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AN INVESTIGATION INTO EFFECTIVENESS OF ACCEPTANCE AND COMMITMENT THERAPY (ACT) IN REDUCING DRUG ABUSE AND INCREASING QUALITY OF LIFE OF DRUG IN PATIENTS WITH CRYSTAL ABUSE DISORDER WITHIN TEHRAN

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ABSTRACT

This study aims to investigate errors in drawing Gestalt port test shapes at patients suffered from cerebral tumor referring to Tajrish shohada hospital. Research design and method is descriptive, of correlation and psychometric type, and in term of aim. It is practical. Statistical community includes all cerebral-tumor patients referring to Tajrish shohada hospital during tertiary half of 2014. Among considered community, 30 patients were selected using sampling method. In order to collecting data, Gestalt port motor visual test has been used. Spss software and chi square test were used to analyze data. Data analyzed showed that Gestalt port test have shown agreement coefficient 76/66 based on specialist diagnosis. There has not been any relationship between kindness tumor and error kind, but there is a relationship between tumor malignancy, placing in right and left hemisphere with errors type. Regard to results, it can be concluded that Gestalt fort test can party suitably help in diagnose cerebro-disorder among patients involved in cerebral tumor.

Keyword: Gestalt Port Test, Cerebral Tumor, Cerebro-Disorder

INTRODUCTION

A tumor is abnormal tissue that grows by uncontrolled cell division in brain tissue and creates specific behavioral and cognitive disabilities. Tumors compared to other cerebrovascular diseases usually raise more psychiatric symptoms. Tumors in the frontal and temporal lobe of cerebrum raise the highest extent of psychiatric symptoms. Most tumors are followed by the injuries to mental, language and memory functions (Hudon C, Belleville S, Gauthier, 2012). In this regards, neuropsychological research have indicated descending effects related to impairment in brain tumor on attention and memory functions of patients with crystal abuse disorder.

More specifically, studies indicate that patients with tumors near left hemisphere have been witnessed with impairment in verbal memory and patients with tumors near right hemisphere have been witnessed with impairment in visual memory (Garousi *et al.*, 2011). Hence, it can consider that the patients with brain tumor have been witnessed with neuropsychological deficits. Group Neuropsychological tests refer to psychological tests which have enjoyed substantial advancement in recent years. These tests allocate to examination of the linkage between brain and behavior, grounded on this principle that brain injury is often followed by changes in cognition and behavior (Cheng-Lai *et al.*, 2013). Dependent on The type, severity and location of the lesion in brain injuries, few changes raise in different cognitive functions, under which Neuropsychological tests in response to clinical situations such as early detection of brain injury, determination of the strengths and weaknesses of patients with cognitive impairment, assessment of rehabilitation and treatment programs, determination of how to take care of the patient, the patient's prognosis and such things can assist the clinical psychologists, psychiatrists and specialists in neuroscience (Benton, 1994, quoted from Bahrami, 2010). In this regards, Bender - Gestalt Test has been designed as one of diagnostic tools for traumatic brain injury, used more likely as a screening tool in diagnosis of organic brain disorders in adults (Marnat, 2013). Studies indicate that the patients who make error in reconstruction of test plans are found with brain injuries, that the type of errors is associated to the injury area (Behdad *et al.*, 2007). Results of studies by Loreta Bender (1938) indicated that Bender -

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Gestalt Test enables to diagnose brain lesions. Mrs Bender used her test as an index for Perceptual-Motor Development and diagnosis of brain lesions through expanding her approach and emphasizing on how is the effect of organic brain lesions and brain's functional disorders and/or lack of Perceptual-Motor development in the person's performance (Gulleroglu *et al.*, 2013). In another study by Storen (2001), quoted from Sheikhi (2007), he examined Bender-Gestalt test performance in diagnosis of dementia, that the results indicated that Bender-Gestalt test has not the diagnostic power of very weak and mild dementia from typical elderly people and this test has the ability to diagnose mild and severe dementia (Ghaliban *et al.*, 2011).

Efficiency and validity of Bender-Gestalt test have been examined in different studies, but the present research seeks to examine and respond this question that whether patients with brain tumor face errors in graphics of Bender-Gestalt test or what graphical errors exist in depiction of figures of Bender-Gestalt test for the patients with brain tumor, due to lack of scientific and practical examination of Bender-Gestalt test in screening brain lesions of the patients with brain tumor.

MATERIALS AND METHOD

Methods

Descriptive and psychometric research design and method has been used, mentioned as an applied research in sake of aim. The statistical population (229) consists of all the patients with brain tumor who referred to Tajrish shohada hospital during 2014. Convenient sampling method has been considered as the sampling method, such that 30 patients (15 male and 15 female) have been selected among the statistical population voluntarily. After selecting the patient group, a questionnaire was filled by them to measure confounding variables and background of the patients (age, gender, history of other diseases, benign and degree of disease) by the help of their physicians and ultimately Bender - Gestalt Test was used to examine graphical errors in these patients. Two instruments including Addiction Potential Scale (APS) and Questionnaire-short form for quality of life have been used to collect data.

Bender Visual Motor Gestalt Test: in this research, data collection instrument includes Bender Visual Motor Gestalt Test. Bender Visual Motor Gestalt Test includes 9 visual cards to the size of 4 by 6 inch on which there is a pattern. The patterns are given to the individuals participated in the test and asked to depict each pattern with a pencil on a white sheet (A4). Individual method has been used to perform the test. Lack's adult scoring system consisting of 12 fundamental indices for intracranial injury is used to interpret results of participants' performance, including closure, collision, shift of paper, perceptual rotation, retrogression, simplification, fragmentation, overlapping, elaboration, perseveration, and redrawing. After the test session scored via guide criteria, the clinical experts can clarify whether the participant's scores are in the range of normative score of patients with brain injury or not. Lacks has determined the normal range equal to 0 to 4 and optimal outline for the brain injury equal to 5 error or more.

The reliability reported for Bender Visual Motor Gestalt Test is proper. Consensus level between different evaluators for 12 symptoms has been reported ranging from 95% to 98%. Reliability of retest during 3-12 months has been reported about 0.79, 0.66 and 0.57-0.63 for the patients with neuropsychological deficits, Alzheimer's patients and seniors. Discriminant validity of this test equals to 0.80 for diagnosis between brain injury and lack of brain injury (Lacks, 1999). This test has been normalized by Baraheni (1994) on 767 child at the age group 5-11 years old in Tehran. According to this research, reliability coefficient of test with the close retest method has been reported at the range of 0.81 to 0.96 depending on the age levels.

Further, Pour Sharifi *et al.*, (1996) in primary schools of Tabriz performed Bender Visual Motor Gestalt Test via Koppitz Developmental Scoring System. Several criteria were used to obtain validity that the correlations ranging from 0.60 to 0.90 indicate high validity. In addition, to obtain validity of test with 4-6 weeks from the data of the first retest on 100 participants in random, which the validity coefficient was obtained equal to 0.89 (quoted from Mehri Nejad, Sobhi Gharamaleki & Rajabi Moghadam, 2012). Chi-square test has been used to analyze data.

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RESULTS AND DISCUSSION

Findings

Results of research indicated that 50% and 50% of the participants have been male and female, respectively. Further, mean of participants’ age has been 39.38.

Table 1: The Relationship between Expert’s Diagnosis and Diagnosis via Bender Visual Motor Gestalt Test

		Expert’s Diagnosis		Sum
		Brain Tumor	Healthy	
8 Cut Point	Brain Tumor	23	0	23
	Healthy	7	0	7
Sum		30	0	30
Consensus Level		76/66		

As observed, Bender Visual Motor Gestalt Test enabled to diagnose 23 patients with brain lesion in diagnosis of patients with brain tumor and brain lesion. This finding indicates that there is 76.66% diagnostic consensus between experts’ diagnosis and diagnosis via Bender Visual Motor Gestalt Test.

Table 2: Result of Analysis of Test for Independence of Error-Type Frequencies in Benign Tumor

	Category
Chi-Square	9/27
Freedom Degree	14
Sig	0/813

As shown in table above, significance (0.813) is more than the error (0.05) that it can say that the error-type frequency at Bender Visual Motor Gestalt Test is not independent from each other at 95% confidence level, thereby there is no significant relationship between error type and Benign tumor.

Table 3: Result of Analysis of Test for Independence of Error-Type Frequencies in Malignant Tumor

	Category
Chi-Square	23/58
Freedom Degree	11
Sig	0/015

As shown in table above, significance (0.015) is under the error(0.05) that it can say that the error-type frequency at Bender Visual Motor Gestalt Test is not independent from each other at 95% confidence level, thereby there is no significant relationship between error type and malignant tumor.

Table 4: Result of Analysis of Test for Independence of Error-Type Frequencies in Right-Hemispheric Primary Brain Tumor

	Category
Chi-Square	23/33
Freedom Degree	13
Sig	0/038

As shown in table above, significance (0.015) is under the error (0.05) that it can say that the error-type frequency at Bender Visual Motor Gestalt Test is not independent from each other at 95% confidence level, thereby there is no significant relationship between error type and right-hemispheric primary brain tumor.

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Table 5: Result of Analysis of Test for Independence of Error-Type Frequencies in Left-Hemispheric Primary Brain Tumor

	Category
Chi-Square	24
Freedom Degree	13
Sig	0/031

As shown in table above, significance (0.031) is under the error (0.05) that it can say that the error-type frequency at Bender Visual Motor Gestalt Test is not independent from each other at 95% confidence level, thereby there is no significant relationship between error type and left -hemispheric primary brain tumor.

Discussion and Conclusion

Results of research indicated that Bender Visual Motor Gestalt Test enabled to diagnose 23 patients with the brain lesion in diagnosis of patients with brain tumor with brain lesion. This finding indicates that there is 76.66% diagnostic consensus between experts' diagnosis and diagnosis via Bender Visual Motor Gestalt Test. This finding is consistent with the results of research by Cheng-Lai *et al.*, (2013) and Rezaei Nasab (2012). In line with this finding, scholars have announced that Bender Visual Motor Gestalt Test diagnoses about 81% of patients with brain lesion from patients with mental problems and patients without brain injury (Mahmoud Alilo & Kabir Nejad, 2008). In this regards, Rezaei Nasab (2012) who has examined determination of sensitivity, specificity and cut-point of Bender Visual Motor Gestalt Test in diagnosis of Traumatic brain injury indicated that there is a significant difference between two groups of patients with brain tumor and healthy individuals in terms of 12-dimensional errors in Bender Visual Motor Gestalt Test. In general, tumors compared to rest of cerebrovascular diseases raise more psychiatric syndromes. In this regards, Tumors in the frontal and temporal lobe of cerebrum raise the highest extent of psychiatric symptoms. Most tumors are followed by the injuries to mental, language and memory functions. More specifically, studies indicate that patients with tumors near left hemisphere have been witnessed with impairment in verbal memory and patients with tumors near right hemisphere have been witnessed with impairment in visual memory (Garousi, Maleki Rad & Hashem Zadeh, 2011). Results of research indicated that there is a significant relationship between error-type of drawing graphics in Bender Visual Motor Gestalt Test and type of tumor, that is, the patients with malignant tumor face errors of interference and distortion in drawing graphics. This finding is consistent with the results of research by Chang Lai *et al.*, (2013) and Ganjavi (2009). To elaborate this finding, it can announce that benign brain tumors are not cancer cells. Usually, benign tumors can be removed, and they seldom grow back. Benign brain tumors usually have an obvious border or edge, which cells from benign tumors rarely invade tissues around. Malignant brain tumors are generally more serious and often are a threat to life. They are likely to grow rapidly and crowd or invade the nearby healthy brain tissue. Cancer cells may break away from malignant brain tumors and spread to other parts of the brain or to the spinal cord. They rarely spread to other parts of the body. Yet, it should be noted that benign brain tumor or malignant brain tumor is not sufficed to determine prognosis of disease yet the tumor area is of great importance. This is due to this fact that a benign brain tumor in a critical area can be considered a malignant brain tumor in sake of Clinical Course, resulting in premature death of patient (Ganjavi, 2011). Results of research indicated that there is a significant relationship between error-type of drawing graphics in Bender Visual Motor Gestalt Test and type of tumor, that is, the patients with malignant tumor face errors of interference and distortion in drawing graphics. Further, patients with tumors near left hemisphere face omission errors in drawing graphics. This finding is consistent with the results of research by Hamid & Ghafari (2009). In line with findings of research, Hamid & Ghafari (2009) indicated that there is a significant relationship between each of four lobes of the brain and 12-dimensional errors in Bender Visual Motor Gestalt Test in patients with brain injury. Further, it has been announced that there are qualitative differences in performance of patients with

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lesions in different areas of their brain, i.e. the patients with lesion in the right hemisphere of their brain have been more likely witnessed with impairment in their vision such as asymmetry, rotation, unintelligible drawing and non-connecting lines and the patients with lesion in the left hemisphere of their brain have been more likely witnessed with impairment in their drawing with downsizing graphics and omitting the elements (Alilo & Kabir Nejad, 2008). Wagner & Marsico (quoted from Lacks, 1999) have reported sensitivity, specificity and efficiency of Bender Visual Motor Gestalt Test in patients with brain injury about 65%, 67% and 69%, respectively.

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