Review Research

Investigating The Relationship Between Cognitive Distortions and Cognitive Fusion with Psychological Problems of Children with Intellectual Disability

Behnaz Yazd Khasti[1*]

1. Master of Psychology, Department of Psychology, Islamic Azad University, Khorasgan Branch, Isfahan, Iran.

***Corresponding Author: Behnaz Yazd khasti**, Master of Psychology, Department of Psychology, Islamic Azad University, Khorasgan Branch, Isfahan, Iran. E-mail: behnazyazdy@gmail.com. Orcid No: https://orcid.org/0000-0003-3558-3851

Abstract:

Background:

The present study has a practical purpose and a descriptive-analytical method using a questionnaire. The aim of this study was to investigate the relationship between cognitive distortions and cognitive fusion with psychological problems of children with intellectual disability.

Method: The statistical population of the study was the staff of intellectually disabled children and sample size was calculated 100 people using Cochran's formula and the questionnaires were randomly distributed among them. The validity of the questionnaire questions was confirmed by professors and experts in the field of psychology, and its reliability was calculated 0.83 using Cronbach's alpha test. SPSS software was used to analyze the data obtained from the questionnaire. Kolmogorov-Smirnov test showed that the data were abnormal. Eventually, the nonparametric Spearman test was used to test the research hypotheses.

Result: The results of Spearman test showed that the correlation between the two variables of cognitive distortion and psychological problems of intellectually disabled children was confirmed with a coefficient of 0.720 and sig = 0.003 and was accepted with a 95% confidence level. Due to the fact that the level of significance in the correlation coefficient is less than five percent, so there is a direct and significant relationship between the two variables of cognitive distortion and psychological problems of intellectually disabled children. As a result, H_0 hypothesis is rejected and H_1 hypothesis is confirmed.

Conclusion: The results showed that there is a direct and significant relationship between the two variables of cognitive fusion and psychological problems of intellectually disabled children and as a result, the H_0 hypothesis is rejected and the H_1 hypothesis is confirmed.

Keywords: Cognitive Distortions, Fusion, Children with Intellectual Disability

Submitted: 24 January 2021, Revised: 27 February 2021, Accepted: 10 March 2021

[Downloaded from mail.intjmi.com on 2026-11-20]

[DOR: 20.1001.1.23222913.2021.10.1.9.3]

Introduction

People with emotional disorder have wrong and irrational thoughts and this is the main cause of their problems. They have distortions in their thoughts such as extreme generalization, hasty conclusions and personalization of things, and in these negative thoughts, traces of stable and uncontrollable internal conclusions can be seen (1). Cognitive researchers have called the constant flow of ideas, beliefs, or images automatic thoughts. Cognitive behavioral therapists have found that people tend to accept the accuracy of automatic thoughts based on apparent value rather than measuring their correctness. Assumptions and standards seem to be broader background aspects of the individual's worldview and are considered schemas in Beck's cognitive model. Cognitive fusion causes behavior and experience to dominate other sources of behavioral regulation and the individual becomes less sensitive to direct outcomes. According to Alvandi et al. (2016) (2), the phenomenon of cognitive fusion is related to language. In fact, because verbal processes are more or less useful in some aspects, people who are able to react to events with a verbal structure, if

they are perceptible, tend to use verbal processes everywhere. In fact, from the moment language is learned and connected with real structures, it increases the connection of verbal stimuli with reality (2). It is the thoughts of the individual that make such a connection, and from this perspective, instead of an interpretation of reality, it is considered truth itself. Thus, cognitive fusion, with the decreasing of communication at the moment and the dimensions of verbal rules, and when thoughts and feelings are received as reliable reflections of reality, inconclusive efforts are made to control and prevent such events (3). Psychological inflexibility paves the way for cognitive distortions. Cognitive distortions were first proposed in 2019 by Nakhaei. Cognitive distortions in Barrera's theory are irrational beliefs that automatically enter the human mind. In his early work on depression, he identified several important cognitive distortions that could be evident in the thinking processes of depressed people (1). Cognitive distortions arise from irrational beliefs that automatically enter the human mind. In his early work on depression in 1987, Barrera identified several important cognitive distortions that can be identified in the thought processes of depressed people, stating that negative cognitions have a certain stability, and this feature causes a person to suffer from depression. This negative issue is constantly followed and even the person may not be aware of these thoughts at that moment. After him, other psychologists have developed these distortions that are involved not only in depression but also in many other psychological traumas. One of the cognitive processes that are discussed in psychological problems is cognitive fusion, which is called extreme and undesirable regulation of behavior based on verbal processes, during which one cannot separate the world that has been verbally conceptualized and evaluated from the world directly experienced (4).

Nakhaei Moghadam and Ghanbari (2019)(3) have conducted a study entitled "Predicting cognitive distortions based on irrational beliefs and cognitive fusion of psychology students of Khorasan Institute of Higher Education". Psychology students, as community mental health counselors, are considered as one of the most important pillars of prevention and treatment of mental injuries and, more broadly, they help the public awareness towards the dangers and threats of the advancement of community mental health. Irrational beliefs, ideas, thoughts and cognitive distortions and cognitive fusion of these future community mental health counselors have a direct impact on various groups in society, especially psychological and mentally damaged clients. Therefore, the purpose of this study is to predict cognitive distortions based on irrational beliefs and cognitive fusion of psychology students. Research findings, irrational beliefs, and cognitive fusion can predict students' cognitive distortions; therefore, by training and managing rational beliefs and efficient cognitive factors, students' cognitive distortions can be reduced.

Ranjbar Noshari and Baradaran. (2017)(4) have conducted a research entitled "Cognitive Distortions, Cognitive Fusion and Psychological Problems in University Students". University is a stressful period of time due to various factors. The aim of this study was to investigate the relationship between cognitive distortions and cognitive fusion with depression, anxiety and psychological stress in students. Participants in this study were 180 students of Payame Noor University of Gilan province who were selected by random sampling method and completed the Cognitive Distortion Questionnaire, Cognitive Fusion Questionnaire and the Depression, Anxiety and Stress Questionnaire. The results showed that there was a significant positive correlation between cognitive distortions and cognitive fusion with depression, anxiety and psychological stress. Based on the results of this study, we can emphasize the effective role of cognitive distortions and cognitive fusion on depression, anxiety and psychological stress in students.

Ahmadi (2017)(5) has conducted a study entitled "The diagnostic role of cognitive emotion regulation strategies, cognitive fusion and thought control strategies in obsessive-compulsive disorder." The aim of this study was to investigate the diagnostic role of cognitive emotion regulation strategies, cognitive fusion and thought control strategies in people with obsessive-compulsive disorder and normal individuals. The results of data analysis showed that in all variables except adaptive strategies of acceptance and re-evaluation, as well as strategies for controlling anxiety, punishment, social control and re-evaluation, the mean of the normal group was significantly higher than the obsessive group. In other variables, the mean of the obsessive-

[Downloaded from mail.intjmi.com on 2026-11-20]

[DOR: 20.1001.1.23222913.2021.10.1.9.3]

compulsive group was significantly higher than the normal group. Also, the findings of this study showed that based on cognitive emotion regulation strategies, cognitive fusion and thought control strategies, membership in two groups can be predicted. Conclusion: It can be concluded that the activation of thought fusion beliefs triggers assessments based on which the use of maladaptive strategies of emotion regulation and control of thought is increased and consequently obsessive thought is considered dangerous. These assessments lead to feelings of fear, anxiety, guilt, and unhappiness. If the person's assessment is that the obsessive-compulsive disorder indicates that something dangerous has already happened, he or she may resort to checkout strategies or mental disorders. Strategies prevent one from actually testing these beliefs and denying their validity.

Alvandi Sarai et al. (2016)(2) have conducted a study entitled "Predicting cognitive distortions based on irrational beliefs and cognitive fusion". Since the members of the organization are one of the most important assets of higher education centers, the study and identification of factors related to resources that can affect their job performance, has become increasingly important. Accordingly, the purpose of this study was to predict cognitive distortions based on irrational beliefs and cognitive fusion of administrative staff of Payame Noor University in Hamedan province. Method: In order to conduct this study, a sample of 240 administrative staff of Payame Noor University of Hamadan province was selected by systematic random sampling. Ranjbar correlation coefficient and multiple regression were used to evaluate the relationships between variables. Results: The results showed that irrational beliefs and cognitive fusion have a significant predictive role in predicting cognitive distortions of the administrative staff of Payame Noor University of Hamadan ($P < 0.05$). Based on research findings, irrational beliefs and cognitive fusion can predict cognitive distortions; therefore, by training and managing rational beliefs and efficient cognitive factors, employees' cognitive distortions can be reduced.

Cognitive distortions

The word cognition means the act or process of knowing. The cognitive approach to personality focuses on how people become aware of the environment and themselves, how they perceive and evaluate, learn, and solve problems. This is really a psychological approach to personality; because it focuses exclusively on conscious mental activity. This focus on the mind does not ignore the concepts that other theorists have addressed. For example, in the cognitive approach, needs, impulses, or emotions are seen as aspects of personality that are controlled by cognitive processes. Cognitive distortions are those thoughts that are formed on the basis of false assumptions and lead to orientation in thinking. This orientation is such that it distances one from the reality of life in this world and leads to many misunderstandings in individual and interpersonal behaviors, so that sometimes one falls into the abyss of mental disorders. The famous psychologist Albert Ellis has identified these errors and introduced them in the form of ten cognitive errors. Since many of our problems and unhealthy emotions are due to our irrational thoughts, being aware of these thoughts is the way to get rid of the problems of individual life. These distortions include: all-or-nothing thinking, exaggerated generalization, subjective filtering, neglect of the positive, hasty and predictive conclusions that include mind-reading and erroneous thinking, macropsia and micropsia, emotional reasoning, labeling and personalization of cognitive distortions are errors that occur in the reasoning process, such as inferred or distorted inferences from facts. For example, the general conclusion from insufficient information or the acceptance that an incident has a completely negative connotation simply because it does not seem to have a positive meaning. If cognitive distortions are frequent, they can lead to distress or mental disorders. Inference and concluding are important human tasks. Humans need to monitor their actions and consider the consequences in order to make plans for their social, love, and professional lives. But when there are many cognitive distortions, they cannot do these things properly and suffer from anxiety, depression and other disorders. Cognitive Therapists find cognitive distortions and help their patients understand their mistakes and change their way of thinking. Cognitive distortions appear when information processing is incorrect or ineffective (5).

Cognitive fusion

Cognitive fusion means that one is influenced by one's thoughts as if they are completely real and that behavior and experience dominate other behavioral modalities and make one less sensitive to direct

[Downloaded from mail.intjmi.com on 2026-11-20]

[DOR: 20.1001.1.23222913.2021.10.1.9.3]

consequences (6). Cognitive fusion is a cognitive and social concept and confuses the person to such an extent that after a while it is considered as a correct interpretation of personal experiences and can no longer be distinguished from the individual's experiences. The results of the study by Gillanders et al. (2015)(6) showed that cognitive fusion is associated with mental disorders. People with high cognitive fusion are more prone to mental disorders. The results of other researches have shown that the higher the cognitive fusion in individuals, the more likely they are to suffer from depression and anxiety (7).

Research goals

Determining the relationship between cognitive distortions and psychological problems of children with intellectual disability.

Determining the relationship between cognitive fusion and psychological problems of children with intellectual disability.

Theoretical foundations of research

Research Hypotheses

- There is a positive and significant relationship between cognitive distortions and psychological problems of children with intellectual disabilities.
- There is a positive and significant relationship between cognitive fusion and psychological problems of children with intellectual disabilities.

Methods

The present study has a descriptive-analytical method and a practical purpose. Data collection was done with the help of documentary-library studies and field surveys through observation tools and completing a questionnaire. After confirming the validity and reliability, the questionnaire was distributed by the researcher among the staff of intellectually disabled child care centers in Tehran by simple random sampling. The statistical population of the study was the staff of intellectually disabled child care centers in Tehran, of which 100 people were selected. The validity of the questionnaire questions was confirmed by professors and experts in the field of psychology, its reliability was calculated at 0.81 by Cronbach's alpha test (Table 1). SPSS software was used to analyze the data obtained from the questionnaire. Kolmogorov-Smirnov test showed that the data were abnormal. Eventually, the non-parametric Spearman test was used to test the research hypotheses.

Table 1: Cronbach's alpha test

Dimensions	Chronbach's alpha
Cognitive distortions	0.83
Fusion	0.82
Psychological problems	0.83
total	0.81

Results:

According to Table (2), Kolmogorov-Smirnov test showed that the research data was abnormal, so Spearman test was used.

Investigating the research hypotheses

The first hypothesis:

H_1: There is a positive and significant relationship between cognitive distortions and psychological problems of children with intellectual disabilities.

H_0: There is no positive and significant relationship between cognitive distortions and psychological problems of children with intellectual disabilities.

the correlation between the two variables of cognitive distortion and psychological problems of intellectually disabled children are confirmed with a coefficient of 0.720 and sig = 0.003 and is acceptable with a 95% confidence level. Due to the fact that the level of significance in the correlation coefficient is less than five percent, so there is a direct and significant relationship between the two variables of cognitive distortion and psychological problems of intellectually disabled children. As a result, H_0 hypothesis is rejected and H_1 hypothesis is confirmed.

The second hypothesis was as following: H_1: There is a positive and significant relationship between cognitive fusion and psychological problems of children with intellectual disabilities.

H_0: There is no positive and significant relationship between cognitive fusion and psychological problems of children with intellectual disabilities.

the correlation between the two variables of cognitive fusion with psychological problems of children with intellectual disability is confirmed with a coefficient of 0.170 and sig = 0.003 and is acceptable with a 95% confidence level.

Table 2: Kolmogorov-Smirnov test to check for normality

Variable	Number	Kolmogorov-Smirnov	P

[Downloaded from mail.intjmi.com on 2026-11-20]

[DOR: 20.1001.1.23222913.2021.10.1.9.3]

Cognitive distortions	100	3.478	0.003
Fusion	100	3.89	0.003
Psychological problems	100	3.987	0.003

Due to the fact that the level of significance in the correlation coefficient is less than five percent, so there is a direct and significant relationship between the two variables of cognitive fusion with psychological problems of children with intellectual disability and as a result, the H_0 hypothesis is rejected and the H_1 hypothesis is confirmed.

Discussion

The results of the analysis showed that the correlation between the two variables of cognitive distortion and psychological problems of children with intellectual disability was confirmed with a coefficient of 0.720 and sig = 0.003 and is acceptable with a 95% confidence level. Due to the fact that the level of significance in the correlation coefficient is less than five percent, so there is a direct and significant relationship between the two variables of cognitive distortion and psychological problems of children with intellectual disabilities. As a result, H_0 hypothesis is rejected and H_1 hypothesis is confirmed. The results obtained from the level of significance indicate that the correlation between the two variables of cognitive fusion with psychological problems of children with intellectual disability is confirmed with a coefficient of 0.170 and sig = 0.003 and is acceptable with a 95% confidence level. Due to the fact that the level of significance in the correlation coefficient is less than five percent, so there is a direct and significant relationship between the two variables of cognitive fusion with psychological problems of children with intellectual disability and as a result, the H0 hypothesis is rejected and the H1 hypothesis is confirmed. Which is in line with the results of researchers such as Barrera (2015)(1), Nakhaei et al (2019)(3).

According to the research of these researchers, cognitive fusion causes a person to be influenced by his thoughts. And makes one less sensitive to direct consequences. According to the results of their study, cognitive fusion is associated with mental disorders. People with high cognitive fusion are more prone to mental disorders.

Conclusion

It was found that there is a relationship between cognitive distortions and cognitive fusion with the mental problems of children with intellectual disabilities. And children with mental disabilities face psychological problems that make them unable to identify the items they need.

References

1. Barrera, T.L.; Szafranski, D.D.; Ratcliff, C. G.; Garnaat, S. L. & Norton, P. J. "An Experimental Comparison of Techniques: Cognitive Defusion, Cognitive Restructuring, and in-vivo Exposure for Social Anxiety". Behavioural and Cognitive Psychotherapy, 2015;1–6. http://doi. Org/10. 1017/S1352465814000630.

2. Alvandi Sarai, Mohammad, Zare, Hossein, Alipour, Ahmad, Erfani, Nasrollah, Predicting cognitive distortions based on irrational beliefs and cognitive fusion, Educational sciences and psychology, Social cognition, 2016; 5(2),12-19.

3. Nakhaei Moghadam, Nava, Ghanbari, Hamidreza, Predicting cognitive distortions based on irrational beliefs and cognitive fusion of psychology students of Khorasan Institute of Higher Education, 4th International Conference on Research in Psychology, Counseling and Educational Sciences. 2019, 203-213.

4.Ranjbar Noshari, Farzaneh, Baradaran, Majid, Cognitive Distortions, Cognitive Fusion and Psychological Problems in University Students, University Jihad Scientific Information Center Base, 2017; Volume 6, 112-122.

5. Ahmadi, Farshad, The Diagnostic Role of Cognitive Emotion Regulation Strategies, Cognitive Fusion and Thought Control Strategies in Obsessive-Compulsive Disorder, Clinical Psychology, 9th year Fall of, 2017; No. 3 (35 consecutive)

6. Gillanders, D., Ashleigh, K.S., Margaret, M. & Kirsten, J. Illness cognitions, cognitive fusion, avoidance and self-compassion as predictors of distress and quality of life in a heterogeneous sample of adults, after cancer. J Contextual Behav Sci, 2015; 4: 300-311.

7. Samadifard, Hamidreza, Mikaeili, Niloufar, (2016), Disease control and cognitive fusion in predicting the quality of life of diabetic patients, Journal of Scientific Researchers, 2016; 15(1), 335-346.

[Downloaded from mail.intjmi.com on 2026-11-20]

[DOR: 20.1001.1.23222913.2021.10.1.9.3]