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DEPRESSION AND ANXIETY AMONG CHILDREN WITH ASTHMA AND HEALTHY CONTROLS

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ABSTRACT Some of the psychosocial factors play a major role which leads to some kind of consequences like physical as well as psychological and social for any kind of general medical health condition. If the Children with Asthma, affects not only in person, affected to other family members as well as community. Common factors like depression, anxiety and stress may be the risky psychological variables. So this present study aims to find out the anxiety and depression among children with asthma and healthy controls. Twenty five children who were diagnosed with asthma by the pediatrician and twenty five healthier children were assessed with Children Depressive Inventory and Children manifest Anxiety Scale. Results indicated that anxiety and depression are prominent among asthmatic children than normal controls. So there is a need to develop intervention for Asthmatic Children.

KEYWORDS : Depression, Anxiety and Asthma

Introduction

Children with asthma are more likely to suffer from Anxiety and Depression. However, there are huge research findings available in this context. Therefore, Asthmatic symptoms continue well into adolescence and in early adulthood for 95% of patients (Kelly, Hudson, Phelan, and Olinsky, 1987).

Children with asthma have high degree of depression and anxiety (Hamlett, Pellligrini and Katz, 1992), experienced lot of Psychological problems (Creer, Harm and Marion, 1988, Hochron, 1993). The relationship between asthma and depression is bi-directional (Miller and Wood, 1997). Individuals with asthma are at increased risk for developing anxious behavior with respect to their asthma (Hamlett et al., 1992). There is a general presence of psychogenic factors in asthma. Children with asthma have more emotional difficulties than healthy children (Mcquaid et al., 2001). Psychological disturbances in asthmatic children and adolescents and that depression is highly related with asthmatic children (Robles et al., 2002). Richardson et al., (2006) found that overall number of reported asthma symptoms was significantly associated with the number of anxiety and depressive symptoms. It was found that presence of anxiety and depressive disorders is highly associated with increased asthma symptoms for youth with asthma.

Asthma attack was significantly associated with depressive disorder, generalized anxiety (Ortega et al., 2004). It is significantly more anxiety, depression and emotional problems compared to children in the control group (Rajesh et al., 2004). There were more anxiety symptoms in the asthmatic group than in the control group (Vila et al., 1998). There is a relationship between anxiety disorders and asthma. Both adult and child populations with asthma appear to have high prevalence of anxiety disorders. In child/adolescent populations with asthma, up to one third may meet criteria for co-morbid anxiety disorders (Katan et al., 2004).

The complete functioning of an individual is affected by asthma. A psychological aspect plays a major role in the severity of the illness. Children are subjected to anxiety and depression. Studies have shown those asthmatics children tend to have neurotic traits and are more dependent and insecure in nature. They are subjected to anxiety and depression and also face lots of emotional problems (Blackman and Mathew, 1997). The asthma symptoms interfere with the overall functioning. Present study attempts to find out the anxiety and depression among asthmatic children.

Methodology

Aim

The aim of the present study is to compare level of depression and anxiety between asthmatic children and healthy controls.

Objectives

1. To assess the level of depression between children with asthma and healthy controls
2. To find out the level of anxiety between children with asthma and healthy controls.

Hypotheses

1. There is no significant difference in depression between asthmatic children and healthy controls
2. There is no significant difference in anxiety between asthmatic children and healthy children

Materials and Methods

The sample for the present study consists of 25 asthmatic children who were diagnosed to have asthma at Sir Muthiah Medical College and 25 normal controls were selected from the community in the age group from 8-12 years in both genders male and female, using purposive sampling method.

Inclusion criteria

Children in both genders between the age group 8-12 years who were diagnosed as asthmatics by Pediatrician and were under medication for one year.

Exclusion criteria

Children who have other medical and psychological problems, Children who are not co-operative for this study and Children who are not attending the school were excluded.

TOOLS USED

1. Socio Demographic sheet:

This is a structured data sheet prepared exclusively for the present study. It was used to collect information like age, gender and duration of the illness.

2. Children Depressive Inventory (CDI):

The CDI is a self-report form for children and adolescents between the ages of 7 and 17; developed by Maria Kovacs in 1992. The CDI has two forms: The original 27 item version, and the 10 item short term

version, which takes between 5 and 15 minutes for the child to complete. There are five subscales within the assessment that measure different components of depression like anhedonia, negative self-esteem, ineffectiveness, interpersonal problems and negative mood. CDI has 27 items. Each item is scored from 0 to 2 with 0=absence of symptoms, 1=mild symptoms and 2=definite symptoms. The child rates his or her own behavior or feelings by selecting one of the three statements that best describes his or her behavior within the past 2 weeks. A total score and five sub-scales scores are derived. Cronbach's alpha for CDI total scores range for 0.7 (Pediatric medical out patients) to 0.89 (Clinic referred youth). One year stability coefficient ranges from 0.41 to 0.69.

3. Reynolds Children's Manifest Anxiety Scale (RCMAS):

It was developed by Reynolds and Richmond (1978), is a 37 item self report inventory used to measure anxiety in children for clinical purpose. The RCMAS consists of 28 anxiety items and 9 lie (social desirability) items. The RCMAS was based on a trait theory of anxiety. It was an amended version of an instrument used to measure anxiety in adults (Taylor's Manifest Anxiety Scale). The Manifest Anxiety Scale was a compilation of items from the MMPI. RCMAS was developed to assess the degree and quality of anxiety experienced by the children and adolescents. The Kuder Richardson analysis of variance method was used to establish the co relation of internal consistency. Reynolds and Richmond (1978) reported that with 37 items selected for the RCMAS, a reliability estimate of 0.83 is yielded confirming the internal consistency of RCMAS. The convergent and divergent validity of the RCMAS was assessed in relation to measures of trait and state anxiety with the State Trait Anxiety Inventory for Children (STAIC). Reynolds (1983) found that the RCMAS scores co related highly with a Trait Anxiety Scale (correlation=78, p=.001) but not with a State Anxiety Scale(r=.08).

Procedure

After obtaining permission from the concerned authority of the pediatric Department, the samples were chosen from the outpatient department of pediatrics. The parents of both asthmatic children and healthy controls were explained about the study and written consent was obtained from the parents individually. After establishing rapport with the child the following tools were administered to the samples 1.Child depressive Inventory and 2. Reynold Child's Manifest Anxiety Scale. The tests were administered individually to each child and it nearly took sixty minutes for each child for the completion of the test.

Results and Discussion

In order to test the hypothesis, the statistics methods used in the study are percentages and t-tests. t-test was used to find out the differences between the means. Correlation was used to find out the degree of relationship between two variables. SPSS package was used in the present study.

Table - 1 shows the percentage of Socio demographic characteristics

Variables		Asthmatic Children		Normal Controls	
		Frequency	%	Frequency	%
Gender	Boys	14	56%	12	48%
	Girls	11	44%	13	52%
Locality	Rural	17	68%	13	52%
	Urban	8	32%	12	48%

The socio demographic details are presented in Table1 with regard to gender, 56% are boys and 44% are girls among children with asthma and in normal control group 48% are boys and 52% are girls. With regard to place among asthmatic children 68% live in rural area and 32% live in urban area and in normal controls 52% live in rural area and 48% live in urban area.

Table - 2 shows the significance of Difference between the mean scores of the two groups on Depression (N=25 each group)

Group	Mean	S.D	t	Level of Significance
Asthmatic Children	4.56	3.69	3.77	0.01
Normal Controls	1.68	1.03		

The present study is aimed to study the level of depression and anxiety (emotional problems) among asthmatic children and normal controls. 25 children of both genders from 2 groups were included in the study. The table 1 shows the mean scores and standard deviations of the two groups on depression assessed by Children's Depressive Inventory. The't' value is found to be 3.77. It is evident from the table 1, that there is significant difference between the two groups. The findings is in agreement with the study by Rajesh et al., (2008) who stated that asthma children have significant level of depression compared to normal group.

Table-3 shows the significant difference between the mean scores of the two groups on Anxiety

Variable	Group	N	Mean	S.D	t	Level of Significance
Anxiety	Asthmatic Children	25	1.08	1.08	2.9	0.01
	Normal Controls	25	1.84	0.75		

The table - 3 shows the mean scores and the standard deviation of anxiety in both the group assessed by Reynolds's Manifest Anxiety Scale. The findings show that there is significant difference between the groups. The't' value of anxiety is 2.90. The study finding is agreeing with the study by Ortega et al., (2004). Katon et al., (2004) found that asthma symptoms are significantly related to anxiety symptoms. It was also found that anxiety is significant among asthmatic children who are in agreement with the study Vila et al., (1998) who reported that anxiety symptoms are more n asthmatic children than in control group. It was found that anxiety levels are significant in asthmatic children who go in par with the study by Richardson et al., (2006) who found that asthma symptoms are significantly related to anxiety symptoms.

Conclusion

The present study was carried out to study the depression and anxiety among healthier children and children with asthma. Equal number of healthier children and asthmatic children were taken for the study and all of them were assessed for their depression and anxiety. The sample consists assessed for their depression and anxiety. The sample consists of 25 healthier children and children with asthma. While taking account of depression, asthmatic children were significantly depressed and anxious than healthy controls. Asthma with anxiety and depressive disorders has a high prevalence for all population especially in children and increasing evidence suggests that these disorders frequently co-occur. It is important for future studies to document the extent of co-morbidities. Future studies need to be planned to enhance understanding regarding the biological, psychological, social as well as cognitive mechanisms that might explain this association. This study is evident for all mental health professionals to create a new / specific intervention module. This will be helpful to improve the medical problems as well as psychological problems. This study used only limited sample size and not given any intervention.

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