Comparative of Executive Function in People with Antisocial Personality Disorder and without Personality Disorder

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A R T I C L E   I N F O

Article history:
Received 25 September 2014
Received in revised form 26 October 2014
Accepted 25 November 2014
Available online 15 January 2015

Keywords:
executive function of the brain,
antisocial personality disorder

A B S T R A C T

The purpose of this study was to compare the executive functioning of the brain among people with antisocial personality disorder and without personality disorder. The study sample included all of the help seekers in Sanandaj Central Prison and normal subjects. Numbers of Sample is 60 patients, including 30 patients (15 women and 15 men) from help -seekers and 30 patients (15 males and 15 females) from normal subjects. Available and were voluntarily method selected. SCID-II Structured questionnaire, the digits span test, the Wisconsin Test, Stroop Test, and the Tower of Hanoi test was used to collect information. For Data analysis multivariate analysis of variance was used. The results showed that the style of executive functioning component of the brain in people with antisocial personality disorder and no personality disorder are different. The findings showed that people with antisocial personality disorder in the brain’s executive functions are much poorer than those without personality disorders.

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INTRODUCTION

Personality disorders are chronic and common, predisposing factor for other psychiatric disorders (eg. substance abuse, suicide, emotional disorders, impulse control disorders, eating disorders and anxiety disorders) and interfere with the treatment outcome of axis I syndromes and failure rate disease and increased mortality in these patients. Personality disorders are unanimously agree with me because of the lack of interest in the treatment of patients with personality disorders are likely to reject psychiatric treatment [14]. Anti social personality disorder is first recognized personality disorder. These disorders are characterized by persistent antisocial behavior and crime but not the criminal equivalent, but the inability to adapt to the social normsthat at included many of the growth norms for teen agers or young adult ‘spatients.

Because of the wide impact on public safety or the economic well-being than other personality disorders, research has been done on antisocial personality disorder [15]. A number of researchers have attempted to explore the physiological differences between antisocial and normal controls, and a significant number of these differences have been found. Functional imaging Studies suggest functioning of Frontal lobe and temporal and any cerebral buildings like Angular gyrus and corpus callosum is in the antisocial personality disorder [12]. Based on these studies, individuals with anti social personality disorder have abnormal itiesinthebrain ‘sexcutive functions. Executive functions refers to a group involved of high-level cognitive processes, self-regulation the thoughts, actions and emotions.

These functions are necessary for adaptive behavior and objective frontal cortex associated with the integration of the nervous system [13]. Pennington and Avzvnvf knows context of executive functions include the ability that they organize space, selective inhibition, response preparation, goal -oriented, and flexible scheduling. Barkley also knows executive functioning command as his self- employed actions. Hebelivecamedexercised executive functions briefly as a one for themselves and Restrainmenttheir behavior, goal-oriented and implemented to maximize future outcomes [1]. Psychological studies show that high-level cognitive processes are a group of executive functions involved in self-regulation of thoughts, actions and

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emotions, [13]. Accordingly, the central question in this research is whether people with antisocial personality disorder executive functions in normal people are different?

Research hypotheses:
There is a difference between component of the executive functions of the brain of people with antisocial personality disorder and no personality disorder.

MATERIALS AND METHODS

The research method is descriptive, causal – comparative type. For the present study, all patients and normal individuals detained in the central prison of Sanandaj in 2013. The Sample study of present research availability and Voluntary. A total sample of 60 patients, 30 patients (15 men and 15 women) is a help seeker, and 30 patients (15 men and 15 women) who are without personality disorder. In this study, for data analysis multivariate analysis of variance was used.

Research Tools:
Stroop test:
These tests used for attention measure, inhibition and Set changes. First time in 1935 Stroop test was made by Ridley Stroop to measure selective attention and cognitive flexibility. The Stroop test is one of the most important tests that researchers have used to measure response. Reliability of the Stroop test, based on research Delazar, [5], test-retest reliability for all three attempts, respectively, equivalent to 01 / 0, 83 / 0 and 90 / 0. Ghadiri, Jazayeri, Ashayeri and GhaziTabatabaei (2006) were reported three attempts of test the reliability 6 / 0, 83 / 0 and 97 / 0. In order to measure interest in this study, the numerical Stroop test computer PEBL test sets are used (Po & et al, 2002).

Wisconsin Test:
Wisconsin Card Sorting Test, one of the most well-known neuropsychological tests of abstract reasoning, cognitive flexibility, Remaining, problem solving, concept formation, change, collection, hypothesis testing and the ability to use feedback errors, start and stop strategy action, measures of attention and maintenance. Past Studies has reported the reliability of the test scores of the 92 / 0 and the reliability of the score 0/94.

The tower of Hanoi Test:
The most famous test of planning and problem solving is a Tower of Hanoi test (new shape Tower of London). The test has three bars that are fixed on a flat base and is composed of three pieces of different sizes. Subjects must move the beads on the rods, the initial position to the target position to convert. With seven move the pieces can be moved from position A to position C. [1] This test widely used to evaluate executive planning related to fill the frontal executive functions, and concept of information processing in connection with the proposed function of the prefrontal. For grading the test, the subjects' movements to solve the problem are considered, the number of errors committed by the subjects in the test, and the amount of time spent on problem solving has been calculated. Acceptable for this test and 79 / 0 is reported.

Span dataset:
This is a test of short-term memory and attention subscale that especially the negative numbers it creates means of measuring working memory. Span subscale varieties of verbal subscales of the Wechsler Adult Intelligence Test Revised (WAIS-R), the Wechsler (1981) reported 97 / 0 exam -half reliability for the overall IQ scale of, 97 / 0 for verbal IQ and IQ 93 / for 0 practical scale.

SCID-II Personality Questionnaire:
SCID-II is a diagnostic interview structured to assess 10 personality disorders on Axis II of the DSM-IV as well as for the assessment of personality disorder, depressive personality disorder and passive - aggressive (located in Appendix DSM-IV B, which "contains a set of criteria and issues for further study"). SCID-II can also be classified axis II diagnosis (presence or absence of disorder) as well as dimensions (with specified number of criteria for each personality disorder who receive a diagnosis code 3) can be used. SCID-II is used both in research and in clinical practice.

Results:
There is a difference between Components of the executive functions of the brain of people with antisocial personality disorder and no personality disorder.
What is shown in Table 2, corresponding to different groups in the four components of executive function of the brain is that the results showed a mean difference between groups is significant: working memory (F (1, 56) = 13.226; MSE = 104.017; P ≤ .001), flexibility (F (1, 56) = 9.589; MSE = 183.750; P ≤ .005), attention (F (1, 56) = 8.755; MSE = 1.189; P ≤ .005) and reasoning (F (1, 56) = 9.895; MSE = 9.70E+08; P ≤ .005). There were no significant differences in gender (P-value≥05/0). Except for flexibility (F (1, 56) = 8.873; MSE = 170.017; P ≤ .005). The interaction between group and gender was not significant (05/0 P value≥). Except flexibility (F (1, 56) = 9.589; MSE = 126.150; P ≤ .01). Therefore, the null hypothesis of no difference between an executive function of the brain, people with antisocial personality disorder and no personality disorder is rejected. Thus, we can conclude that people with antisocial personality disorder in the brain’s executive functions (working memory, flexibility, attention, and reasoning) are different than those without personality disorders in terms of gender and the interaction of group and gender there is differences only in the components of flexibility.

**Conclusion:**

There is a significant difference between Components of the executive functions of the brain of people with antisocial personality disorder and no personality disorder. The results show that people with antisocial personality disorder in all components of the executive functions of the brain are weaker than those without personality disorder and to examine the interaction of gender with the components argument only, those female with antisocial personality disorder are better than those female without personality disorder.

Maximum difference for people with antisocial personality disorder and those without the disorder components (attention, flexibility, and working memory), we can conclude that people with social personality disorder in adapting to new conditions and pursuant to the laws of trouble. And can not properly use their past experiences, it makes people with antisocial personality disorder have poor compatibility. Several studies have been conducted on individuals with antisocial behavior, generally indicate disturbances in prefrontal function and sometimes structure [12,7,3]. Further imaging studies available for Ventromedial and Orbitofrontal have special role for the process of antisocial behavior and violent [17,10,11] have a study on 2 adults before 16 months of age with prefrontal damage. Showed that Medial prefrontal cortex lesions can lead to psycho Paty. Brower and Price, [3] also examined eight studies that included neuropsychological executive functions.

Concluded that antisocial and aggressive people have problems in their administrative functions. This study, based on a review of available literature, and examined evidence for causal relationship between abnormal functioning of the frontal lobes and violent crimes. Overall, the authors have concluded that neuropsychological studies further confirmed the significant association between prefrontal executive function and anti-social behavior and violent tendency. In populations with previous risk behavior, violent or antisocial, there are deficits in executive function may be useful in assessing the likelihood of future violence. Studies show that people with antisocial personality disorder, but standardized tests of executive function may not be able to show Ventromedical and orbitofrontal prefrontal dysfunction, while it is evident that these structures are highly associated with violence.

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**Table 1:** Results of Leven Test to evaluate the homogeneity of error variance.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Degrees of freedom</th>
<th>Degrees of freedom</th>
<th>F</th>
<th>The significance level</th>
</tr>
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<tr>
<td></td>
<td>1</td>
<td>2</td>
<td></td>
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<td>active Memory</td>
<td>3</td>
<td>56</td>
<td>0.194</td>
<td>0.9</td>
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<td>Flexibility</td>
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<td>56</td>
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<tr>
<td>Attention</td>
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<td>56</td>
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<tr>
<td>Argument</td>
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<td>56</td>
<td>1.399</td>
<td>0.253</td>
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</table>

**Table 2:** Summary of multivariate analysis to examine the effect of subjects.

<table>
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<tr>
<th>Variables</th>
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<th>Degrees of freedom</th>
<th>Means of squares</th>
<th>F</th>
<th>The significance level</th>
<th>Squares</th>
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<td>0.137</td>
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ACKNOWLEDGEMENT

This research was conducted with support from General Directorate of Prisons in Kurdistan province and the authors would like to thank them.

REFERENCES