IDENTIFYING PERVERSIVE ELEMENTS IN TEENAGE GIRLS DIAGNOSED WITH ANOREXIA NERVOSA

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ABSTRACT

The objective of this study was to explore the association between autistic traits and clinical symptoms in a group of teenagers diagnosed with Anorexia Nervosa. This descriptive study was performed on a group of 20 subjects aged between 14 and 17, who were evaluated in the Child and Adolescent Department of the “Al. Obregia” Clinical Psychiatry Hospital between 2012-2014. The diagnosis for Anorexia Nervosa was formulated based on the clinical interview, the psychiatric exam, the physical exam, the BMI score and psychological exam, using scales like KID-SCID, Raven’s progressive matrices test, Systemizing Quotient Scale (SQ), Cambridge Behaviour Scale (EQ). As predicted, anorexia patients had a higher SQ score. Their EQ score was reduced, but only for the parent-report version in the younger age group. Using EQ-SQ scores to calculate ‘cognitive types’, anorexia patients were more likely to show the Type S profile (systemizing (S) rather than empathy (E)), compared to typical females their age. Although we can't generalize, the results we obtained show us that there are pervasive elements in teenagers with anorexia nervosa and these results are close to other studies conducted on the subject. Identifying these elements allows us to find new methods for our therapeutic approach when treating our patients. The fundamental theories for Adler’s psychotherapy concerning autism say that when approaching patients with autism spectrum disorder, the four concepts: connection, capability, I matter, courage are crucial (theory of Lew and Bettner). This theory can also be applied to teenagers with Anorexia Nervosa to achieve the development of good communication, cooperation and collaboration, of social interest and the common welfare (mental health), the person's evolution from the feeling of inferiority to the one of capability, physical safety, personal value, trust, hope.

Keywords: anorexia nervosa, pervasive elements, resistance to treatment.

INTRODUCTION

Anorexia nervosa is an eating disorder specific to teenagers, characterized by the refuse to eat and the refuse to keep to a normal weight for the height and age of the person, associated with an intense fear of gaining weight [1].

In 2013, Simon Baron-Cohen et al. stated that the autistic traits are overrepresented in persons suffering from anorexia nervosa, and they can increase resistance to treatment [2].

Resemblances between anorexia nervosa and autism spectrum disorder were first highlighted in 1980 by Cristopher Gillbert. He called anorexia nervosa an empathy disorder belonging to the autistic spectrum [3].

The most recent research developments cover three areas: central coherence, executive functioning and visuospatial processing and memory.

1. Central coherence is the ability to achieve balance between efficiency and attention to detail. A regular person processes information on a gestalt level that enables them to see the ‘bigger picture’ or general gist. This is known as high central coherence. Central coherence weaknesses are common in anorexia nervosa, including a focus on detail at the expense of the bigger picture.
Harrison et al. (2011) studied current and recovered anorexia patients and found in both groups enhanced performance on the detail processing task, whereas only the acute phase of anorexia was associated with difficulties in global integration [6].

2. Executive functioning skills include planning, organizing, cognitive flexibility, inhibition, self-monitoring. All these are skills necessary for purposeful, goal-directed human activity. Patients with anorexia nervosa have an enhanced ability to limit such behaviours. They also have impaired cognitive inhibition – they are prone to overvalued ideas of importance of body weight and shape to self-concept. A number of studies found set-shifting deficits and the tendency to adopt concrete and rigid approaches to problems [6].

3. Visuospatial processing relates to perception of location, size and organization of stimuli in the visual field, thus helping to perceive and manipulate objects in two and three dimensions.

Lask et al. (2005) investigated blood flow in early-onset anorexia nervosa and compared it with neuropsychological test results. The results showed a significant correlation between unilateral hypoperfusion in the temporal lobe and deficits in visuospatial ability [6].

Anorexia nervosa is the most severe eating disorder affecting mainly, but not only, young women, and has the highest rate of mortality linked to a psychiatric disorder, due to high levels of medical complications and suicide in chronic patients.

The intelligence quotient (IQ) represents a composite score on a variety of tests designed to measure a hypothesized general ability or intelligence. It has been hypothesized that people with anorexia nervosa have a higher IQ level than the general population based on clinical and school performance observations.

There is a suggestion, however, that higher perfectionism, but not higher IQ, would explain the better performance at school in this group [4].

The objective of this study is to explore the association between autistic traits and clinical symptoms in a group of teenage girls diagnosed with anorexia nervosa.

METHOD

Participants

This descriptive study was performed on a group of 20 subjects between 14 and 17 years old, who were evaluated in the Child and Adolescent Department of the “Al. Obregia” Clinical Psychiatry Hospital between 2012 and 2014. We obtained the parents’ consent for the teenagers to participate in the study.

Inclusion criteria:

- Symptoms of anorexia nervosa: the refusal to maintain a minimum or above minimum body weight for their age and height, the distorted perception of their body shape and weight, amenorrhea (DSM IV-TR).
- Identification of pervasive elements: rigid thinking, self-centering, central coherence - perception of details without being able to understand the big picture, inability to anticipate and read thoughts or emotions of those around them, difficulty to empathize with others, resistance to change, increased systemizing capacity, social anhedonia.

Exclusion criteria:

- Important somatic comorbidities that could influence body weight
- Patients diagnosed with Autism Spectrum Disorder, Asperger’s Syndrome.

Diagnosis tools

Anorexia Nervosa was diagnosed in these patients using the clinical interview, the physical and psychiatric clinical examination, calculation of BMI, blood tests, psychological examination. The pervasive elements were identified during the psychological examination using:

- The KID-SCID scale (Childhood Structured Clinical Interview for DSM-IV)
- RAVEN’s progressive matrices
- Systemizing Quotient (SQ)
- Cambridge Behaviour Scale (EQ)

Data analysis

The data was processed with Microsoft Office Excel 2007.

RESULTS

After applying the Systemizing Quotient and Cambridge Behavior Scale, the results were:
Identifying pervasive elements in teenage girls diagnosed with Anorexia Nervosa

- SQ Scale: 4 patients with lower systemizing capacity, 14 normal and 2 with increased systemizing capacity (Figure 1);

  ![Systemizing Capacity](image)

  **Figure 1. Systemizing capacity**

- EQ Scale: 5 patients with lower empathizing capacity, 11 normal and 4 patients with increased empathizing capacity. (Figure 2)

  ![Empathic Capacity](image)

  **Figure 2. Empathic capacity**

  Interpretation: If the SQ score is higher than the EQ score, the person has an “S” (systemizing) behaviour type. If the EQ score is higher than the SQ score, the person has an “E” (emotional) behaviour type.

  If the EQ score is not significantly different from the SQ score, the person has a “B” (balanced) behaviour type. The extremes: extreme “E” or extreme “S”.

  The KID_SCID test applied to our patients revealed that 17 of our patients had these traits in common:
  - Rigidity
  - Emotional blockage
  - Accommodation issues
  - Inhibition.

  The RAVEN test revealed that these patients have an IQ medium and above medium (average IQ=100), except for one patient that had an IQ of 73.

  As predicted, the patients with anorexia had a higher AQ and SQ. Their EQ score was reduced, but only for the parent-report version in the younger age group. Using EQ-SQ scores to calculate ‘cognitive types’, patients with anorexia were more likely to show the Type S profile (systemizing (S) better than empathy (E)), compared to typical females. [5]

**DISCUSSIONS**

Based on the tests we applied – SQ, EQ, RAVEN and KID-SCID, we can make the following correlations:
  - For the “S” cases (2 cases), we identified a low EQ score and a high IQ score
  - For the “E” cases (4 cases), we identified a normal or low SQ score and a medium and above medium IQ score
  - In our study we identified 8 “B” type patients.
  - The majority of our patients present pervasive traits from autism spectrum disorders that don’t correlate with the scores for SQ and EQ scales.

**Limits of our study:**
  - The study group consists of a small number of patients admitted in our clinic during the aggravation phase of the disease, due to their pervasive traits. The study must be generalized on a larger scale to determine correlations between these parameters.
  - The IQ score was calculated in a time of aggravation of the disease that is associated with depression and anxiety which limit the response capacity of our patients.

**CONCLUSIONS**

Although they can’t be generalized, the results we obtained show us that there are certain pervasive traits present in teenage girls diagnosed with anorexia nervosa, results similar to those in recent studies.

Identifying these elements allows us to find new methods for therapeutic treatment.
The fundamental notions of Adler’s psychotherapy concerning autism spectrum disorder state that the approach of the four main concepts – connect, capability, I matter, courage - is crucial.

The theory can be successfully applied even to teenagers diagnosed with anorexia nervosa in order to develop good communication, mutuality, cooperation and collaboration, social interest and common welfare (mental health).

The evolution of the person from feeling inferior to feeling capable, to physical safety, personal value, trust, hope can be achieved.

They can successfully carry on with life’s main aspects: a career, a family, couple life and social relationships.

Females with anorexia have elevated autistic traits. Clinicians should consider if a focus on autistic traits might be helpful in the assessment and treatment of anorexia. Future research needs to establish if these results reflect traits or states associated with anorexia [5].

REFERENCES
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