

Comparison of Cognitive Decision Making, and Social Judgment, in schizophrenia Patients and Normal Controls

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ABSTRACT

The purpose of this study was to compare the cognitive decision making, and social judgment in schizophrenic patients and normal people. The causal-comparative research, and case control study. This study included 40 patients with schizophrenia and 40 normal individuals who, as a convenience, and according to gender, age, education and drug use were matched for data collection, analysis and cognitive decision, and social judgment and Inventory questionnaire positive symptoms, and negative schizophrenia were used. Research data by multivariate analysis of variance, LSD post hoc test and multiple regression analyzes, the data were analyzed. Multivariate analysis of variance showed that the decisions and judgments of social cognition in patients with schizophrenia and normal controls, there is a significant difference. (Explain in simple sentences) In other words, each of the decision variables and social judgment, the "schizophrenic patients compared with normal subjects," significantly less. The results of multiple regression analyzes showed that 48% of the variance in negative symptoms, and 44% of the variance in positive symptoms, judging by social, cognitive and decision-making are explained. These results have important implications in the field of pathology, symptom recognition, and treatment of schizophrenia and bipolar.(bipolar: delet)

KEYWORDS: decision making, cognitive, social judgment, schizophrenia.(bipolar: delet)

INTRODUCTION

Mental dissociation (psychosis), based on the lack of contact with reality, and the incidence of lesions in the realm of perception, information processing, and response to environmental stimuli characterized. In other words, hallucinations, delusions and isolation, in a world where almost the influence of people or events around the periphery, people distinguish the psychological discrete. Schizophrenia is the most common and most malignant type of mental dissociation. Although this disease is a cognitive disorder, but often leads to cognitive defects in patients. The cognitive deficits in areas such as working memory, problem solving, selective attention, judgment, attention maintenance, higher cognitive processes such as decision making, and so is the executive functions [18]

Decision-making cover for the selection process is actually a series of studies, the choice between alternative ways by the organism, and is often an important part of this process is considered to be psychological [8] The decision process is a cognitive process, concepts such as impulse control, risk of harm avoidance, reward dependence, quality choices, etc. involved modernistic enthusiasm [6] decide Decision making patients schizophrenic affect cognitive functioning, and emotional processing. Li et al. study studies showed that schizophrenic patients in making decisions in difficult situations of uncertain cause trouble. This finding consistent with the results of Sergei (2007), [7], Yip et al (2009) and Larkvt et al (2010) is located[9] In these studies suggest that, in patients with schizophrenia in the decision of the normal subjects show greater deficits, and these deficits as a core cognitive abnormalities in schizophrenia acts.[4,5]

Another issue that (Not necessary) is damaged in schizophrenia, social cognition (Penn et al, 2006). Social cognitive biases play an important role in population plays in schizophrenia patients [14]. Social judgment of interesting stuff in social cognition [2]. Judgment and ability to properly assess a situation and act accordingly in a position to be broken, and social judgment protests treatment, the

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patient is harmful and contrary to accepted behavior, the cultural context be, it is said. (Uncommon statement) Targeted actions are the result of different value judgments that encourages people to get to the selection, and value judgments, including internalization of the target price and price decisions and predictable [17] Judgment and cognitive impairment in schizophrenia, is severely impaired [19].

So psychotic disorders such as schizophrenia can cause further damage in performance, decision making and social judgment. This study seeks to answer the question: Is the decision, cognitive, and social judgment in schizophrenic patients and normal subjects there?

The same process, either as a distinct and accurate identification, they can be targeted for treatment. The failure to provide specific cases, in order to plan appropriate therapy, including cases in which the research will need (reform this sentence). The results of this study could be of great importance in diagnosis and treatment. The results of this research can, opens the door to future research in this field.

Method Tool

Method Causal - comparative, and a case-control study. The study sample consisted of patients with schizophrenic disorders in Tehran in 2010 is. The study sample included 40 patients with schizophrenia who, in the sample, were selected. 40 normal subjects that, in terms of gender, age, education, marital status and drug use, and alcohol were matched with patient groups [16]. Hypotheses of the study, a multivariate analysis of variance and post hoc test LSD, in order to compare the means of decision-making, cognitive, and social judgment is impaired in patients with schizophrenia and normal controls, using multiple regression analyzes to predict disease, the decision variables, cognitive, and social judgment in patients with schizophrenic disorder, and normal and Pearson correlation coefficient to determine the relationship between social judgment, and decide cognitive symptoms were used. Data were analyzed using SPSS16.

Research Tools

Decision Test: This test was first Bashara (1994), Department of Neurology, University of Iowa in the United States for assessment of decision-making in patients with stable lesions in the ventral-medial prefrontal [11] were designed and implemented [15]. In this test, a person's ability to balance the choice between options that are associated with high profits (but with some degree of probability), but in the future will be associated with higher losses (bad choice) and options that even a small profit, is being awarded a person can make in the future will be less damaging, (good choice), and orientation toward good option is checked [13].

Scale social judgment to assess the social judgment, in addition to the Wechsler Adult Intelligence Scale understanding of social judgment is a self-made instruments.[1]

Understanding requires the adaptive response to the situation, it is necessary for the efficient way to deal with a particular issue choices. Subjects must not only have the right information, but this information is necessary for the decision to close properly. The department consists of 16 open questions. For each of the questions 1 and 2 grades, equivalent to 2 or zero (the 2 points for the correct answer, and zero for the incorrect answer), and for each question ranging from 3 to 16, depending on the answer score against with 2 or 1, or zero awarded.

Social judgment scale, scale-based situational judgment [20]. The 11-item scale Respondents choices in a 5 degree scale (from very ineffective and very effective), respond location. The coefficient alpha was 0/61. The meta-analysis of McDaniel et al (2001) reported alpha coefficients 0/43 to 0/94. Internal consistency was observed, consistent with the results of the meta-analysis are reported. . To assess the reliability of this scale with comprehension subscale, Wexler was correlated. The results showed that there is a significant correlation between these two measures ($0/18 = r$) [3]

Scale Negative Symptoms (SANS), and Positive Symptoms (SAPS): the scale for assessment of negative symptoms, and positive symptoms of schizophrenia were used. The scale of the Anderson (1948), has been developed. Negative Symptoms Scale is a 20-question, five groups of patients with negative symptoms of schizophrenia, including a limited affect, poverty of speech, lack of will, apathy, lack of pleasure, social apathy, and attention-deficit measures, in end of each of the five aforementioned symptoms, there is a generic question for assessment of symptoms. 30 questions that measure of positive symptoms, positive symptoms of the four groups of patients with schizophrenia, including hallucinations, delusions, bizarre behavior and formal thought disorder, the measure. Each of the positive and negative symptom scale, in six levels(No - wavering - small - medium - high -

extreme -) score can be from zero to five. [22]. the mean coefficient of reliability the scale of the culture with the test-retest and internal consistency were obtained at 0/77. They also have average reliability coefficient, separately for negative symptoms, 0/78, 0/77 and positive symptoms reported. the President and Hadianfar research, the Cronbach's alpha coefficient for internal consistency of the scale 0/87, and for positive and negative symptoms, 0/83 and 0/81 respectively obtained separately [10]

Findings

A total of 80 subjects participated in this study. Participants aged 41-50 years, with a high school diploma were single. Table 1 shows the mean and standard deviation parameters of individual judgment, comprehension, social judgment and cognitive decision making in both schizophrenia and normal controls show. As can be seen, the mean scores of the study in schizophrenic patients is lower than normal.

Table 1: Mean and standard deviation of social judgment, and decision-making cognition in patients with schizophrenia, bipolar disorder and normal controls

Table 1: Mean and standard deviation of social judgment, and decision-making cognition in patients with schizophrenia and normal controls

Normal group		schizophrenia		Variable
standard deviation	mean	standard deviation	mean	
20.21	64.71	16.24	48.90	Individual judgment
4.41	17.94	4.77	13.53	Comprehension
8	59.92	12.66	34.25	Social judgment
1494	1	952.7	-5.3	Decision making

Table 2. Significant MANOVA test scores, social judgment, and decision-making cognition in schizophrenic and normal groups

Chi Eta	P	Error df	Hypothesis df	F	value	Exam Name	Variable
0/244	0/000	228	8	9/2	0/49	Pilai effect	Group
0/244	0/000	228	8	11/1	0/52	Wilks and lambda	
0/244	0/000	228	8	13	0/93	Hotelling effect	
0/244	0/000	228	8	26/2	0/92	The root of the error	

The results show that, among schizophrenia and normal controls, there is at least one of the dependent variables. Eta squared (actually squared correlation coefficient between the dependent variables and group membership) shows the difference between the two groups with respect to the dependent variables, the total amount of this difference is significant and 24%, ie 24% of the variance the difference between the two groups is due to the interaction of the dependent variables.

Table 3: Test results meaningful multivariate analysis of variance (MANOVA), social judgment and decision making, cognitive scores in the two groups of schizophrenic and normal subjects

P	F	MS	Df	SS	Dependent variable	Predictor Variable
0/001	7/5	2541/2	2	5082/4	Individual judgment	Group
0/000	10/2	196/01	2	392/02	Comprehension	
0/000	21/13	2835/5	2	5671/01	Social judgment	
0/000	23/7	2/8	2	5/6	Decision making	

As can be seen in Table 3, the average individual judgment (F = 7/5), comprehension (F = 10/2), social judgment (F = 21/13), and cognitive decision (F = 23 / 7) in schizophrenic patients and normal subjects, there was a significant difference (0/001 > P).

Table 4: Comparison of mean scores of social judgment, and decision-making cognition in schizophrenic patients and normal subjects with LSD test

Normals	Schizophrenia	Groups	Dependent variable
(0/000) * -15/8	-	Schizophrenia	Individual judgment
(0/014) * -10/32	(0/19) 5/5	Bipolar	
-	(0/000) 15/8	Normals	Comprehension
(0/000) * -4/43	-	Schizophrenia	
(0/007) * -2/7	(0/8) 1/73	Bipolar	
-	(0/000) * 4/4	Normals	Social judgment
(0/000) * -16/7	-	Schizophrenia	
(0/000) * -11	(0/028) * 5/7	Bipolar	
-	(0/000) * 16/7	Normals	Cognitive Decision
(0/000) * -1572/45	-	Schizophrenia	
(0/000) * -1304/7	(0/27) 267/75	Bipolar	
-	(0/000) * 1572/45	Normals	

The mean scores of individual judgment, the "People with schizophrenia and normal people", is significantly lower (0/01 >P). The results show that, the mean comprehension, social judgment and decision making, cognitive, on "People with schizophrenia and normal people", is significantly lower (0/001 > P).

Table 5: Correlation coefficient of positive and negative symptoms of schizophrenia, with individual judgment, comprehension and social judgment

Positive symptoms	Negative symptoms	Variable
* -0/38	* -0/33	Individual judgment
* -0/4	** -0/52	Comprehension
** -0/54	** -0/51	Social judgment
0/10	0/035	Cognitive Decision

As can be seen in Table 5, the negative symptoms of schizophrenia with individual judgment ($r = -0/33$), comprehension ($r = -0/52$), social judgment ($r = -0/51$), and positive symptoms schizophrenia is a personal judgment ($r = -0/38$), comprehension ($r = -0/4$) and social judgment ($r = -0/54$), a significant negative correlation (01/0 >P). Decision cognitive symptoms of schizophrenia, negative and positive, no significant relationship.

Table 6: Results of multivariate regression analysis, social judgment and decision making, cognitive, on the negative symptoms of schizophrenia

t(p)	Non-standardized coefficients	Standardized coefficients		ARS	R2	R	Predictor variables
	Beta	B	SE				
7/15 0/000	-	71/234	9/964				Constant
-2/1 (0/042)	-0/323	0/407	0/124	0/081	0/104	0/323	Individual judgment
-3/35 (0/002)	-0/466	-2/002	0/597	0.276	0/313	0/560	Comprehension
-3/3 (0/002)	-0/409	-0/661	0/203	0/425	0/469	0/695	Social judgment
-0/56 (0/58)	-0/071	-0/002	0/003	0/414	0/474	0/688	Cognitive decision making

To determine the effect of each variable, individual judgment, comprehension, social judgments and decisions cognitive and negative symptoms of schizophrenia as predictor variables in the regression analysis was used as the criterion variable. F shown in the table is significant, and 47/4% of the negative symptoms of schizophrenia, the variables of individual judgment, comprehension, social judgment and cognitive decision is expected. Given the amount of beta comprehension (0/466 = B), social judgment (0/409 = B) and individual judgment (0/323 = B), can be changed to negative symptoms in patients with schizophrenia, significantly explained.

Table 7: Results of multiple regression analysis, social and cognitive decision on the positive symptoms of schizophrenia

t(p)	Non-standardized coefficients	Standardized coefficients		ARS	R2	R	Predictor variables
	Beta	B	SE				
7/36 0/000	-	79/684	10/821				Constant
-2/49 (0/017)	-0/37	-0/523	0/210	0/117	0/140	0/374	Individual judgment
-2/355 (0/024)	-0/342	-1/625	0/690	0/212	0/252	0/502	Comprehension
-3/41 (0/002)	-0/442	-0/793	0/232	0/388	0/435	0/659	Social judgment
-0/532 (0/58)	-0/07	-0/002	0/003	0/375	0/439	0/663	Cognitive decision making

To determine the effect of each variable, individual judgment, comprehension, judgment and decision-making, social cognition, as a predictor variables and positive symptoms of schizophrenia, as the criterion variable in the regression analysis. F shown in the table is significant, and positive symptoms of schizophrenia, 43/9% of variance, the variables of individual judgment, comprehension, social judgment and decision making, cognitive forecast. According to the judgment of individual beta values (0/37 = B), comprehension (0/342 = B) and social judgments (0/442 = B), can be changed to positive symptoms in patients with schizophrenia, significantly explained.

DISCUSSION AND CONCLUSION

The results showed that, between social judgment in patients with schizophrenia and normal individuals there. In other words, social judgment weaker than in the patient group than is normal. The results show that the average social judgment, comprehension and individual judgment in schizophrenic patients is lower than normal. This finding is consistent with research by Sturm et al. (2005); Sarab Mankal et al (2007); Kim, Hayojin et al (2007); Kothari et al. (2008); Hooker et al (2011) is located. These studies suggest that, in patients with schizophrenia are able to assess the options available, and can choose the right direction in relation to the standards of conduct adult show, and it is possible to select options and paths that result from decisions Pulsed-based instant gratification demand. Possible interpretation is that schizophrenic patients are able to maintain the data to be manipulated for use in the current situation is not. The reason is probably, abstract thinking in these patients is poor, prevents accurate assessment of the status and conditions, to achieve the desired results on the social environment.

Another outcome of this study was that, out of decision-making cognition in patients with schizophrenia, is less than normal. This finding is in line with the results of Sergeisoo (2007), Erin and colleagues (2008), Yip et al (2009) and Larkot et al (2010) and inconsistent with the results of Wilder et al (1998), Kavalaro et al. (2003), Rodrigov- Sanchez et al (2005) and Sharman et al (2006) is. In these studies suggest that, in patients with schizophrenia in decision-making, compared to normal subjects show greater deficits, and these deficits as a core cognitive abnormalities in schizophrenia acts. Cognitive abilities such as abstract reasoning, decision making, and organizational behavior, and would be consistent with other results suggested that a defect in the decision, as one of the main features of psychosis, a failure that reflects damage in cognitive processing is controlled by the frontal lobe. Decision-making process, which is a cognitive process, concepts such as impulse control, risk of harm avoidance, reward dependence, quality choices, etc. involved modernistic enthusiasm [12]. Decide of patients schizophrenia affect cognitive functioning, and emotional processing. Significant differences between the two groups is likely to be cognitively impaired and superficial thinking, in these patients, among others. The decision is a component of high-level cognition, and affect cognitive functions that, in schizophrenia are impaired. As a result, these groups are able to decide the appropriate time, and will make a decision based on conjecture and coincidence. [29]

Another result of this study is that between social judgment and symptoms of schizophrenia, there was a significant negative correlation. This finding is in line with research Sarab Mankal and et al (2007), Kim, Hayojin et al (2007), Cutter et al (2008), Pol Mani, et al (2010) is. These studies show that, despite signs that indicate the severity of the disease, can weaken and destroy social judgment, the

relationship is. It cannot properly assess a situation and act accordingly, were in that situation. The ability to understand the relationships between facts and inferences are, and may react inappropriately in social situations show. Impairment of judgment, one of the most obvious signs of psychiatric disorders, such as schizophrenia. In general it can be said, factors such as the level of emotion, thought blocking, and social isolation (negative symptoms), and failure association and hallucinations (positive symptoms), the inability of patients to be desired in social judgment. Possible interpretation is that the presence of positive and negative symptoms decreases abstract thinking, and disconnect with reality and thus the inference, and understand the relationships between objects and environments in patient's decreases. [30]

Between cognitive decisions, and there is no significant relationship between the symptoms of schizophrenia. This finding is in line with the study by Ritter *et al.*, 2004, Sergeyssoo *et al* (2007) and Kim *et al* (2009) is. They show that the decision is disturbed in schizophrenia, positive and negative symptoms of schizophrenia but no connection. Possible interpretation could show the effectiveness of drug treatment and rehabilitation of patients, and the relative influence of drugs on the symptoms of schizophrenia, and is proportional control symptoms of schizophrenia. [25]

Results of regression analysis showed that social judgments and decisions can be cognitive changes related to positive and negative symptoms in schizophrenic patients, significantly predict. Results of regression analysis showed that social judgment and decision making, cognitive symptoms, 47 percent negative, 44 percent positive symptoms explained. [29]. the study showed that schizophrenic social judgment, adversely affect the reliability of the judgment that the positive symptoms of patients, especially those who feel persecuted they affect and emotion are negative, leading to biased interpretations with paranoid thoughts, and ultimately lead to poor social judgment.[33]

It seems that the presence of positive and negative symptoms in social judgment, be involved. Auditory hallucinations and disturbed emotions in schizophrenia, leading to deterioration of mental impairment, and poor social adjustment [27] Morrison and *et al* (2000) and Salvatreh (2007) demonstrated that human emotional needs of others, through speech and voice recognition, and due to the impairment of the ability of schizophrenia, negative symptoms of schizophrenia revealed. Tzu and colleagues (2010) showed that emotional experiences predictor of social adjustment, independent of social cognition, and plays an important role in the poor performance plays a schizophrenic. Matthew and Barech (2010) also showed that poor emotional responses can be an important factor in understanding the functional outcome in schizophrenia games. Larkot and colleagues (2010) showed that schizophrenic patients with positive symptoms evident in the combination of concepts, cognitive, and emotional poor, resulting in the production of consistent behavior in the community, and the environment are powerless. Lee Soccer (2008) states, auditory hallucinations may result from distracting thoughts that are mistakenly attributed to an external source, and can cause cognitive impairment. Fragmentation of experience and changes in the external stimuli in patients with schizophrenia, the generalization of previous experience to reduce the current experience. The overall results suggest that components of personal judgment, comprehension and social judgment, to varying degrees, affected in schizophrenia, and this result may be due to the drug treatment, mental health and effective steps taken by patients.

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