

## EGO DEFENCE MECHANISMS IN PATIENTS WITH EPILEPSY

Suljo Kunić<sup>1</sup>, Omer Ć. Ibrahimagić<sup>2</sup>, Zoran Vujković<sup>3</sup>, Vlado Đajić<sup>3</sup>, Dževdet Smajlović<sup>2</sup>,  
Mitra Mirković-Hajduković<sup>4</sup>, Amela Kunić<sup>5</sup>, Lejla Zonić<sup>2</sup> & Emir Tupković<sup>1</sup>

<sup>1</sup>Department of Neurology, Primary Health Center Tuzla, Tuzla, Bosnia and Herzegovina

<sup>2</sup>Department of Neurology, University Clinical Center Tuzla, Tuzla, Bosnia and Herzegovina

<sup>3</sup>Department of Neurology, University Clinical Center Banja Luka, Banja Luka, Bosnia and Herzegovina

<sup>4</sup>Department of Psychiatry, University Clinical Center Tuzla, Tuzla, Bosnia and Herzegovina

<sup>5</sup>Department of Occupational Medicine, Primary Health Center Tuzla, Tuzla, Bosnia and Herzegovina

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### SUMMARY

**Background:** In order to protect itself from the pain or discomfort that would result from the forbidden instinctual impulses, the ego developed defence mechanisms (DM). Mature DMs are associated with adaptive functioning. Immature and neurotic DMs are associated with maladaptive functioning. Our goal was to determine the intensity of the most frequently used immature, neurotic and mature ego DMs in patients with epilepsy.

**Subjects and methods:** We examined 50 patients with epilepsy, using a Defense Style Questionnaire (DSQ-40). We measured the intensity of individual DMs. Mature DMs: sublimation, humour, suppression and anticipation; neurotic DMs: undoing, pseudo-altruism, idealization and reactive formation; and immature DMs: projections, passive aggression, acting out, isolation, devaluation, autistic fantasies, denial, displacement, dissociation, splitting, rationalization and somatization. The control group consisted of 36 healthy subjects. Groups are equal in age and level of education.

**Results:** Patients with epilepsy use neurotic ( $p=0.0290$ ) and immature ( $p=0.0155$ ) defensive styles significantly more. Individually, they most intensively use acting out, humour and sublimation, and statistically significantly more they use displacement ( $p=0.0161$ ), denial ( $p=0.05$ ) and somatization ( $p=0.0019$ ).

**Conclusion:** Patients with epilepsy use the neurotic and immature styles of ego defence more intensively. As such, they are less adaptable to new situations. Our knowledge can be useful for planning future interventions for people living with epilepsy.

**Key words:** epilepsy - defense mechanisms - ego

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### INTRODUCTION

The Ego is at the center of personality structure and is under constant pressure to integrate the demands arising from the idiosyncrasies, the superficial and the outer world. In order to protect itself against the pain or embarrassment that would result from the forbidden instinctive impulses, the ego develops defence mechanisms (DMs) (Jašović Gašić & Lečić Toševski 2014). Mature DMs are associated with adaptive functioning (AF). Immature and neurotic DMs are associated with maladaptive functioning and represent an effort for an individual to maintain a psychological homeostasis (Vaillant 1977, Vaillant 2011).

Epilepsy is far more than a seizure disorder; it is a frequent cause of disability. This disability can be presented in problems with AF, which are characterized by lower than expected levels of day-to-day independent functioning (Bruininks et al. 1996). Furthermore, it is known that people, especially those with childhood onset of epilepsy, do not do as well as expected with respect to school completion, employment, marriage, and parenthood (Camfield et al. 1993, Gaitatziset al. 2004, Shackleton et al. 2003, Strine et al. 2005, Tellez-Zenteno et al. 2007). They are more likely than others to

report symptoms of depression (Karouni et al. 2010), sleep disturbances, and pain syndromes. The delays in AF in children with active epilepsy are greater than expected relative to intellectual ability (Kerr & Fayed 2017). In previous studies, there has been evidence of a significant correlation between the maturity of defence and the level of personality adaptation (Bond et al. 1983, Vaillant et al. 1986), academic performance and DMs of personality (Waqas et al. 2015), psychological maturity and quality of life (Miranda & Louza 2015).

Our objective was to determine the intensity of the most commonly used immature, neurotic and mature ego DMs in patients with epilepsy. This information could be important to the planning of future interventions for persons living with epilepsy.

### SUBJECTS AND METHODS

#### Participants

We examined 50 participants with epilepsy, between 25 and 65 years of age (mean age  $\pm$  standard deviation (SD)  $47 \pm 12.47$  years) of which 26 (52%) were male. The examination took place in the period between January 9, 2017 to December 7, 2017 at the Department of Neurology of the Primary Health Center Tuzla.

Inclusion criteria were: medically confirmed diagnosis of epilepsy whose diagnosis was made in line with the statement issued in 2005 by the International League Against Epilepsy (ILAE) and the International Bureau for Epilepsy (IBE), partners The World Health Organization (WHO), which reads: Epilepsy is a brain disorder characterized by a persistent predisposition to generate attacks and the neurobiological, cognitive, psychological and social consequences of this disorder (World Health Organization 2003), and who are on outpatient treatment, and age between 25 and 65 years (the age group is distinguished because the psychological characteristics of the respondents are then stable or negligible variable (Vaillant 1995, Vaillant 2011)). The participants without oligophrenia, structural damage to the brain or addiction. They are treatment with antiepileptic drugs about 20 years (95% confidence interval (95% CI) 16.8, 23.2) and had an about 19 attacks per year (95% CI 3.9, 34.1).

The control group consisted of 36 healthy subjects. The groups were matched by age and level of education, sex, and other socio-demographic indicators equated with the experimental group. They were recruited during the systematic inspections of workers of Tuzla companies or from the so-called. volunteers who were not engaged in work. After presenting the purpose and aim of the research, all selected subjects signed informed consent. All measurements were carried out by a qualified researcher - neuropsychiatrist, in accordance with standardized procedures, and under the supervision of a licensed psychologist, with an identical approach and administration for all participants.

## Procedures

This study was approved by the Research Ethics Board of Primary health Care Center Tuzla. Written consent was obtained for all participants. All measurements were conducted and scored by a trained research

assistant in accordance with standardized procedures under the supervision of a licensed psychologist, with identical test administration ordering for all participants.

## Measures

The Defence Style Questionnaire (DSQ) (Andrews et al. 1993) is a self-report inventory that measures specific defence mechanisms. DSQ comprises of 40 items in a 9-point Likert format that derive scores for 20 defence mechanisms, two items for each. These mechanisms are organized in three sub-groups:

- Mature DMs: sublimation, humour, suppression and anticipation.
- Neurotic DMs: undoing, pseudo-altruism, idealization and reactive formation.
- Immature DMs: projection, passive aggression, acting out, isolation, devaluation, autistic fantasies, denial, displacement, dissociation, splitting, rationalization, somatization.

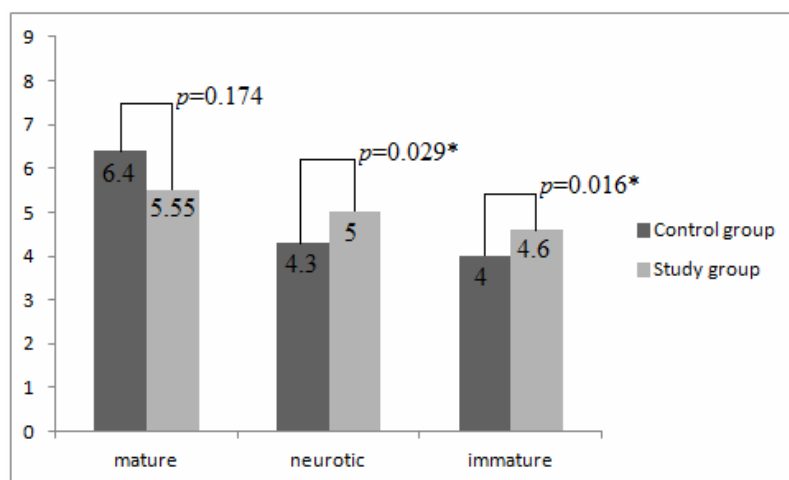
These sub-groups are often referred to as defence styles. Scores for defence mechanisms and defense styles are formed by averaging the ratings for relevant items. All DSQ items were translated, and blindly back-translated by native English speakers.

## Statistical analysis

Descriptive statistics and Mann - Whitney U – test were used for data analysis (Petz 1997). Statistical significance was defined as a value of  $p < 0.05$ . Microsoft Office Excel 2007 (Berk & Carey 2009) and Arcus Quickstat Biomedical (Buchan 1997) software were used for data processing.

## RESULTS

Participants with epilepsy use neurotic and immature defence style significantly more, as shown in Figure 1.



**Figure 1.** Ego defence styles of the study group (participants with epilepsy) and control group (healthy subjects); Value of  $p < 0.05$  was considered significant

**Table 1.** Intensity of use of ego defence mechanisms

Defense mechanisms		C G (n=36), median	S G (n=50), median	p value
Mature	Sublimation	6	6	0.5860
	Humour	7.25	6.25	0.0515
	Anticipation	6.75	5	0.0763
	Suppression	6	5	0.5179
Neurotic	Undoing	4.75	5.25	0.3913
	Pseudo-altruism	4.75	5	0.2379
	Idealization	3.25	5	0.0849
	Reaction formation	4.25	5	0.2882
Immature	Projection	3.75	4.5	0.2057
	Passive aggression	3	4	0.3115
	Acting out	6	7	0.3650
	Isolation	3.5	5	0.4331
	Devaluation	4	5	0.0894
	Autistic fantasies	2.25	3.5	0.3209
	Denial	2	3.75	0.0500*
	Displacement	1.75	3.5	0.0161*
	Dissociation	3	4	0.1055
	Splitting	5	5	0.8181
	Rationalization	6	5.75	0.9841
	Somatization	1.25	4.25	0.0019*

C G - control group (healthy subjects); S G - Study group (participants with epilepsy); Value of  $p < 0.05$  was considered significant.

Patients with epilepsy most intensely use acting out, humor and sublimation. Healthy subjects most intensely use humour, anticipation, sublimation, suppression, acting out and rationalization.

For denial, displacement and somatization are significantly higher in the group with epilepsy. The result of DMs is shown in Table 1.

## DISCUSSION

In many situations, seizures shift brain function towards a more immature state, promoting the birth of newborn neurons, altering the dendritic structure and neuronal connectivity, or changing neurotransmitter signaling towards more immature patterns (Galanopoulou & Moshé 2014). Our research has confirmed that the patients with epilepsy significantly immature defence style of the ego significantly more than the control group.

Significant differences we found in the subgroups of immature DMs: denial, displacement and somatization. Denial, a mechanism by which person refuses to accept external reality because it is too threatening. It is one of the most primitive and most dangerous DMs that persons with epilepsy, according to this research, use significantly more intense. Ignoring and ignorant behavior by objective facts due to the inability to deal with them, they are at risk of taking over such a treatment by: taking therapy, restrictions in professional engagement or sports activities, a negating role that can be fatal in the event of an epileptic

seizure. With this DMs, an individual rejects everything that does not fit into his lifestyle. With denial, patients block feelings and avoid thinking about the disease. Therefore, they do not take care of themselves, avoid medical examinations, and refuse help from their loved ones. However, in some situations denial can also be adaptive. Baumeister et al. have reported that some manifestations of denial are associated with high self-esteem, adapting and happiness, which is consistent with the view that denial can be an effective defense. Although some answers are still unclear, Baumeister et al. they concluded that there was no complete answer as to whether the denial actually works or whether the denial is really a function in defense of self-esteem (Baumeister et al. 1998). These are questions that we need to answer in the future.

Our results further show, that people with epilepsy are prone to intense use of the displacement. The DMs by which a person shifts sexual or aggressive impulses to a less threatening target. Displacement, as such, can be disadvantageous for persons from the micro social environment of the person who using it. Especially for people who are professionally lowered from them, or they are children or persons who do not have a direct role in the formation of a conflict situation. By searching the relevant databases, we did not find any results that would support our assertion but not those who would disprove this ours evidence.

Also, our results showed, that persons with epilepsy are significantly higher using somatization, a mechanism by which person transforms unpleasant feelings towards

others into uncomfortable feelings toward oneself: pain, illness, and anxiety.

Neurotic style indicates a person's limitation in learning needed skills to adjust and cope effectively in social and work settings. Such a style often reflects an inability to self-reflect, introspect, learn about one's perception of a situation, one's respective role, one's impact on others, and others' impact on self for developing and engaging in more effective behavior. Our research has shown that patients with epilepsy use neurotic style significantly more intensely. A similar relationship between personality traits and defenses was also found in people with symptoms of eating disorders and body mass index (Behzadi et al. 2011). Identifying the neurotic style is a pre-requisite to understanding the complexities involved and subsequently needed change in patients with epilepsy.

The most commonly used mature DMs include: humour, overt expression of ideas and feelings that gives pleasure to others; and sublimation, i. e. transformation of unhelpful emotions or instincts into healthy actions, behaviours, or emotions. It is interesting that similar DMs dominate in the control group. The reason for this can be found in the culturally and generally accepted social norms of the behavior of people of northeastern Bosnia and Herzegovina.

All stated, points to the following: patients suffering from epilepsy find it harder to adapt to new situations, and, in comparison to the general population, they more frequently use immature and socially less acceptable DMs to protect their ego.

This study has, however, also several limitations. First of all, we only evaluated the motivated participants, not randomly selected. In addition, we used a self-administered questionnaire, which can lead to bias of information. However, this study has focused on a construct of the DSQ-40 as suggested by Andrews (Andrews et al. 1993).

## CONCLUSION

Patients with epilepsy intensively used the neurotic and immature style of ego defence. They most often used acting out, humour and sublimation. Significantly more intensive use of displacement and somatization was found. This kind of reaction in the patients involved in this research leads to them being less adaptable to new situations. This information will be important for planning future interventions for people living with epilepsy.

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**Conflict of interest :** None to declare.

## Contribution of individual authors:

Suljo Kunić contributed to all stages of this work.

Omer Ć. Ibrahimagić contributed to the idea, the formation of the study and the critical revision of the paper.

Zoran Vujković, Vlado Đajić & Dževdet Smajlović contributed to the formation of the study and the critical revision of the paper.

Mitra Mirković-Hajdukov contributed to the study design and data analysis.

Amela Kunić & Lejla Zonić contributed to collecting data and writing the manuscript.

Emir Tupković contributed with data interpretation and manuscript preparation.

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Correspondence:

Suljo Kunić, MD

Department of Neurology, Primary Health Center Tuzla

Veljka Lukića Kurjaka Street 66, 75 000 Tuzla, Bosnia and Herzegovina

E-mail: suljo.kunic@hotmail.com