , 347, 2008) .

The interest in developing the thinking of university students and their capabilities helps them to keep pace with the changes of renewable life, as they represent the first investment in all countries and are an integral part of the members of society affected by the changes that occur in it. The university remains the largest and most important role in the lives of its students who live in an important and difficult stage of their lives full of openness, pluralistic thought and the mixing of divergent ideology. If they do not have a mature, broad and open intellectual line that immunizes them from the intellectual impurities that target them, their thinking will be circular (Al-Hakak, 2015, 167).

Circular reasoning is one of the epistemological methods that has long had historical roots. It has been addressed by ancient and modern philosophies when they referred in their writings to individuals who have Circular reasoning with strict views on some issues and who adopt specific opinions and ideas that they do not accept in controversy and are not subject to any thinking, criticism or review (Al-Shahat , 2012, 356).

Interest in the study of Circular reasoning has increased in the last two decades partly due to some recent research areas that dealt with behavioral problems in educational institutions and resolving conflicts between students in safe, sound and non-violent ways (1, 2012, Brown).

Therefore, the importance of studying Circular reasoning at the present time is emphasized by modern theories in teaching and learning of the need for students to learn the skills that enable them to control their life matters such as thinking skills, self-learning skills and skills related to developing their methods of obtaining and processing knowledge and mental openness to the future to face the technological and social changes that have occurred in contemporary societies and continue to occur continuously and rapidly making it difficult to predict the information necessary for the individual in the future.

(Al-Harthi, 2009, 19) .

Third : Research Objectives

The current research aimed at identifying the following: -

1. Circular reasoning among university students
2. The significance of differences in Circular reasoning among university students is defined according to two variables : a- Gender (males ,females) and specialization (scientific ,human)

Fourth : Search Limits

The current research is determined by the Circular reasoning of the students of the morning primary studies at the University of Babylon for both sexes (males ,females) and both specialization (scientific ,human) for the morning primary study of(males - females) for the academic year 2022-2023 .

V. Terminology

First: Circular reasoning (Circular reasoning)

Defined by :

Alston (2005,Alston), Circular reasoning as: The individual's use of his cognitive beliefs as premises assumes their reliability , for the purpose of reaching conclusions, in other words, that he uses conclusions as an introduction to prove the validity of his results, for the purpose of justifying the reliability of the individual to a certain cognitive belief resorts to another belief proven its reliability in advance, and the latter depends on its credibility on the validity of a third reliable belief, which originally depends on the original cognitive belief, and thus fall into a cognitive circle, (210-209, 2005 Alston,).

- Theoretical definition of Circular reasoning : The total score that the responding student receives on the scale items for Circular reasoning .
- Procedural definition of Circular reasoning : A set of questions and positions prepared by the researcher for the purpose of measuring the level of Circular reasoning , through the degree obtained by university students at the University of Babylon when answering the items of the Circular reasoning test.

Chapter Two : A Theoretical Framework and Previous Studies

The concept of Circular reasoning

Literature review

Thinking, feeling and desire are of one importance. Thinking is the only way to control our minds and show what is wrong with our thinking. We can also show how to deal with our destructive emotions and turn fruitless desires into fruitful ones. The moderate mind is the one that can free us from intellectual slavery. If we understand our minds and their functions, and confront the obstacles represented by the selfish tendencies that led to the improvement and development of our lives, and if we rely on our minds on a daily basis, we can take steps and procedures that enable us to become thinkers (Jamil, 2011, 14).

Explanatory theories of Circular reasoning

First : Theory of Personal Knowledge (2005)

This theory goes back to William P. Alston. Alston, who has made many contributions to metaphysics, epistemology, philosophy of language, psychology, and religion, is the author of Psychoanalytic Theory and Faith, Epistemological Justification, Reliability of Perceptual Perception, and The Inductive Argument from Evil and the Human Cognitive State. (10-1 2009 ,Snyder).

The study of knowledge focuses on our means of acquiring knowledge and how we can differentiate between truth and falsehood by thinking. Schumer defined the concept of personal knowledge as a complex system consisting of several rather independent dimensions. These beliefs are related to cognitive processes (109 , 2012, Ismail & et al.).

We all know that we should not form cognitive beliefs on insufficient and unclear evidence, that we should have consistent beliefs, and that our cognitive beliefs should not be based on these puzzling inferences and other statements that should be our knowledge bases, that is, the criteria that regulate the formation and maintenance of our cognitive beliefs. Observing cognitive criteria ideally helps to obtain true beliefs, and the presence of true beliefs ideally helps to achieve the things we value in our thinking . (142-1 2008, 14,Mitova).

Cognitive norms are not merely empirical generalizations about what we think or know, but are justified as principles and rules, telling us what to believe. A criterion, whether in the sense of a rule or in the sense of a general principle, is supposed to guide our behavior or thought, or regulate the exercise of our thoughts in certain situations. (2006,5, Gabbay & et al.).

A growing number of epistemologists claim that reliable cognitive beliefs are a prerequisite for obtaining cognitive rational beliefs, and William Alston has argued that reliability is a prerequisite for cognitive rationality. (188, 1985 ,Foley) .

A large part of the actual teaching consists of the teachers telling students about the materials and knowledge objects learned, that is, making statements or assertions without supporting the reasons, evidence or arguments and proofs. Should students expect to believe these statements? Not only students, but all types of listeners face unsubstantiated assertions or testimonies by speakers under any circumstances that justify believing these statements. Goldman (1999, Goldman) here tightly links the issue of the student's belief on the basis of the teacher's certificate to the justifying case of believing on the basis of his certificate in general. Students must trust the statements of their teachers despite the lack of independent evidence other than their testimony on the credibility of what they are studying for most of them (13-11, 2004 , Siegel).

Understanding may also be affected by beliefs about knowledge building (knowledge ayah) and the possibility of achieving the truth, when students believe that knowledge is absolute and does not change, there is a high probability that they will not take responsibility for their learning and remain negative in the learning process, and this lack of active participation by them means that students' understanding of risk due to their low probability of engaging in deep learning approaches requires previous knowledge links. Understanding may also be affected because students who believe in knowledge certainty will be less likely to analyze information critically (8-2009.7, Walker & et al) .

William Alston et al. saw reliability as a prerequisite for cognitive rationality. Tamween claims that X believes rationally only if he has reasons that are reliable and valid indicators, and if this belief is the product of an intellectual virtue, as intellectual virtues are the sedentary behaviors of acquiring facts, and that X believes rationally only if he obtains or maintains the belief in a way that makes the cognitive beliefs made in this way reliable, that is, mostly true, and each of these scientists suggested that there is some kind of logical or conceptual link between cognitive rationality and truth. The exact nature of this link depends on what it means that the cognitive process, logic, or intellectual virtue is reliable or not(1, 1985,Foley) .

Anyone who genuinely cares about whether their beliefs are true should care equally about whether those sources (cognitive beliefs) on which they rely tend to lead them to the truth or not. On the other hand, it is also easy to feel that this is an inevitable problem. In order to have a reasonable belief about whether our sources are reliable, we will then have to rely on some of our sources of beliefs. Based on those sources, it seems to be assumed in advance that they are reliable in reality, so it seems inevitable that any attempt to defend the

credibility of all our sources is doomed to failure in the face of the possibilities of such a circle. This is what we call a circular fallacy of knowledge (Circular reasoning) (224-223,2011 ,Alexander).

One case of cognitive generalization occurs when you are justified in thinking that something is a justifiable and acceptable source from that same source. For example: Suppose I try to convince you that the testimony of an expert in a particular field is justified as a reliable source of information, and the reason why this claim is justified may be argued is that the expert himself said so, and since his testimony is justified, the justification for the claim is justified! Assume also that I am not relying on any evidence other than the testimony of that expert (whatever he says), it is not as if I am testing what he says against an independent source, but I am relying on his testimony to justify the claim that the source of his information is justified and reliable, this type of thinking seems very suspicious, and it is strange to think that we can gain justification for trusting that expert only by trusting him and what he says, and in fact there seems to be something generally impermissible about trusting the source to prove its justifying effectiveness, one of those reasons. Cognitive circular reasoning arguments are dialectically ineffective. When I try to convince you that an expert's testimony provides justification through what he says, you must find my argument unconvincing. If you don't actually believe me, you have no reason to accept my evidence. If you do believe me, you simply don't need it. So a meal to accept an argument depends on the source that you are trying to justify originally (1, 2015 ,Macdonald).

Circular reasoning occurs when an individual uses the same conclusion or a closely related proposition as a means of support , rather than justifying the conclusion on the basis of agreed facts and reasonable conclusions. These patterns of thinking lead to where they began without being objected to. Circular reasoning patterns are those that involve special patterns of justification. This type of thinking leaves people at the mercy of inappropriate and useless attempts at persuasion. The inability to detect or exit from circles in an individual's thinking may also lead to narrow-mindedness, or even illusions, where one's beliefs on a subject are self-confirmed and isolated from evidence that may cast doubt on them. In fact, this logic of Circular reasoning in actual controversy is sometimes difficult to detect. Condemning someone from this fallacy often requires careful analysis and argument in itself (768-767,2002 ,Rips).

Studies on Circular reasoning

Al Akidi Study 2020

(Slow rapid thinking and its relationship to both preventive thinking and Circular reasoning among students of the University of Mosul)

A study conducted by (Al-Okaidi 2020) on the students of the University of Mosul. The sample size was (1000) students in various disciplines. One of its objectives was to measure the level of thinking among the students of the University of Mosul by identifying the significance of the differences in the level of Circular reasoning according to the gender variable (males and females). B-Identify the significance of the differences in the level of Circular reasoning according to the variable of specialization (scientific and humanitarian). The researcher built a test for Circular reasoning based on the theory of

(William Alston) He verified validity and reliability by retesting and used the equation of Alpha Cronbach and Koder Richardson. The results of the study indicated that there is no statistically significant relationship between preventive thinking and the level of Circular reasoning in Mosul students (Al-Akidi ,2020)

Discussion and identification of the benefit of previous studies

Aspects of benefit from previous studies

1. Previous studies are a basic and important information base for the researcher.
2. Previous studies highlight some of the tasks and actions that a researcher may have overlooked during their research.
3. Previous studies help the researcher to develop questions related to his study, by familiarizing him with the studies of others, and the way they formulate questions, which earns him experience in formulating important and useful questions for his own scientific research.
4. Previous studies enable the researcher to identify the scientific mechanism and methodology used in those studies.
5. Compare the results of the current research with the results of previous studies to identify the similarities and differences between them.

Chapter 3: Research Methodology and Procedures

Research Methodology

The research method is defined as the method used by the researcher or scientist in studying his problem in order to reach solutions to it and some results. The descriptive approach is a commonly used approach among researchers, which aims to determine the current status of a particular phenomenon, and then works to describe it. It relies on the study of the phenomenon and cares about it accurately as it exists in reality (Al-Issawi and Al-Issawi, 1997, 13). Correlational research describes the degree of relationship between variables quantitatively, and also describes the

present with a tendency to predict the future , and relationships, which helps to explain (Abu Allam, 2007, 245) The researcher chose the descriptive approach (correlational studies) in the process of collecting and analyzing data to suit the subject of the study.

Second: The research community

The current research community is determined by the students of the University of Babylon for the morning preliminary study and the academic year (2022-2023), who number (26,441) students and for humanities and scientific specialties, by (11,243) students and by (42.5%), (15,198) students by (57.5%), and table (1) shows this ,and the number of scientific specialization (16,971) by (64%) and the number of humanities specialization (9470) by (36%)

Third : Research sample

The sample means a partial group of the community and contains some elements of the original community, and here the researcher must be careful and cautious when choosing the sample , as it must represent the community an honest and sound representation and this requires him to determine the objectives of the study and its community(Awad, 2008, 282).

The importance of the subject of the samples is evident in that it enters the scope of statistical inference and works to extract the statistical properties of the original community from the statistical properties of one of its samples (Al-Bahi, 1978, 304) .

Since the variables to be studied in the current research are divided into layers, each of which expresses a category of levels of the variable in question, the researcher resorted to choosing a random sample with a proportional distribution. In order to adopt this method of samples, the following steps must be followed

1. Dividing the members of society into two classes (females – males) and divided on the basis of specialization (humanistic – scientific) from the original society.
2. Determine the number of members of society who belong to each class .

Determine the total sample size and sample size of each population, and its proportion of the total population to conduct the research (Thompson , 2012 , 39) .

The sample of statistical analysis consisted of (380) male and female students (1.43%) of the original research community by (163) students by (43%) and (217) female students by (57%) , while the number of scientific specialization of the sample (243) by (64%) and the number of humanitarian specialization amounted to (64%) (137) by (36%)

After extracting the scometric properties of the scale and after excluding some items from the scale with the procedures of validity and reliability , a sample was chosen for the final application .

Search Tools

In line with the theoretical framework adopted by the researchers in studying the variables and in order to achieve the objectives of the current research, there must be a tool to measure Circular reasoning , and therefore the researchers took the following steps:

Tool 1: Circular Reasoning Test

Testing is a codified means that elicits reactions or responses that the psychologist can record (Abbas, 1996, 9) .

After reviewing the previous studies and psychological literature that dealt with the subject of Circular reasoning , the researcher found that the test (Al-Akidi , 2020) , Appendix (2) is appropriate to achieve the objectives of the research and adopted it for the following reasons:

1. There is no tool to measure Circular reasoning applied in the Iraqi and Arab environment because of the scarcity of studies in this subject, according to the researcher's knowledge, other than this test .
2. It is applicable to the study sample (university students) , because it was applied to the same sample.
3. The test has good reliability and reliability indicators.

Preliminary description of the test

The test consists of(42) items distributed in four areas, namely (reliability and ease of knowledge , cognitive failure, standard problem, circular knowledge) , and the number of items for each area (10) items except the last area (12) items , and the key to correcting the alternatives to answer the test has given the alternative that represents Circular reasoning (one degree) when correcting; The other does not represent Circular reasoning and is given (zero) when correcting and Appendix (2) clarifies that .

Validity of the circular reasoning test items

To verify the validity of the items of the Circular Reasoning Test in its initial form, which consists of (42) items Appendix (3) presented to a group of arbitrators in the field of measurement, evaluation and psychology, the number of (30) arbitrators Appendix (1) to indicate the validity of the test items to measure what they have

prepared to measure and modify what they deem appropriate and the suitability of alternatives, and to analyze the opinions of the arbitrators, a K-square has been adopted for good conformity and percentage and each item has been returned valid when the value of the calculated K-square is statistically significant at the level of significance (0.05) and the degree of freedom (1), and as a result of this procedure all items have been accepted because the value of K-square calculated higher than the table of all items, amounting to (3.84) at the level of significance (0.05).

Explain the instructions for the Circular Reasoning Test

The instructions of the scale are the guide that guides the respondent during his response to the items of the scale, as the test instructions must be clear and easy to understand and within the scientific and cultural level of the sample prepared for the test and should also resort to giving illustrative examples that help to understand the questions of the test and how to answer (Awad, 2008: 69).

Therefore, the two researchers were keen to formulate the instructions of the scale to be clear, accurate and simple, and they were also keen not to mention what the scale measures. They asked the respondent to indicate one of the alternatives and answer them honestly and objectively, giving an example that shows how to choose one of five alternatives. They also indicated that the answers are for the purposes of scientific research also and there is no need to mention the name and that the answer will not be seen by anyone except the researcher. To find out the extent to which the instructions were clarified, the scale was applied to a sample of (40) male and female students from the University of Babylon and from the human and scientific disciplines who were chosen in a random way with equal distribution. After conducting the experiment, it was clear that the test items, its alternatives and instructions were clear, and the time taken to answer the test was (24-26) minutes.

Statistical analysis of the items of the Circular Reasoning Test

The statistical analysis of the items helps to examine the ability of each item to distinguish between the sample members and to decide on the amendment, deletion or retention of items, and the reliability of the test scores and the validity of the interpretation of the results depends on the quality of the test items and thus will help improve the quality of the scale prepared for the test (Reynolds, Livingstone, 2013, 300).

The discriminatory force of items means the extent to which the item is able to distinguish between the upper and lower levels of individuals in relation to the concept measured by the item (Shaw, 1967, 450).

In order to conduct the statistical analysis of the items of the scale, the scale was applied to a sample of (380) male and female students selected by the random stratified method with proportional distribution and from both scientific and humanitarian disciplines.

Discriminatory power of circular reasoning test items

❖ The method of the two (Groups Contrasted)

The primary purpose of calculating the discriminatory power of vertebrae is to exclude vertebrae that do not discriminate between the examined and to retain those that discriminate between them (Ebel & Frisbie, 2009, 294).

Kelley (1957) believes that (27%) is the best percentage to determine the number of members of the upper and lower groups in large samples with normal distribution. (Anastasi, Uren, 2015, 344). To do this, the researcher followed the following:

- Determine the total score for each of the scale forms that were applied to the statistical analysis sample.
- Order forms from highest grade to lowest grade (descending).
- The percentage of (27%) of the forms with the highest scores was chosen after a higher group, and the percentage of (27%) of the forms with the lowest scores was chosen after a lower group, as the number of forms in each group was (103) forms, that is, the number of forms that were subjected to statistical analysis is (206) forms.
- The researcher extracted the coefficients of ease and difficulty and the coefficient of discrimination, and to find out the acceptability of the item was compared to the Abel standard, which believes that the item is distinctive if the coefficient of excellence is higher than (0.19). As for the coefficient of difficulty, according to Bloom and Downey, the extent of the difficulty of items ranges between (0.20 – 0.80).

It was found that all items are distinct except for items (8,10,16,20,27,33,34,37), because their scores of ease coefficients were less than (0.20) and their difficulty coefficients were higher than (0.80).

It is clear from the above table that all items are distinctive except (8,10,16,20,27,33,34,37) when compared to the Abel standard, which shows us that they are not distinctive because their distinctive coefficient is less than (0.19). As for the difficulty coefficient, according to Bloom and Downey, the difficulty of items ranges between (0.20 – 0.80), so the items (8,10,16,20,27,33,34,37) are unacceptable according to them (Kline, 2005, 96).

B- Internal consistency

To extract internal consistency, the same data, which were adopted in extracting the discriminating force in the method of the two peripheral samples, amounting to (380), were used as follows: -

- Item Score Correlation Relationship in Field Score and Overall Test Score (Internal Consistency)

The objective is to find the correlation between the degree of each item of the Circular reasoning test and the total degree of it for the same members of the research sample of (380) male and female students. To find out the consistency of the items, the researcher used the point biserial correlation coefficient.

The method of the relationship of the item to the overall degree indicates the extent of homogeneity of the items of the scale in measuring the behavioral phenomenon, and that each item of the scale goes on the same path as the scale as a whole, this method is one of the most accurate means used in calculating the internal consistency of the scale (Al-Kubaisi, 2010, 273).

This method is based on calculating the correlation between the respondents' performance on the test as a whole and their performance on each of the test items (Mikhail, 2016, 79).

After all the forms were corrected, and the total score for each form was calculated, the point biserial correlation coefficient was calculated between the score of each test paragraph, the score of the field to which it belongs and the total score of the test.

It is clear from the above table that all items are distinctive except (8,10,16,20,27,33,34,37)

Because the calculated value is smaller than the table (0.123) at the level of significance (0.05) and the degree of freedom (378).

- The relationship of the field degree to the degree of other fields and the relationship of the field degree to the total degree of Circular reasoning

It is clear from the table above that there is a good correlation between each field score and the score of other fields as well as with the overall score of the test.

Psychometric Characteristics of Circular Reasoning Test

Validity

It is that the test measures what it is designed to measure, that is, the honest test measures the function it purported to measure, and it means the ability of the test to measure what the test is designed to measure (Barker et al., (2002): 65.

The validity of the scale has been verified by

Face Validity

means the suitability of the test for the purpose for which it was designed, and reached by a competent judgment on the degree of measurement of the test for the measured feature, and since this judgment is characterized by a degree of subjectivity, the test is given to more than one arbitrator to estimate this type of coincidence (Abu Al-Diyar, 2012, 29). This type of validity was verified by the procedures that were carried out to verify the validity of the items of the current scale, its alternatives and weights, by presenting it to a group of arbitrators specialized in psychology and psychometrics, and their observations were taken from an amendment to some items.

Construct Validity

The extent to which the test measures the formation of a hypothesis, psychological concept or trait and is called the validity of the hypothetical formation (Abu Hatab, et al., 2008, 190).

The construct validity has been verified through the following indicators:

- Calculate the coefficient of ease, the coefficient of difficulty and the discriminating force of the scale items.
- The method of the relationship of the item to the total degree of the field to which it belongs and the total degree of the test
- The total score relationship method for each of the fields and the total score of the scale.

Reliability

A static test is a test that gives static measurements or estimates if it is repeated twice between two sets (Amoush, 2009, 255).

Consistency means consistency in scores when the test is applied again to the same individuals as the previous time after a period of time and giving the same results (Fraenkel & Wallen, 1993, 13).

To extract the reliability was used:

(1) Kyoder-Richardson coefficient method of internal consistency

This concept emphasizes the relationships that exist between the vocabulary of the scale more than its emphasis on the reliability of the scores of the scale over time, or their equivalence, and this test has found an alternative

to the Fakronbach test for internal consistency and is a good indicator of the coefficient of equivalence, along with internal consistency or homogeneity, and gives the Keoder-Richardson coefficient the minimum estimated value of the reliability coefficient (Allam , 2000, 165).

After applying the scale to a sample of (380) male and female students, the reliability coefficient reached (0.86), and this score is good compared to the psychological literature and previous studies.

(2) Test-Retest Method

This method is one of the most important methods of calculating reliability , but one of the simplest and easiest ways to set the reliability coefficient, and this method is summarized in the application of the test to a group of individuals, and then re-applied again to the same group and then the Pearson correlation coefficient is calculated between the two applications to obtain the reliability coefficient of the test scores (Ismail, 2004, 73). Therefore, the researchers randomly selected a sample of (60) male and female students by (30) male and (30) female students. After two weeks of the first application of the scale, the researchers reapplied the same scale to the same sample. The Pearson correlation coefficient, which represents the reliability coefficient in this method, was calculated, as it appeared that its value was (0.82). This score is good compared to psychological literature and previous studies.

Statistical Indicators for the Circular reasoning Test: Extracted, Statistical Indicators, Circular reasoning via the Statistical Portfolio of Social Sciences (SPSS)

Describe the circular reasoning test and its correction method in its final form:

After verifying the metric characteristics of the test, it became in its final form consisting of (34) items distributed in four areas , the first field includes (8) items , and the second field consists of (8) items , and the third field consists of (9) items ,and the last field consists of (9) items ,while the key to correcting the alternatives to answer the test was given The alternative that represents Circular reasoning (one degree) when correcting; The other alternative does not represent Circular reasoning and is given to it (zero) , and thus the highest possible score of the test is (34), and the lowest possible score of the scale is (zero) degree , and with an average hypothesis of (17), and Appendix (2) includes the test in its final form

Chapter 4: Presentation, Interpretation and Discussion of Findings

First : Presenting, interpreting and discussing the results

Objective 1

❖ Identifying Circular reasoning among university students: To identify this objective , the Circular reasoning test was applied to the final application sample of (300) male and female students, and it was found that the arithmetic mean of the grades reached (15.85) degrees with a standard deviation of (6.002) degrees , while the hypothetical average of the scale reached (17) degrees . In order to identify the significance of the statistical difference between them, the T-test was used for one sample

(One Sample T Test) It was found that there is a statistically significant difference between them in favor of the hypothetical average, where the calculated T-value was (3.309-), which is greater than the table value of (1,96) at the level of significance (0.05) and the degree of freedom (299), which indicates that the study sample does not have the ability to think circularly .

Arithmetic mean, standard deviation, hypothesis mean, and circular reasoning (T) values

This result can be attributed according to the Stone Theory (Alston, 2005)

He argues that the reason why our Circular reasoning seems unconvincing is because it seems that we either trust a certain source or don't trust it, and in either case there is a reason why an argument based on that source fails to convince us , but things may not be so simple, and the reason may be that we trust the source practically, but we have no belief . He is qualified to trust. For example, you might treat induction as trustworthy without us having a belief . That it is. So the suggestion is that circular reasoning can justify sources whose credibility is implicitly accepted (an implicit argument) even if it cannot convince us to accept a source that it is explicitly accepted or rejected, copies of this suggestion have been made by both scientists (Alston, Bergmann & Schmitt), and both scientists (Michael & Bergmam, 2013), that our saying or rejecting a source comes in two different contexts in which trust is formed in that source : the first is a context in which we doubt the subject or are unsure of the credibility of the source as such. The second context has no such doubt or uncertainty so it is an unquestionable source (107-108, 2015 ,Macdonald) .

It is illogical to think that it can gain justification for trust in circular reasoning because it is ineffective, since there is no reason to regard it as a means of support , rather than justifying the conclusion on the basis of agreed facts and reasonable conclusions. These patterns of thinking lead to where they began without being challenged, and those involving particular patterns of justification, leave people at the mercy of inappropriate and futile attempts at persuasion. The inability to detect or exit circles in an individual's thinking may also lead to narrow-mindedness, or even illusions, where one's beliefs about a topic are subjective coincidence isolated from evidence that may cast doubt on them. Convicting someone of this fallacy (circular logic) often requires careful analysis and arguments at the limit of decisive Circular reasoning patterns are the same(768-767, 2002 ,Rips) .

The result of the current research is consistent with the results of the study (Al-Akidi , 2020), which concluded that university students do not have the ability to think circularly .

The researchers believe that the university students, based on their mental development and maturity of their cognitive processes, learn the basic concepts in life and acquire experiences and knowledge, have become highly aware, which is not limited to the use of physical and simple manifestations in thinking about situations, but goes beyond it to achieve their objective s .

CONCLUSIONS

In light of the researchers' findings by analyzing and discussing the data, conclude the following

1. University students generally do not have the ability to think circularly.
2. There are no differences in the correlation in Circular reasoning according to the variables of gender and specialization .

RECOMMENDATIONS

Based on the findings of the current research, the researchers recommend the following :

- 1.Emphasis on benefiting from the current research in the work of other similar future research in various psychological and educational fields.

Third : Suggestions (Suggestions): In light of the results of the research and to complement the current research, the researchers submit the following proposals:

1. Conduct studies to identify the relationship between Circular reasoning and other variables such as (mental well-being, self-regulation).
2. Conducting studies similar to the current research takes other demographic variables such as: (occupation , marital status, economic level, and type of housing).

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