



SCIENTIFIC ARTICLE

Anxiety and depression in adolescents with hostile behaviour

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KEYWORDS

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Abstract

Introduction: Adolescents go through a phase characterised by physical, mental, psychological and social changes which justify periods of hostile behaviours. The occurrence and intensity of these behaviours may correspond to a psychopathological condition that will affect their future lives. The aim of this research is to identify the socio-demographic and family background variables that influence hostile behaviours in adolescents and to analyse the influence of depression and anxiety in hostile behaviours in adolescents.

Methods: This is a quantitative, non-experimental, cross-sectional, descriptive, correlational study with epidemiological characteristics. The sample consists of 1890 adolescents, 863 (45.7%) boys and 1027 (54.3%) girls whose average age is 16.26 years. The data collection instrument includes the socio-demographic and family background and anxiety, depression and hostile behaviours in adolescence measurement scales: the State-Trait Anxiety Scale, the Depression Scale and the Buss-Durkee Hostility Inventory.

Results: We found that the prevalent group is between 17 and 21 years old (40.3%) 41.4% boys and 39.4% girls; the highest percentage of the adolescents (37.8%) are in the 10th year of schooling; 50.7% live in the city, 70.0% live with their parents; the monthly household income is medium-high (56.7%) for (56.5%) girls; 3.5% of the adolescents exhibit depressive symptoms, mostly girls who are 17 or older; girls have higher levels of anxiety-trait and boys of anxiety-state.

Conclusions: We may conclude that only depression has a relationship with hostile behaviours. It is higher in adolescents with these behaviours. The presence or absence of anxiety is not related to the hostile behaviour in adolescents.

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Introduction

Adolescents go through a transitional phase from childhood to adulthood, characterised by a rapid physical growth often causing difficulties in accepting their new image. During this phase adolescents fight to identify the “I” and structure their existence based on that identity as a process of self-affirmation, surrounded by conflict and resistance, fighting for their autonomy.

It is ideologically inherent in society that this phase of life has specific and natural psychological characteristics, such as insecurity, rebelliousness, impulsivity and aggression.¹ Psychological adolescent behaviour changes, not only because of physical and biological changes, with their strong endocrine and metabolic component, but also due to the new behaviours of adults, who deal with them as if they were adults and children almost simultaneously.

One in five children has evidence of mental problems, such as depression and anxiety, and this proportion is likely to increase. Psychiatric childhood and adolescent disorders present major social, human and financial costs and many of them are perpetuated throughout adulthood.

Anxiety is an emotional state rooted in the possibility of loss of self and triggered by any change in the environment or in the individual him or herself, which is perceived as a threat. It is a transitory state, in constant variation, characterised by unpleasant situations of tension and apprehension consciously perceived by the individual, with increased autonomic nervous system activity. The state of anxiety may vary in intensity and fluctuate in time.²

Anxiety is also a personality trait or characteristic whereby people can be classified, assessed and differentiated. It may also be an indicator of the frequency and intensity of expression of past states of intensity and the probability of that state of anxiety being felt in the future. The higher the trait anxiety, the more likely the individual is to manifest a state of intense anxiety when faced with a threatening situation.³

An individual with high trait-anxiety tends to associate common situations with possible threats to their integrity, generally being more vulnerable when assessed by others, presenting low self-esteem and low self-confidence.²

Depressive disturbances are a group of pathologies with high and growing prevalence in the general population. In the next two decades there will be a dramatic change in the health needs of the world's population as pathologies such as depression and cardiovascular diseases will replace the most common diseases today, such as infectious diseases and malnutrition.⁴

Depression, while disturbance in one's mood, includes changes in the overall level of activity, sadness, which is usually unmotivated, slowness and inhibition of all psychic processes, feelings of malaise, dejection, sadness, worthlessness and inability to perform any activity.⁵

Up to the 60s it was believed that depression in children and adolescents was rare or even non-existent. Depressive states were devalued and justified as a crisis of age itself. Adolescents with depression were seen as difficult to treat. At the end of the 60s, scientific interest in the problem arose and it was believed that the child and the adolescent could have as deep and meaningful emotional disturbances as adults, affecting them at different levels, with serious effects in their adult lives.

Depression can significantly interfere with daily life, social relationships and children's and adolescents' general well-being, where they externalise symptoms differently from adults. They may be contentious in school, more negative or be misunderstood. They worry about their own bodies, particularly with secondary sexual characteristics, acne and weight. Changes in sleep and appetite may become more prevalent, as well as feelings of hopelessness, anhedonia, and suicidal ideation.

This study will assess the state-anxiety and trait-anxiety in adolescents using the State-Trait Anxiety Inventory for Children (STAIC).

Juvenile violence deeply harms not only the victims, but also those who perpetrate these behaviours, their families, friends and communities.⁶ To understand this issue “Anxiety and Depression in Adolescent Hostile Behaviours,” we decided to study the hostile behaviours such as violence, indirect hostility, irritability, negativism, resentment, fear, verbal hostility and guilt in adolescents as well as the coexistence of mood disorders, specifically, anxiety and depression.

In this context we generated the following questions: *a)* what socio-demographic and family background variables influence the hostile behaviours in adolescents?; *b)* what is the influence of depression and anxiety on hostile behaviours in adolescents?

Our aim is to: *a)* identify the socio-demographic and family background variables that influence hostile behaviours in adolescents; *b)* analyse the influence of depression and anxiety in hostile behaviours in adolescents.

We outline a quantitative, non-experimental, cross-sectional descriptive correlational study with epidemiological characteristics.

Our intention is to contribute to the development of this topic to raise the awareness if the most active participants in the education and training of these young people with regards to these behaviour changes. Thus, this study confirms and strengthens the relationship between hostile behaviours and anxiety and depression disturbances, showing that these disorders may increase the chance of hostile behaviours in adolescents.

Material and methods

This is a quantitative, non-experimental, cross-sectional, descriptive, correlational study with epidemiological characteristics. The data collection instrument includes the socio-demographic and family background characterisation and State-Trait Anxiety Scale of State-Trait Anxiety, Ponciano's Portuguese version of the original State-Trait Anxiety Scale for Children (STAIC), the Depression Scale, translated into Portuguese from the Reynolds Child Depression Scale (RCDS) and the Buss-Durkee Hostility Inventory (BDHI), applied to 1890 adolescent students of both sexes who attend the 10th, 11th and 12th years of schooling and the professional course.

We used the descriptive and inferential statistics for data analysis. Regarding the former, we determined absolute and relative frequencies, some measures of central tendency or location, such as means and variability or dispersion measures, such as range of variability, coefficient of variation

and standard deviation, in addition to skewness and flatness measures, in accordance with the characteristics of the variables under study. With regard to inference statistics, we used parametric statistics and to study proportions, we used non-parametric statistics.

Statistical analysis was processed by IBM's SPSS (Statistical Product and Service Solutions) version 21.0 for Windows. With these methodological considerations, we begin the next section by presenting and analysing the results.

Results

The sample consisted of 1890 secondary school students to attend the 10th, 11th and 12th years of schooling and the professional course. Both sexes are represented, but there is a predominance of females (54.3%). With regard to age, it ranges between 14 and 21, with a mean of 16.26 years, and the most prevalent age group 17 or older. Most students attend the 10th year (37.8%) and reside in the city (50.7%) and more than two thirds live with both parents (79.0%).

As for hostile behaviour, we concluded that 93.0% of the adolescents have some form of hostile behaviour with the most common manifestation being fear, followed by violence.

The adolescents attending the professional course and residing in the village present more hostile behaviour, which leads us to affirm that these behaviours are statistically related to the academic qualifications and place of residence. Males had higher percentage of hostile behaviours and the age group of 17 years or older showed more hostility overall (Table 1), however the sex and age did not influence the presence or absence of hostile behaviour, so it has no statistical significance for this study.

Regarding the expression of depressive symptoms (Table 2) we found that 96.5% of the adolescents surveyed have no such symptoms, or only 1 in 10 adolescents have depressive symptoms. Of these, the majority are the age group of 17 years or older, so we deduce that the older the adolescents, the more likely they are to present depressive symptoms.

We also concluded that gender differentiates adolescents' depressed state with females exhibiting greater depressive symptomatology for all factors.

With regard to the presence or absence of anxiety and trait-anxiety, the trait-anxiety factor was found to be the one that with a more representative mean, 33.93 (Table 3).

Table 1 Hostile behaviours and age group

Age group (years)	14-15		16		≥ 17		F	P
	Mean	SD	Mean	SD	Mean	SD		
Violence	4.906	0.078	4.747	0.068	4.673	0.062	2.832	.059
Indirect hostility	4.591	0.069	4.871	0.056	4.546	0.054	9.148	.000
Irritability	6.085	0.078	6.191	0.072	5.958	0.067	2.887	.056
Negativism	2.848	0.063	2.774	0.057	2.814	0.052	0.387	.679
Resentment	4.126	0.078	4.223	0.072	4.087	0.065	1.015	.362
Fear	5.278	0.094	5.407	0.079	5.434	0.070	0.998	.369
Verbal hostility	7.165	0.089	7.350	0.077	7.207	0.077	1.353	.259
Guilt	4.173	0.095	4.471	0.084	4.368	0.075	2.861	.057
Overall hostility	39.171	0.394	40.034	0.339	39.087	0.326	2.269	.104

Table 2 Age vs. depressive symptomatology

Age (years)	14-15		16		≥ 17		Total		χ^2	P
	N	%	N	%	N	%	N	%		
Without symptoms	493	97.0	597	96.3	733	96.2	1823	96.5	0.722	0.697
With symptoms	15	3.0	23	3.7	29	3.8	67	3.5		

Table 3 Statistical analysis on the STAIC scale

Factor	Min	Max	Mean	SD	CV (%)	Sk-error	K-error	KS
Absence of anxiety	10	30	18.35	3.83	20.87	-1.54	4.50	0.000
Presence of anxiety	10	30	27.50	3.06	11.13	32.16	35.05	0.000
Trait-anxiety	19	57	33.93	5.84	17.21	3.46	-0.013	0.000

Discussion and conclusions

The problem of hostile behaviour in adolescents is worrisome given the results of our study in which 93.0% of the adolescents questioned have some manifestation of hostile behaviours. In a recurring pattern, these behaviours can become pathological and affect all aspects of future adult life; otherwise small behavioural changes are common to the development of any young person.⁷

Relationship between depression, anxiety and hostile behaviours in adolescents

Regardless of gender and age of onset and depending on the degree of hostility of the behaviours which remain, they may develop into a mood disorder in the future.⁷

As for depression, given the results found, we concluded that adolescents who have a higher index of hostile behaviours are those who also have a higher rate of depression. These values are statistically significant ($P < .05$). Therefore, depression is higher in adolescents who present hostile behaviours for all factors except for the negativism.

Regarding anxiety, analysing the multiple regressions, we conclude that there is no statistically significant relationship with hostile behaviours i.e., hostile behaviours in adolescents is in no way related to the presence of anxiety.

With respect to the presence or absence of state-anxiety and trait-anxiety in the adolescents surveyed, trait-anxiety was found to be the most highly represented factor with a mean of 33.93. In a study on levels of state-trait anxiety in football players of the base categories of professional clubs, it was concluded that trait-anxiety is a reaction to situations individuals perceive as threatening, developed from their personal experiences, i.e., the person has a tendency to develop anxiety/anxious reactions when confronting unexpected events, resulting from their past experiences or perceptions in response to certain events.²

Now comparing the presence and absence of anxiety, we found that among adolescents the presence of anxiety prevails with a mean of 27.50, instead of the 18.35 mean found for the absence of anxiety factor. This result is justified considering the high value for trait-anxiety which leads to presence of high levels of anxiety. In a study titled "Emotional Reactions and Children's Perception of Conflict," the author concluded that subjects with a high level of trait-anxiety are more predisposed to view the world as threatening and dangerous, experience state-anxiety reactions more often and more intensely than subjects with low levels of trait-anxiety.⁸ We may therefore deduce that trait-anxiety leads to appearance of individual differences with regards to being disposed to respond to stress with increased state-anxiety variables.

In our study, we also observed that females had a statistically significant higher prevalence in the absence of anxiety and trait-anxiety factors. We thus concluded that, although from a general perspective girls have a lower presence of anxiety, they have a greater tendency for trait-anxiety. This result is also confirmed in the article, "Anxiety differences between men and women," which states that women have higher risk of developing anxiety disorders.⁹

Researching on "The relationship between state-anxiety and trait-anxiety, depressive symptoms and sensitivity to stress in postpartum mothers," the phenomenology of anxiety is found to vary and may switch over time, taking into account driving episodes.¹⁰

In response to the question: what is the influence of depression and anxiety on hostile behaviour in adolescents? From the mood disturbances under study: depression and anxiety, we only established a relationship between hostile behaviours and depression with the presence of greater depression in young people with hostile behaviours. For the anxiety variable, we can only say that its presence or absence is not related to any kind of hostile behaviour in adolescents.

Given the high rate of violence and depressive symptoms reported by our adolescents, it would be germane to implement intervention programmes involving schools, adolescents and their families, encouraging parents and the entire school community to have an assertive relationship so as to promote healthy behaviours in adolescents.

What we know about the theme

Adolescents, facing physical, psychological and social changes among others, adopt risk behaviours to assert and achieve autonomy and independence. These behaviours, marked by periods of hostility, are considered an integral part of their normal development. However, the recurrence of hostile behaviours deserves special attention because they may coexist with mood disturbances, in particular anxiety and depression, which can act as enablers of hostile behaviours.

What we get out the study

This study concludes that hostile behaviours are statistically related to the variables, adolescents' academic qualifications and place of residence. Mood disturbances and hostile behaviours, with 3.5% of adolescents presenting depressive symptomatology, were found to coexist with behaviours of violence, hostility, indirect irritability, resentment, fear and verbal hostility. We found that among adolescents there is the presence of anxiety ($M = 27.50$), rather than the absence of anxiety ($M = 18.35$), and that trait-anxiety factor is the most representative ($M = 33.93$).

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Conflicts of interest

The authors declare that there are no conflicts of interest.

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