




# The comparison of cognitive distortions and dysfunctional attitudes of normal adolescents and adolescents with conduct disorder

Yousef Jamalpour 

Child and Adolescent Clinical Psychology, Islamic Azad University, Masjedsoleyman, Iran

Email: [yousefjamalpour@gmail.com](mailto:yousefjamalpour@gmail.com)

## ABSTRACT

Over the past few decades, conduct disorder has increased rapidly. However, few studies have been conducted on the role of interpersonal cognitive distortions and dysfunctional attitudes in this kind of disorder. This is a causal-comparative study. The research statistical population is composed of all the adolescents with conduct disorder living at Esfahan's Centre for Rehabilitation and Training in 2021. Also, research sample size encompasses a total of 60 adolescents: 30 adolescents with conduct disorder and 30 normal. Two groups were matched regarding the age, sex and educational level. The research tools were three questionnaires on demographic characteristics, interpersonal cognitive distortion and dysfunctional attitude scales. Data were analyzed by Multivariate Regression. According to the research data analysis, there was not a significant difference between two groups with regard to the misconception mean scores in interpersonal relations and interpersonal cognitive distortions. However, mean scores of adolescents suffering from conduct disorder in rejection with interpersonal relations, unrealistic expectations, and dysfunctional attitudes were significant ( $P < 0.05$ ). According to findings of the study, it seems that dysfunctional attitudes and interpersonal cognitive distortions are effective in causing disorders. Thus, by providing grounds for psychological interventions, conduct disorder can be treated with better results.

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## INTRODUCTION

Adolescence is a period, during which the risk of emotional and behavioral problems increases (Azadyekta, 2011; Bongers et al., 2008; Fairchild et al., 2009; Lubenko and Sebre, 2010). Conduct disorder, which has been known for a long time, is one of the disorders caused at this period (DeLisi et al., 2021) (Cohen, 2010; Glaser et al., 2010; Herpertz et al., 2005; Yu et al., 2012).

According to previous studies, among other emotional disorders, especial cases of behavioral problems such as conduct disorder and oppositional defiant disorder increase more rapidly during school years (Ayano et al., 2021; Kazdin, 2000; Morrell, 2003). This kind of problematic behavior shows itself in a series of repetitive clashes with teachers, friends,

and others at school (Barry et al., 2008; Glaser et al., 2010; Nasir et al., 2010). The disorder can have serious consequences like anti-social personality disorder, drug misuse (Bailey and Scott, 2008; Duko et al., 2021; Farrell, 2006; Kruesi et al., 2004).

Dysfunctional attitudes are beliefs and assumptions that individuals hold towards themselves, their future and the world around it (Abela and Skitch, 2007; Imanifard and Kamkar, 2011; Jua et al., 2020). These attitudes influence one's emotions, behaviors and their understanding and perception of events (Hajizade et al., 2007; Ma et al., 2021). Since they are inflexible, extremist, and persistent to change, thus these attitudes are

considered as dysfunctional and fruitless (Esmailie et al., 2009; Mostafaie et al., 2012; Zhang et al., 2021).

Cognitive distortions are improper ways of defining behaviors and experiences (Barriga et al., 2000; Schlutera et al., (2019) ; Wu et al., 2021). According to some studies, compared to non-juvenile offenders, the juvenile show higher degrees of cognitive distortions and problematic behaviors (Barriga et al., 2000; Schlutera et al., (2019) ). Moreover, it is found that compared to normal adolescents, those with conduct disorders pay considerably more attention to signs with hostile meanings when encoding and retrieving (Freik, 2003; Liabo and Richardson, 2007; Lochman and Dodge, 1994; Steel et al., 2020).

Due to having distorted perceptions of their peers and themselves, adolescents with conduct disorder hold their peers responsible for the clashes and conflicts (Harvey et al., 2001). Such interpersonal abnormal perceptions expose adolescents with conduct disorders to high risks of dysfunctional social relations (Lochman and Dodge, 1994). As these adolescents grow older, they are more likely rejected by their peers (Barth et al., 2004 ; Bierman, 2004).

According to previous studies, the prevalence of conduct disorder among adolescents is rising (Bailey and Scott, 2008; Karam et al., 2004; Lintonen et al., 2000). Therefore, the necessity for conducting such studies to gain more understanding of factors effective in the prevalence of this disorder is highly felt.

## ■ METHODOLOGY

### Participants

This is a causal-comparative study. The research subjects include all the boys with conduct disorder (12-16), who were kept Esfahan's Centre for Rehabilitation and Training in 2021. The participants consisted of 30 teen with conduct disorder and 30 normal teen who were matched with patients, according to demographic features like age and sex. Sampling procedure in conduct disorder group, was done by intact group method. In this way that, at first by going to Esfahan's Centre for Rehabilitation and Training, the questionnaire of children disease signs (CSIIV) was filled, and then teacher folio by the Center's Psychologist. In this study, 40 of them were

recognized as having conduct disorder and 10 of them in addition to conduct disorder, were diagnosed as having ADHD too, therefore they were excluded from the study. Also for selecting control group, we went to a school in district 3 of Esfahan and among 100 students, 30 ones were selected arbitrary by random selection method, in order to participate in the research. Inclusion criteria for both groups were: age (12-16), sex (only boys) and exclusion criteria was adolescents with ADHD. Moreover, data gathering instrument used in the current research are as follow:

### Interpersonal cognitive distortion scale

In order to evaluate interpersonal cognitive distortions in interpersonal relations, developed this scale based on Aaron's Cognitive Theory (Ebrahimi et al., 2011). The scale encompasses 19 items including three micro-scales, namely rejection in interpersonal relations, unrealistic expectations in relations, and misperception in interpersonal relations. Based on psychometric studies, the scale is reported to enjoy high levels of psychometric quality. Reliability of the scale is calculated and validated through internal consistency, Cronbach's Alpha, and also a re-test administered after two weeks. The values concerning the scale reliability are 0.67 and  $r = 0.74$ , and for the micro-scales are 0.7, 0.76, and 0.74, respectively. Also, validity of the scale is investigated though correlation with irrational beliefs, automatic thoughts scale, and scale of tendency to conflict in interpersonal relations, whose values are 0.45, 0.53, and 0.53, respectively. It should be noted that they are all meaningful at the 0.99 confidence level (Ebrahimi et al., 2013).

### Dysfunctional attitudes scale

This scale is developed by Beck and Wiseman in 1978. It is also invented based on Beck's Cognitive theory on depression and anxiety. The scale measures beliefs and attitudes which include highly inflexible and ambitious criteria for evaluating personal performance and self-value (Ebrahimi et al., 2013). According to studies conducted on reliability and validity of the dysfunctional attitudes scale on a normal and clinical population, value of Cronbach's Alpha, its correlation with Beck's depression test, and with automatic thoughts questionnaire are 0.85,  $r = 0.47$ , and  $r = 0.47$ , respectively. As quoted by (Ebrahimi et al., 2011) calculated the value of reliability

coefficient after a time period of 6 weeks in Iran as  $r = 0.90$ , its reliability through DAS scores correlation with depression scores as 0.65, and Cronbach's Alpha as 0.75.

**Child symptom inventory (CSI-IV)**

Encompassing 9 groups of behavioral disorders, this inventory is a behavior classification scale having two parent and teacher forms. In the present study, teacher form for research subjects is completed by the Centre psychologist. Some questions of the inventory (27-41) address conduct disorder. By using Cronbach's Alpha, reliability coefficient of conduct disorder scale equals 0.87, showing that the scale questions are internally consistent. Also, according to results of experts' judgment, homogeneity and appropriateness of CSI-4 content to the research area is validated (Mohammad Ismail, 2001).

Finally, data gathered is analyzed thorough Multivariate Analysis of Variance (MANOVA) in SPSS version 22.

**RESULTS**

Table 1 presents scores of two groups on components like of Interpersonal Cognitive Distortions and Dysfunctional Attitudes Variables.

In order to take account of hypotheses before using MANOVA, the use is made of Box and Levene's test. According to Box's test, which hasn't been meaningful for any of the variables, the condition for variance/covariance homogeneity is properly met.

Also, as it is presented by Table 2, according to Levene's test, which hasn't been meaningful for any of the variables, the condition for intergroup variance homogeneity is met as well. Thus, MANOVA can be used here. According to results of Wilks' lambda, Pillai's Trace, Hotelling's Trace and Roy's Largest Root statistical characteristics, the effect of group on Interpersonal Cognitive Distortions and Dysfunctional Attitude is significant ( $P < 0.05$ ; Table 3). Based on Wilks' lambda test, MANOVA is allowed to be used.

**Table 1-** Mean and standard deviation values of interpersonal cognitive distortions and dysfunctional attitudes variables in normal adolescents and those with conduct disorder

Variable	Conduct Disorder		Normal	
	M	SD	M	SD
Interpersonal cognitive distortions	66.05	15.83	53.30	11.63
Rejection in Interpersonal Relations	25.55	3.17	30.19	6.17
Unrealistic expectations	30.70	13.66	23.90	5.43
Misperception in Interpersonal Relations	9.80	2.04	10.10	2.69
Dysfunctional attitudes	168.60	21.12	149.65	19.25

**Table 2-** Results of Levene's test on the two groups' variance analogy hypothesis in interpersonal cognitive distortions and dysfunctional attitude

Comparative variable	F	Degree of freedom 1	Degree of freedom 2	Significance level
Interpersonal cognitive distortions	0.005	1	58	0.943
Rejection in interpersonal relations	13.30	1	58	0.001
Unrealistic expectations	1.97	1	58	0.168
Misperception in interpersonal relations	1.75	1	58	0.193
Dysfunctional attitudes	0.347	1	58	0.560

**Table 3-** Results of MANOVA significance test on the effect of group variable on dependent variable

Variable	Test	Value	F	Significance level
Group	Pillai's trace	0.386	5.49	0.002
	Wilk's lambda	0.614	5.49	0.002
	Hotelling's trace	0.628	5.49	0.002
	Roy's largest root	0.628	5.49	0.002

**Table 4-** Results of MANOVA test on the mean of interpersonal cognitive distortion components and dysfunctional attitudes of normal adolescents and those with conduct disorder

	<b>Dependent variable</b>	<b>Total square</b>	<b>df</b>	<b>Mean square</b>	<b>f</b>	<b>Significance level</b>
	Interpersonal cognitive distortions	1625.62	1	1625.62	8.41	0.006
	Rejection in interpersonal relations	390.625	1	390.625	16.22	0.001
	Unrealistic expectations	462.40	1	462.40	4.27	0.046
<b>Group</b>	Misperception in interpersonal relations	0.90	1	0.90	0.158	0.649
	Dysfunctional attitudes	3591.025	1	3591.025	8.78	0.005

According to results of MANOVA, there is not a meaningful difference between mean score of misperception in interpersonal relations in interpersonal cognitive distortions of both groups. Meanwhile, with regard to rejection in interpersonal relations, unrealistic expectations, and dysfunctional attitudes, the mean score of adolescents with conduct disorder is higher than that of normal ones.

## ■ DISCUSSION AND CONCLUSION

The goal of the present study was to compare interpersonal cognitive distortions and dysfunctional attitudes of adolescents with conduct disorder and normal counterparts. Now, the research hypotheses can be discussed on the basis of what has been mentioned yet:

According to the first hypothesis, compared to normal adolescents, those suffering from conduct disorder hold more dysfunctional attitudes. Results of the present study confirm this hypothesis. Dysfunctional attitudes are in fact attitudes which individuals hold towards themselves, and the world around them (Abela and Skitch, 2007). They influence the individual's perceptions of other people's emotions and behaviors (Hajizade et al., 2007). Also, they make them consider a certain situation too negative and dysfunctional (Imanifard and Kamkar, 2011). Then, the individual determines his/her way of behaving with other people on the basis of these inappropriate attitudes, the result of which is an increase in conduct disorder symptoms (Cohen, 2010).

According to the research second hypothesis, in comparison with normal adolescents, those with conduct disorder suffer more cognitive distortions. Although results of the present study show that compared to normal adolescents, those with conduct

disorder show degrees of meaningful weakness in rejection in interpersonal relations and unrealistic expectations, they have no meaningful deficiency with regard to misperception in interpersonal relations.

Also, according to research results, compared to normal adolescents, those with conduct disorder show degrees of meaningful weakness in rejection in interpersonal relations and unrealistic expectations. The latter have hostile expectations of other people (Liabo and Richardson, 2007), hold their peers responsible for clashes and conflicts (Harvey et al., 2001), and show more verbal and physical aggression in comparison with their peers (Bailey and Scott, 2008; Barriga et al., 2000). These factors put them at high risks of dysfunctional social relations (Harvey et al., 2001). Accordingly, though some of them might remain social, the possibility of getting rejected by their peers is high among them (Barry et al., 2008; Barth et al., 2004 ; Bierman, 2004).

Undoubtedly, there are various challenges and problems on the way of any kind of research and the present study is no exception. Some of the challenges that the researcher faced during the study were low sample size and limitation of sample to just male adolescents. Accordingly, in order to shed more light on vague relationships between research variables and generalize the research results with more caution, it is suggested that the same research be carried out with a larger sample and taking into account the gender variable.

## ■ DECLARATIONS

### Corresponding author

Yousef Jamalpour;

Email: yousefjamalpour@gmail.com

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### Competing interests

The author declares that they have no competing interests.

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