

Screening for Generalized Anxiety Disorder in Teenagers

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Abstract

Background: Adolescence is the transition phase from childhood to adulthood. There is great predisposition to the development of anxiety disorder in this phase, since it involves physiological, cognitive and behavioral components, which harms the teenager in social, school and family environments.

Objective: to carry out screening for generalized anxiety disorder in a teenager population.

Method: Application of Multidimensional Anxiety Scale for Children (MASC) in teenagers between 11 and 16 years old, students from at a elementary school and at a high school in the state of Paraná, Brazil, as well as adolescents attended at an adolescent outpatient clinic. For this research, the cutoff point at MASC was ≥ 56 points, situation in which a mental health professional evaluation should be suggested.

Results: 161 questionnaires were applied for the teenagers, among them, five (3.1%) were excluded due to incomplete fill. Among the 156 (96.9%) of the adolescents who have filled the questionnaire, 58 (37.1%) scored for generalized anxiety disorder. There was relation between gender and positive scoring on MASC ($p < 0.001$). School year and age were not associated with anxiety.

Conclusion: As shown in literature, there was a straight association between girls and anxiety. The prevalence of Generalized Anxiety Disorder was greater than in literature, what justifies the need of investments in programs that reduce the occurrence of anxiety disorders in adolescents.

Keywords: adolescent, anxiety, questionnaires, test anxiety scale.

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I. Introduction

Adolescence is a transition phase from childhood to adulthood, a period in which involves several changes, being biological, emotional, psychic and environmental¹. Anxiety has its beginning in this period, being the 8th cause of illness and incapacity among teenagers, which may negatively interfere in their psychosocial development².

Applying questionnaires is a way to screening generalized anxiety in teenagers. Some methods used to assess anxiety among teenagers are: the Screening for Child Anxiety Related Emotional Disorders (SCARED) and the Multidimensional Anxiety Scale for Children (MASC). Other questionnaires, such as the Pediatric Symptoms Checklist (PSC) and the Child Behavior Checklist (CBCL) also present questions for anxiety screening in the assessment^{3,4,5}.

The MASC uses four dimensions or factors to evaluate anxious symptoms in adolescence: (a) Physical Symptoms (12 items), which includes the subfactors Tension/Anxiety (6 items, e.g.: "I fell tense or nervous") and Somatic/Autonomic (6 items; e.g.: "I have difficulties breathing"); (b) Danger Avoidance (9 items), composed of Perfectionism subfactors (4 items; e.g.: "I try to do things perfectly") and Anxious Coping (5 items; e.g.: "I keep myself alert in relation to danger signs"); (c) Social Anxiety (9 items), subdivided in Humiliation/Rejection (5 items; e.g.: "I worry if the others will laugh at me") and Public Performance (4 items; e.g.: "I get worried when I am called in class"); and (d), finally, Separation Anxiety (9 items; e.g.: "I'm scared when my parents leave") (March et al., 1997). This is an easy and quick scale to apply and analyses social anxiety dimensions as well as physical symptoms, contributing for a better understanding of anxiety symptoms presented in clinical context.

The aim of this research was to apply a questionnaire to screening generalized anxiety disorder in adolescents.

II. Method

Cross-sectional, observational study developed from December/2021 to December/2022, with both genders teenagers, age ranged from 11 to 16 years old, regularly enrolled in a elementary and high school in the West of Paraná, Brazil, as well as teenagers from an adolescent medicine outpatient clinic at a university hospital.

After authorization from the board of directors at school, signatures of the Free and Informed Consent Form (FICF) from parents or guardians and of the Adolescent Written Informed Assent (AWIA) from the participant teenagers, it was applied the MASC questionnaire to screening generalized anxiety disorders in the individuals.

The MASC is a self-report instrument commonly used to measure anxiety symptoms in children and adolescents and it was originally developed by March, Parker, Sullivan, Stallings and Conners (1997), adapted and validated to Brazilian-Portuguese by Nunes (2004) and later by Vianna (2008). In this research, the questionnaire was chosen because it had already been used in previous studies by the research group. The questionnaire consists of 39 items, arranged on a Likert-like scale that varies from 0 to 3 (0=never, 1=rarely, 2=sometimes and 3=frequently). Scoring varies from 0 to 117 and the higher marks on scale indicate higher levels of anxiety. For this study, a cutoff of 56 was used, a score in which the participant must be referred to a mental health professional.

The software Stata/SE v.14.1 StataCorp LP, USA, 2021 was used to analyze statistics. In each classification of the variable of interest (gender, age and school year), the scoring results on MASC were described through average statistics, median, minimum and maximum values, 1st and 3rd quartiles and standard-deviation. To compare both classifications of a variable in relation to the MASC score results, it was considered the Student's Test T to independent samples. For a joint evaluation about the MASC score of the relation between age and gender, a model of Multiple Linear Regression was adjusted. P values below 0.05 indicated statistical significance.

This research was approved by the Research Ethics Committee of the Western Paraná State University under the protocol number 5.132.138/2021.

III. Results

161 questionnaires were applied for the teenagers, among them, five (3.1%) were excluded due to incomplete fill. In the end, 156 (96.9%) questionnaires were analyzed. Of those, 74 (47.4%) were male and 85 (52.5%) female. Among the evaluated questionnaires, 58 (37.1%) scored for anxiety, from which 14 (24.1%) were male and 44 (75.8%) were female. Age ranged from 11 to 16 years old (average: 13), and the school year ranged from 8th to 10th grade.

Table 1 presents the variables analyzed, as well as the correlation with MASC score.

Table 1- Correlation between grade, gender, age and MASC¹ Score.

Grade	n	Average	Minimum	1 st Quartil	Median	3 rd Quartil	Maximum	S-D ⁴	p value ⁵
ES (6 th to 9 th) ²	85	49.4	19	36	50	63	95	18.2	0.290
HS ³	71	52.7	21	37	51	63.5	104	20.0	
Gender									
Female	83	59.5	21	49.5	57	70	104	17.2	<0.001
Male	73	41.1	19	28	38	51	79	16.2	
Age									
Upto 14 yearsold	94	49.7	19	36.25	50	61.5	95	18.1	0.339
Upper 14 yearsold	62	52.7	21	36.5	52	64	104	20.4	

¹ Multidimensional Anxiety Scale for Children

²ES: Elementary School

³HS: High School

⁴ S-D: Standard-deviation

⁵p values below 0.05 indicates statistical relevance

IV. Discussion

Adolescence is a period of psychosocial and emotional transition, which includes changes of biological and psychological factors resulting from puberty. It is a favorable phase to the development of psychopathies such as the generalized anxiety disorder⁶.

Anxiety is one of the most common mental disorders in teenagers⁷. In this study, there was relation between gender and MASC scores, showing that anxiety is more common in girls, as described in literature⁸. Other studies also corroborate with these findings, highlighting that this difference in gender starts in childhood and reaches ratios of 2:1 to 3:1 girls comparing to boys in adolescence⁹. Though, there are researches that have shown no differences among genders^{10,11}.

There was no relation between age and anxiety in this research, although, there are studies in literature that show the younger the age, the higher incidence of anxiety in boys and, with the advance of age, the incidence is higher in girls^{12,13,14}. Anxiety episodes that occur in older children or teenagers are frequently predictors of a worse prognosis than those that occur in younger children¹⁵. Even though the anxiety disorders beginning in childhood or adolescence may spontaneously remit, the course of pediatric anxiety disorders is generally considered chronic and persistent¹⁶.

The study had a limitation: the sample was composed only of 8th and 10th grade students from a public school in the West of Paraná, Brazil, and teenagers aged between 11 to 16 years old from an adolescent medicine outpatient clinic at a teaching hospital.

V. Conclusion

It was concluded, in this research, that there was a relation between gender and a tendency to the development of anxiety disorder. Questionnaires are methods that support health professionals to diagnose anxiety in teenagers, and it is worth mentioning that early diagnosis leads to an immediate treatment, improving the prognosis.

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