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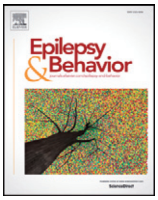

Impaired responsibility dimension of self-esteem of Brazilian adolescents with epilepsy

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ABSTRACT

This study aimed to compare the self-esteem of Brazilian adolescents with epilepsy and Brazilian adolescents without this condition and the correlations between self-esteem of these adolescents with depression and anxiety symptoms. Study participants were 101 adolescents of both sexes, aged 10–19 years old, from elementary and high school education. Fifty patients diagnosed with uncomplicated epilepsy attending the pediatric epilepsy clinic of University Hospital composed the case group. The other fifty-one adolescents without this diagnosis were attending public schools in Campinas—SP region. The instruments used were: identification card with demographics and epilepsy data, Multidimensional Self-Esteem Scale, Beck Depression Inventory and Inventory of State-Trait Anxiety - IDATE. A statistically significant result was found in the Responsibility Self-esteem Dimension favoring the control group. Significant correlations between self-esteem scores and anxiety and depression symptoms were also found. The development of a chronic disease such as epilepsy leads to a change in the way the individual perceives himself and the social environment he is inserted, influencing his behavior. The way people with epilepsy experience their seizures is a subjective measure that will control his/her well-being. Childhood and adolescence form the basis for a healthy emotional development; thus, our results show the importance of studying how subjective variables relate to the physical aspects of a chronic disease in these life stages.

1. Introduction

Epilepsy represents a serious health problem. It is a neurological condition associated with significant physical, relational and behavioral consequences [1]. Studies have shown that epilepsy prevents the development of independence and impairs social function, relationships in pairs, self-esteem, mood and cognition [1–3].

Epilepsy onset in childhood or adolescence can mean losses in different aspects of daily life and to be considered a real risk factor for emotional and behavioral problems for the following years [4].

Considering adolescence as a phase of changes and questions, the main difficulties seem to be related to the prognosis of epilepsy, as there is a desire for independence, desire for acceptance and youth empowerment. Epilepsy begins to affect different areas in this phase: studies, social relationships, ability to drive and drink alcohol, sexuality and leisure constraints, among others [4–6]. In addition, they fear the seizures occur in public places and fear of consequent social exclusion [7]. With all these uncertainties, the adolescents have their self-esteem and self-confidence shaken, they begin to feel different from other people, which limits their opportunities for personal and professional growth [8].

A positive self-esteem is a human need, essential to healthy adaptation, and significantly associated with personal satisfaction and ideal functionality [9]. Self-esteem expresses an attitude of approval or disapproval, and indicates the extent to which the individual believes himself to be capable, significant, successful, and worthy. In short, self-esteem is a personal judgment of worthiness that is expressed in the attitudes the individual holds toward himself [9].

The self-esteem manifests and develops in the context of social life, such as family, school and work. The impact of family life on growth and development of children and building their self-esteem is crucial. The stability and good levels of self-esteem can be decisive factors for mental health [10].

Considering the importance of this subject, the aim of this study was to compare the self-esteem of Brazilian adolescents with epilepsy and Brazilian adolescents without epilepsy and the relationship of self-esteem with depression and anxiety symptoms.

2. Methods

2.1. Participants

In 2011–2012, 101 adolescents aged 10 and 19 according to the WHO criteria [11], in elementary and high school education level, with ability to answer the questions by himself/herself participated in the study. Case participants (50 adolescents registered with

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uncomplicated epilepsy) attending the pediatric epilepsy clinic of University Hospital (UNICAMP, Campinas, Brazil). Control participants (51 adolescents without epilepsy diagnosis) were selected from public schools in Campinas—SP, Brazil. Inclusion criteria for the case group were: medical diagnosis of epilepsy for more than 2 years — when the patient had had at least two unprovoked epileptic seizures (criteria established in service for epilepsy diagnosis) and uncomplicated epilepsy (defined as epilepsy with no initially associated neurological impairment — mental retardation or cerebral palsy). Inclusion criterion for the control group was: no diagnosis of epilepsy. The exclusion criteria for both groups were: if they had had brain surgery, used a concomitant medication with central nervous system effects (except the anticonvulsant used to treat the epilepsy), or had another progressive neurological or psychiatric illness. Data on inclusion/exclusion criteria were obtained from medical records for the case group and from parents' reports for the control group.

Mean years of age of case group was 14.02 (Standard Deviation (SD) = 1.99) and of control group was 12.63 (SD = 1.62); this difference was statistically significant ($p < 0.01$). The majority of adolescents of the case group were male (68%), students (96%), and attending elementary school (72%). Most adolescents of control group were female (58.82%), students (100%), and attending elementary school (90.19%). The difference of gender was statistically significant ($p = 0.007$). Adjustment was made for age and gender. For specific features of the case group regarding medical data (collected from medical records), most adolescents had focal seizures (62%), had frequent seizures (56%), were on monotherapy (58%), and mean of onset seizure was 6.4 years; with regard to psychological variables (data collected from patient reports), 84% of adolescents reported perception of seizure control; and with regard to social aspects, 58% reported occurrence of seizures in public places.

2.2. Measures

1. **Identification card with demographic data** (age, sex, education level, and job) for both groups and, for case group only, **epilepsy data** (age of onset, seizure frequency, type of seizure and drug treatment); for gathering epilepsy data, the researcher used medical records available at the pediatric epilepsy clinic. Regarding seizure frequency, two groups were considered: frequent seizure (one or more seizures in the last year) and seizure-free (seizure-free for at least 1 year) — criteria established by the clinic. Type of seizure was classified according to the International League Against Epilepsy classification of epileptic seizures [12]: focal seizures, generalized seizures, focal + generalized seizures. Drug treatment was classified in monotherapy (one type of medication) and polytherapy (two or more medications). Data on psychological variable were also collected. Perception of seizure control data was obtained from patient reports, in which they evaluated whether their seizures were controlled or not; these data were subjective and may reflect alterations in the intensity and/or frequency of the seizures [13]. Patients were also questioned if they had occurrence of seizures in public places (yes/no). Data on psychiatric history of control group were obtained from parents' reports.
2. **Self-Esteem Multidimensional Scale** [14]. This inventory is a Brazilian version of the Self-Esteem Inventory [15] corrected for validity and reliability by Gobitta [14]. This scale consists of 56 statements about situations that may or may not happen with the person and personal feelings that may or may not exist. Five Dimensions are evaluated (Self, Social Group, Family, School and Responsibility) and a General score is defined. This instrument is not commercialized but can be accessed directly with the author.
3. **Beck Depression Inventory (BDI)** [16], validity and reliability have been tested by Cunha [17]. The BDI includes a 21-item self-report which was used to measure depression. Each of the items contains a 4-point severity rating scale. The scoring algorithm defines scores of 0–9 points which indicates minimum depression; 10–16 points which indicates low depression; 17–29 points which indicates moderate depression; and 30–63 points which indicates major depression. The BDI is being used as a standard reference and is one of the most common self-report scales used to assess depression [18] including in adolescents [19].
4. **State-Trait Anxiety Inventory (STAI)** [20] validated in Portuguese by Biaggio and Natalício [21]. The test is divided into two sections; Part I presents 20 statements related to how the person feels most of the time (Trait); Part II presents 20 statements related to how the person feels at the time of assessment (State). To assess the level of trait anxiety and/or state, it is necessary to first apply a correction to the scores obtained on each item: the values of items 1, 6, 7, 10, 13, 16 and 19 of the Trait scale and 1, 2, 5, 8, 10, 11, 15, 16, 19 and 20 of the State scale must be inverted (in a way that 1 becomes 4, 2 becomes 3, 3 becomes 2 and 4 becomes 1). STAI is widely used in monitoring anxiety states [22] and is also an instrument used to assess anxiety in children and adolescents [20].

2.3. Procedure

Initially the Ethics Committee of *Universidade Estadual de Campinas* (UNICAMP) approved the research (number 176/2005). After that, written informed consent was obtained from all participants and their companions (the one with legal responsibility over the participant), on the day of the outpatient consultation, in an interview to explain the procedures. Participants were assessed individually at the outpatient clinic of Psychology Applied to Neurology at the University Hospital of UNICAMP. On this first day, the objective was to create a positive bond between the professional and participant (interview/presentation stage). On the second day, one week later, the objective was to apply the tools of research (the assessment stage). The selection of participants for the case group obeyed the demand of our neurology outpatient clinic, according to the criteria for inclusion and exclusion, acceptance of the participant and responsibility to take the research.

The selection of participant of control group was made according to the criteria of inclusion and exclusion, acceptance of the participant and responsibility to take the research. Two public schools in Campinas—SP, Brazil, both of elementary and high-school levels, were chosen by lottery. After the headmaster's authorization, the students were taught about the research and those who had an interest in participating took the written informed consent home to get their parents signed the authorization (interview or presentation stage). All the adolescents of control group were assessed at the individual class of their school, when the researcher returned to the school to apply the tools of the research (assessment stage).

2.4. Statistics analysis

Statistical analysis was performed in the Statistical Package for the Social Science (SPSS) version 18.0 for Windows.

To describe the sample profile according to the study variables, data was comprised of: categorical variables with values of percentage (%), and descriptive statistics (with measurements of position and dispersion — mean, standard deviation, minimum, maximum and median) for continuous variables (scores of scales).

To compare numerical variables between two groups we used the Mann–Whitney test and Analysis of Covariance (ANCOVA) when needed to adjust for age and sex.

The level of significance for statistical test was 5% ($p < 0.05$).

3. Results

Data on General self-Esteem and dimensions – Self, Social Group, Family, School and Responsibility – of Self-Esteem from both groups are listed in Table 1.