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## Comparison of Social Adjustment and Self-Control of Patients Suffering From Epilepsy and Normal Individuals.

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### ABSTRACT

The research purpose was to draw a comparison of social adjustment and self-control of patients suffering from epilepsy and normal individuals. The research sample comprised 60 epileptics and 60 normal individuals who were randomly selected and responded to the research data gathering tools including social adjustment questionnaire (Weissman and Paykel , 1999) and self-control questionnaire (Tangney , 2004). Data which were analyzed using multivariate covariance analysis indicated that, there is significant difference between epileptic patients and normal individuals in social adjustment and self-control and epileptic patients' social adjustment and self-control is lower than normal individuals. Moreover, the comparison between the subscales of social adjustment in epileptic and healthy individuals indicated that, there is significant between-group difference in out-of-home work and epileptic patients show less interest in doing out-of-home work. Moreover, no significant difference was observed in leisure time, relationship with extended family, marital role as a spouse, parental role and membership in the family unit in epileptic and healthy individuals.

**Keywords:** epilepsy, social adjustment, self-control.

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## INTRODUCTION

Epilepsy is a relatively prevalent neural disease and studies estimate that 1.5 to 5 percent of each population may suffer from convulsion. Epilepsy is more prevalent among men (Walter, Bradly, and Robert, 2008) and is usually caused by structural deficiency such as tumors, brain stroke and blood vessel problems in the brain (Sing, 2009). Moreover, epilepsy is a kind of disease that is caused by constant areas and identified by psychosocial consequences (Springer, 2010). Clouding of thoughts in epileptic patients using medications increases the dependence on others, decrease of feelings of security and losing the confidence in doing the personal activities (O'Neil, 2005).

According to Olivia, Saracho and Bernard (2007), social adjustment is of crucial importance in childhood and the lack of social adjustment brings about devastating consequences in adulthood. On the other hand, social adjustment refers to the individuals' capacity to adapt to the social needs (Anderson & Beauchamp, 2012). Moreover, mental hygienic problems in epileptic patients and the importance of social adjustment in these patients have caused a wide range including the maintenance of peace and stability of the family, social, occupational, spousal and educational determinants.

Inhibitive, provocative and supportive factors in familial, social (occupational) and relational issues with the spouse and children can be the influential factors on epileptic patients. On the other hand, self-control in epileptic patients can provide for their happy and healthy lives and be of crucial effect on controlling their disease. Tangney, Baumeister & Boon (2004) asserted that, poor self-control results in aggressive and anti-social behaviors.

Martinuzzi (2013) considers self-control as the ability to control feelings, emotions and reactions. In studies carried out by Salgado & Souza (2005) the epilepsy is regarded to trigger psychological problems and feelings of shame, fear and worry. The results of the research by Oguz, Kurul & Dirik indicate that, social adjustment rates low among epileptics. Results of the study by Moffitt (2013) showed that, self-control can exert positive effect on hygiene, health and social programs and the research by Tangney, Baumeister & Boone (2004) indicated that, high self-control can be used to solve the conflict and facilitate the interpersonal cooperation.

Therefore, with regard to the administered studies and lack of doing research on the self-control of epileptics, the necessity for doing this research is recognized. Hence, the present research aims to draw a comparison of social adjustment and self-control of patients suffering from epilepsy and normal individuals.

## METHOD AND MATERIALS

The research employed a comparative-casual method in which social adjustment and self-control of epileptic patients and health individuals are compared. The research population included all the patients suffering to the offices of neurology and brain physicians and normal individuals residing in Isfahan in 2013. The research sample comprised 60 epileptics and 60 normal individuals who were randomly selected from the daily lists of patients referring to the offices of neurology and brain physicians.

Social adjustment questionnaire that was designed and developed by Weissman and Paykel , 1999 is a 108-item questionnaire that is scored on Likert scale. All the scores in the subscales are summed up and divided by the number of the items to which the subject has responded. The subscales include at home activities (18 items), out of home activities (6 items); social and leisure activities (11 items), relationship with extended family (8 items), marital role as a spouse (9 items), parental role (4 items) and membership in the family unit (4 items). The SAS scores (.74) are highly correlated with those obtained with the interview form of the scale (.70). Cronbach alpha and reliability coefficient have been reported to be equal to .47 and .80, respectively. High score in each of the subscales indicate low level of social adjustment in that area (Weissman and Paykel , 1999). Cronbach alphas for the first and second parts of the social adjustment questionnaire in the present research equaled .841 and .835, respectively.

Self-control scale is a 36-item questionnaire that was designed and developed by Tangney et al. it's scored on 5-point Likert scale. The minimum and maximum scores are 36 and 180. The items of 1, 2, 3, 5, 7, 8, 9, 10,

11, 13, 15, 16, 18, 19, 20, 22, 24, 27, 28, 30, 31, 32, 33 and 34 are reversely scored. The questionnaire was carried out on two groups of BA students and its reliability was measured to be .89. The Cronbach alpha of self-control questionnaire in the present research was equal to .846. Data were analyzed using multivariate covariance analysis and one-way ANOVA.

**RESULTS AND FINDINGS**

First hypothesis: there will be significant difference between epileptic and healthy individuals in social adjustment and self-control subsequent to controlling the variables of age, gender and education.

**Table 1: results of multivariate covariance analysis for the comparison of social adjustment and self-control in epileptic and healthy individuals subsequent to controlling the variables of age, gender and education**

source	variable	sum of squares	Df	mean of squares	F	sig	Eta squared	power
Age	social adjustment	10463/472	1	10463/472	22/467	0/000	0/168	0/997
	self-control	777/730	1	777/730	2/807	0/097	0/025	0/383
gender	social adjustment	366/887	1	366/887	0/788	0/377	0/007	0/142
	self-control	1703/607	1	1703/607	6/148	0/015	0/052	0/691
education	social adjustment	43/58	1	43/58	1/14	0/28	0/01	20/18
	self-control	908/62	1	908/62	3/10	0/08	0/02	0/41
group	social adjustment	2596/103	1	2596/103	5/574	0/020	0/048	0/648
	self-control	2729/082	1	2729/082	9/849	0/002	0/081	0/875

**Table 2: multivariate covariance analysis for the comparison of the subscales of social adjustment subsequent to controlling the variable of age**

Source	variable	sum of squares	Df	mean of squares	F	sig	Eta squared	observed power
Age	work outside the home	345/01	1	345/01	6/13	0/07	0/05	0/69
	Leisure	35/45	1	35/45	0/54	0/46	0/005	0/11
	extended family	221/85	1	221/85	6/008	0/01	0/05	0/68
	Marital	5439/92	1	5439/92	62/05	0/00	0/35	1/00
	parental	307/68	1	307/68	27/30	0/00	0/19	0/99
	Roles of family members	479/93	1	479/93	40/16	0/00	0/26	1/00
	social adjustment	10726/75	1	10726/75	23/07	0/00	0/17	0/99
group	work outside the home	72/731	1	72/731	1/292	0/258	0/011	0/203
	Leisure	15/790	1	15/790	0/242	0/624	0/002	0/078
	extended family	5/918	1	5/918	0/160	0/690	0/001	0/068
	Marital	683/535	1	683/535	7/797	0/006	0/065	0/791
	parental	33/027	1	33/027	2/931	0/090	0/026	0/397
	Roles of family members	37/256	1	37/256	3/118	0/080	0/027	0/417
	social adjustment	2801/545	1	2801/545	6/027	0/016	0/051	0/682

As observed in table 1, the difference in social adjustment and self-control of epileptic and healthy individuals subsequent to controlling the variables of age, gender and education is significant ( $P < .001$ ).

**Second hypothesis:** there will be significant difference between epileptic and healthy individuals in the scales of social adjustment subsequent to controlling the variable of age.

As observed in table 1, there is significant difference between epileptic and healthy individuals in the marital role as a spouse subsequent to controlling the variable of age at .001 level of significance.

**Third hypothesis:** there will be significant difference between the scales of marital role as a spouse subsequent to controlling the variable of gender.

**Table 3: multivariate covariance analysis for the comparison of marital role as a spouse subsequent to controlling the variable of gender**

Source	variable	sum of squares	Df	mean of squares	F	sig	Eta squared	observed power
gender	Marital	273/273	1	273/273	2/046	0/155	0/018	0/394
	social adjustment	630/171	1	630/171	1/135	0/289	0/010	0/184
Group	Marital	45/071	1	45/071	0/337	0/563	0/003	0/089
	social adjustment	674/303	1	674/303	1/215	0/273	0/011	0/194

As observed in table 3, there exists no significant difference between epileptic and healthy individuals in the marital role as a spouse subsequent to controlling the variable of gender.

Fourth hypothesis: there will be significant difference between epileptic and healthy individuals in the scales of parental role subsequent to controlling the variable of education.

**Table 4: multivariate covariance analysis for the comparison of parental role subsequent to controlling the variable of education**

source	variable	sum of squares	Df	mean of squares	F	sum of squares	sig	observed power
education	parental	43/580	1	43/580	1/141	43/580	288/0	158/0
group	parental	0/838	1	0/838	0/022	0/838	882/0	052/0

As observed in table 4, there exists no significant difference between epileptic and healthy individuals in the marital role as a spouse subsequent to controlling the variable of education.

### DISCUSSION AND CONCLUSION

Epilepsy is one of the major neurological diseases that can be caused by the uncontrollability in a section in the central nervous system that disrupts the balance in the brain cells and can be controlled by maintaining the balance. Victor & Ropper (2001) considers epilepsy as one of the most prevalent disorders of the brain as intermittent and intense disturbance in the brain system that is caused by the abnormal discharge of the brain cells. The results of this abnormal discharge are immediate sensory disturbance, loss of consciousness, impaired physical functions, seizure or a combination of these items. Ettinger and Kanner (2001) assert that, epilepsy is a disorder with environmental, social and practical consequences that exert negative effects on different aspects of life.

Social adjustment stands among the factors that can produce significant effect on epilepsy. As observed in tables 1 and 2, results indicated that, there exists significant difference between epileptic patients and healthy individuals in social adjustment and this result is significant at  $P < .001$ . Slomowski & Dunn (1996) consider social adjustment and social skill as a process that enables individuals to understand and predict others, control their behaviors and regulate their social interactions. Overall, adjustment has been defined as the ability to communicate, cope, adapt, cooperate and compromise with self, environment and others. In another perspective, social adjustment is adapting with the environment that is necessary for each individual without which the individual is strongly rejected by the society and his/her social interactions reach the lowest level (Mazaheri and Afshar, 2005).

The results of tables 1, 2 and 3 indicate that, the social adjustment of epileptic patients subsequent to controlling the variables of age, gender and education is lower than healthy individuals. This finding is in line with the results of the research by Tedman et al (1996); Oguz, Kurul & Dirik (2002); Gois et al (2011) and Moschta & Valente (2012). These studies also indicate that, the social adjustment of epileptic patients is lower. Oguz, Kurul and Dirik (2002) have concluded in their studies that, prolonged disease negatively affected the social adjustment of children and resulted in low adjustment in them while increasing anxiety and depression.

In the research by Gois et al (2011) which was done on the influence of cognitive performance and clinical variables of epilepsy on social adjustment and quality of life, results indicated that, epileptic patients had poor levels of social adjustment and perception from cognitive performance. In this research, verbal memory disorders were negatively correlated to social adjustment; however, no significant relationship was observed between cognitive performance and quality of life. According to the clinical variables, patients with left temporal epilepsy had poorer social adjustment. Results also indicated that, evaluation of social adjustment and emphasis on the significance of cognitive rehabilitation was effective in the improvement of social adjustment.

In the explanation of this finding that, epileptic patients have lower levels of adjustment as compared to healthy individuals it can be stated that, social adjustment and social skills are regarded a process that enables individuals to understand and predict others, control their behaviors and regulate their social interactions. Overall, adjustment has been defined as the ability to communicate, cope, adapt, cooperate and compromise with self, environment and others. Slomowski & Dunn (1996) consider social adjustment and social skill as a process that enables individuals to understand and predict others, control their behaviors and regulate their social interactions. In another perspective, social adjustment is adapting with the environment that is necessary for each individual without which the individual is strongly rejected by the society and his/her social interactions reach the lowest level (Mazaheri and Afshar, 2005). Epilepsy cannot control the behavior and regulate the social skills due its unpredictability and the individual may not be able to develop the required skills to adapt to different circumstances and conditions.

Self-control is another factor that is significantly different between epileptic patients and healthy individuals. As observed in table 1, self-control in epileptic patients and healthy individuals was significantly different ( $P < .001$ ). The results of the table indicated that, self-control had a higher rate in healthy individuals as compared to epileptic patients. Moreover, results of table 1 which indicated poorer level of self-control among epileptic patients was in consistent with the results of the research by Hita (2013) and Moffitt (2013). Moffitt concluded in his research that, self-control models and social well-fare in children's life is indicative of higher satisfaction, larger salary, less criminal history and higher level of physical health in later decades of their lives. Moreover, Hita (2013) carried out a study on the increase of self-control in human being using direct electrical stimulation of prefrontal lobe in individuals suffering from epilepsy. Results indicated that, generally, these patients do not have the ability to improve their self-efficacy.

In the explanation of low levels of self-control in epileptic patients it can be concluded that, self-control is the ability to control the feelings, emotions and reaction. Many scholars assert that, self-control is an important factor for having a satisfying and successful life (Martinuzzi, 2013). We can cope with critical condition using self-control. Factors such as lack of sleeping, adequate level of peace and sport, low levels of blood glucose and fatigue can negatively affect self-control. In the study by rasbum and et al (1982; cited in Tangney et al, 2004), it was concluded that, individuals with high self-control can cope effectively with helplessness and hopelessness and go on their paths. Self-control is controversially one of the strongest abilities of human being which results in successful personal and social and psychological adjustment.

Therefore, low levels of social adjustment in epileptic patients and the direct relationship with social adjustment and self-control, it can be concluded that, self-control also rates lower in these patients as compared to the healthy individuals. Moreover, patients' self-control is also lower due to the lack of adequate level of peace and low level of glucose because of seizures in epileptic patients. The results of table 3 and 4 indicate that, marital role as a spouse and parental role are not statically different subsequent to controlling the gender and education. Therefore, our third and fourth hypotheses were not confirmed.

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