

Parental Stress and Coping Techniques in Parents of Children with Bronchial Asthma

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Abstract

Parents of children with bronchial asthma face unique stressors. Having an asthmatic child may lead to difficulties in managing behaviour or to emotional problems in children and psychological stress in parents themselves. In such circumstances, parents use various coping strategies to meet this stress. The objective of this study was to examine the stress in parents of children with bronchial asthma and to assess coping techniques used by them to meet their stress. Sixty parents of children with bronchial asthma were selected from Asthma Clinic, Department of Pediatrics, I.M.S., B.H.U., Varanasi and sixty parents of children suffering from minor illness were selected from Pediatrics Out-patient Department. Parenting-stress-index and Ways-of-coping questionnaire were administered on these parents. Socio-economic details were collected by using Kuppuswamy's socio-economic status scale. The mean scores of parents of children with bronchial asthma on Parenting Stress Index scale were significantly higher as compared to their matched controls (Pd"0.001). Regression analysis showed that emotion focused coping like escape avoidance (Pd"0.05) and positive reappraisal (Pd"0.01) were the main coping techniques used by these parents. Parents of children with bronchial asthma had higher level of stress and maladaptive coping techniques. Proper intervention may help these parents in improving their coping skills to meet stressful situation.

Key words: Parental stress, Coping, Bronchial asthma

INTRODUCTION

Parenting children with chronic illnesses is highly demanding and stressful. It has practical and psychological consequences. Children with a chronic condition are dependent on their caregivers for additional care and monitoring of their health because parents serve as the primary caregiver and decision maker of their child. Elevated levels of stress in parents are associated with poor outcomes for both parents and the child. Parental distress affects children's quality of life, both directly and indirectly¹.

Chronic illness like childhood asthma is a chronic lung disorder characterized by inflammation of the airways, airways obstruction that is reversible spontaneously or with treatment and airways hyper

responsiveness to a variety of stimuli^{2, 3}. Having a child with asthma is challenging for families and thereby increases stress and taxes psychological functioning⁴. Researches have started to focus on the different impacts parental stress has on children with asthma. Perceptions of parenting stress and mother child relationship in children with asthma were examined in previous research⁵. Only mothers were the participants and PSI was used to assess stress level. Mothers of children with asthma tended to be more overprotective, overindulgent and rejecting than mothers of children without asthma. Not only did mothers perceive more stress in child attachment but they also perceived more stress in their relationship with their spouse than did mothers of children without asthma⁵. Chiou and Hsieh

reported that parents of epileptic children had higher level of stress than the parents of asthmatic children and parents influence the child and the child's adaptation influences the parent's stress. The major factors related to this difference were the characteristics of the children. Children with asthma had lower global self-worth score than children with epilepsy⁶.

Studies have shown that parenting stress may affect quality of life of parents of children with chronic diseases. Quality of life is a multidimensional concept that includes social, physical, psychological and emotional aspects. Studies in caregivers of children with various chronic illnesses have shown that such caregivers report an impaired quality of life compared to that of caregivers of healthy children⁷⁻⁹. For parents of children with asthma, a decreased quality of life is related to missed days of work, limited activities, inadequate sleep, frequent night awakening and decreased emotional health¹⁰. Stress appears to correlate negatively with quality of life i.e. higher the stress the lower the quality of life¹¹. Parents' distress and feeling of hopelessness may lower the satisfaction with different aspects of life and thus to reduced quality of life⁸.

Since parents of children with asthma face different dimensions of stress, they use various coping strategies to meet such situations. Coping refers to the specific efforts, both behavioural and psychological that people employ to master, tolerate, reduce or minimize stressful events. The Theory of stress and coping has guided much of the research on individual responses to situations and settings that pose a challenge^{12,13}. This theory posits that stress is experienced as a developing dynamic reciprocal transaction. This means that the individual's interaction with a stressor is neither a reaction nor a response, but rather a transaction between his or her well-being¹⁴. In view of the above, the present study was undertaken with the objectives to examine the stress in parents of children with bronchial asthma and to assess types of coping techniques used by them to meet their stress.

MATERIAL AND METHODS

The present hospital based study was carried out from January 2007 to June 2008. Sixty parents of

children with bronchial asthma were selected from Asthma Clinic, Department of Pediatrics, Institute of Medical Sciences (I.M.S.), Banaras Hindu University (B.H.U.), Varanasi. Sixty parents of children with minor ailments, selected from Pediatric Out-patient Department, I.M.S, B.H.U., Varanasi served as matched control. Children in the age group of 3-10 years with an established diagnosis of bronchial asthma and on regular treatment from last 6 months were included in this study. Informed consent was obtained from these parents before participation in the study. The present study was approved by ethical committee, I.M.S., B.H.U., Varanasi. Collection of data was done in a calm and separate room where only the researcher and respondent were present. Parenting Stress Index¹⁵, Ways of coping Questionnaire¹² were administered on these parents. Socio-economic status scale¹⁶ was used to assess the socio-demographic characteristics of the study groups.

*The Parenting Stress Index (PSI)*¹⁵ is a reliable and valid 120 item parent report questionnaire that assesses stressful parent-child interaction. It assesses parental perception of the degree of stress related to various dimensions of the parenting role. The scale has two major parts; the child domain and the parent domain. Under the child domain, the child characteristics i.e. distractibility/hyperactivity, adaptability, reinforces parent, demandingness, mood, and acceptability were assessed, while the parent domain measured seven dimensions of parenting stress i.e. competence, isolation, attachment, health, role restriction, depression and spouse characteristics.

*The Ways of coping questionnaire*¹² was used to assess coping strategies in response to parenting stress. It contains 66 items in eight subscales i.e. confrontive coping, distancing, self-controlling, seeking social support, accepting responsibility, escape-avoidance, planful problem solving and positive reappraisal.

Data analyses Data was analysed using SPSS-version 17. Student t-test was applied to see the difference in stress levels between parents of children with bronchial asthma and their matched control. Pearson's correlation coefficients was applied to know the association between parenting stress and coping techniques used by these parents. Hierarchical multiple regression analysis was applied to assess what type of coping techniques used by these parents.

Table 1. Comparison of means between parents of children with bronchial asthma and parents of control on Parenting Stress Index

PSI Dimensions	Parents of children with bronchial asthma N=60	Parents of Control N=60	t-value	P-value
Distractability	25.05 ± 4.25	18.88 ± 2.62	9.560	0.001
Adaptability	31.08 ± 4.65	20.08 ± 3.68	14.346	0.001
Reinforces Parents	14.88 ± 3.08	8.31 ± 1.59	12.275	0.001
Demandingness	28.36 ± 5.13	14.75 ± 2.60	18.313	0.001
Mood	14.56 ± 3.43	7.81 ± 1.47	13.993	0.001
Acceptability	16.95 ± 4.67	9.58 ± 2.12	11.121	0.001
Child Domain Total	130.23 ± 20.07	79.28 ± 9.44	17.792	0.001
Competence	35.03 ± 8.14	24.80 ± 4.07	8.704	0.001
Isolation	13.13 ± 4.13	9.733 ± 1.86	5.800	0.001
Attachment	12.86 ± 3.55	10.01 ± 1.77	5.561	0.001
Health	16.46 ± 4.16	10.46 ± 1.26	10.668	0.001
Role Restriction	18.93 ± 3.96	13.43 ± 3.16	8.387	0.001
Depression	21.05 ± 5.47	14.58 ± 3.83	7.492	0.001
Spouse	19.60 ± 5.06	13.03 ± 3.52	8.240	0.001
Parent Domain Total	137.23 ± 27.23	96.00 ± 13.15	10.560	0.001
Total Stress	263.31 ± 48.71	175.41 ± 21.57	12.779	0.001

P < .001

RESULTS

No significant difference was observed between socio economic status of study and control group ($\chi^2 = .088$ df=2 $p = .956$). Mean age of parents of children of bronchial asthma and in the control group was 33.48 ± 6.40 years and 33.00 ± 4.47 years respectively. Mean age of children with bronchial asthma and their matched control was 6.65 ± 2.36 and 6.61 ± 2.26 years respectively.

Significant difference was observed between the mean values of various dimensions of PSI for study and control group ($p < 0.001$). Similarly, mean values for parents of children with bronchial asthma were significantly higher on child domain, parent domain and total stress as compare to their matched controls on PSI scale ($p < 0.001$) (Table 1). Pearson's product moment correlations were calculated between scores

of parenting stress index and ways of coping techniques in parents of children with bronchial asthma (Table 2). Escape avoidance showed positive correlation with competence, role restriction, depression and parent domain. Planful problem solving was inversely associated with acceptability and competence. Regression analysis showed that parents of children with bronchial asthma were mostly using escape avoidance ($p < 0.05$) and positive reappraisal ($p < 0.01$) coping techniques to meet their stress (Table 3).

DISCUSSION

The purpose of the present study was to assess stress in parents of children with bronchial asthma and coping techniques used by them to meet their stress. Results of the study indicate that scores on PSI were significantly higher for asthmatic group as

**Table 2. Correlation between Parenting Stress Index and Coping strategies in parents of children with bronchial asthma
N=60**

Dimensions of Parenting Stress Index	Dimensions of Coping					
	Confrontive Coping	Seeking Social Support	Accepting Responsibility	Escape Avoidance	Planful Problem Solving	Positive Reappraisal
Distractibility	0.13	-0.16	0.18	0.05	0.03	-0.18
Adaptability	0.07	-0.26*	0.31*	0.04	-0.03	-0.23
Reinforces parents	-0.01	0.06	0.03	0.13	-0.14	-0.12
Demandingness	0.06	-0.16	0.17	0.13	-0.11	-0.14
Mood	0.09	-0.11	0.13	-0.02	-0.01	-0.17
Acceptability	-0.28*	0.02	-0.00	0.15	-0.37**	-0.03
Child domain	0.06	-0.21	0.10	0.07	-0.05	-0.18
Competence	-0.04	0.13	0.19	0.43**	-0.32*	-0.24
Isolation	0.23	-0.08	0.04	0.09	0.03	-0.02
Attachment	0.17	-0.06	-0.08	0.11	-0.02	-0.02
Health	0.17	0.01	0.05	0.05	-0.01	-0.01
Role Restriction	0.09	0.15	0.09	0.27*	-0.12	0.01
Depression	0.11	-0.02	0.05	0.26*	-0.09	-0.12
Spouse	0.29*	-0.12	-0.15	-0.06	0.07	-0.00
Parent domain	0.15	0.06	0.06	0.28*	-0.14	-0.11
Total Stress	0.12	-0.07	0.03	0.14	-0.09	-0.35**

*p < 0.05, **p < 0.01

Table 3. Regression Analysis: Prediction of Parental Stress according to coping strategies

	Â	R	R ²	F	P-value
Parent Domain:					
Constant	118.84				
Escape Avoidance	162.79	0.28	0.08	4.99	0.05
Total Stress:					
Constant	288.03				
Positive Reappraisal	-160.80	0.35	0.12	8.29	0.001

p < 0.05, p < 0.01

compared to their matched controls. Further, parents of children suffering from asthma scored higher on child domain as compared to parent domain subscale. This shows that child characteristics are major factor in contributing to the overall stress in the parent-child system. Such children are restless, show symptoms of distractibility and difficulty in concentrating on their

homework assignments. Further, these children are more demanding and show high frequency of minor behavior problems. Mood changes are variable in these children therefore they fail to adapt to their environment. As a result of this they are less acceptable to their parents, and qualities and behavior of these children make it difficult for parents to fulfil their parenting role.

For parent domain, parents of children with bronchial asthma show significantly higher scores as compared to their matched controls, indicating that they experience the parental role, as restricting their freedom and frustrating when inflammation causes recurrent episodes of wheezing, breathlessness and tightness in the chest of their child. These parents show symptoms of depression that relates to guilt and unhappy feelings. Higher level of stress was also associated with lack of support from the spouse, family, relatives and friends, limited time for personal activities and parental health problems. These situations make difficult for parents to manage or cope with their child's behavior characteristics and also disease condition.

Very few studies are available on stress level of parents of children with bronchial asthma. Results from the other studies on stress and asthma have concluded that stress can significantly contribute to the child's levels of emotional competence⁶. Studies on adolescents, have reported that parents of children with severe asthma had higher level of parental stress. They reported difficulty in sleeping, night awakening and being stressed by watching their child during medical visits/ procedures¹⁷. Meta analysis of adjustment of ~5000 children with asthma indicates that the level of behavioral difficulties was higher in asthmatic than healthy children¹⁸.

Coping techniques appears to be an important psychosocial moderator between stress and negative emotions. The effect of stress is directly linked to coping. A key finding in the present study was that parents used coping techniques with emotion-focused dimensions i.e. positive reappraisal and escape avoidance. Emotion-focused coping techniques reflects an individual effort to manage the own emotional responses to stressful situation¹³. Escape avoidance coping includes wishful thinking, hoping for a miracle or avoiding thoughts and emotions related to the stressors by eating, drinking, sleeping or smoking. They face more behavioural problems in their child. Positive reappraisal techniques are spiritual/ religious based. Similar findings have been reported by Barrera *et al*, that mothers of children with chronic illness use more emotion-focused coping than mothers of children with acute illnesses¹⁹. Tseng and Chou observed that mothers coping behavior was

affected by the mother's educational level, child's age, seriousness of the child's disease, mother's age, number of asthmatic children in the family and the mother's system of belief²⁰. In another study Sales *et al* reported the role of parental coping in children with asthma, psychological well being, and asthma related quality of life²¹. It was observed that mothers who relied on more active coping strategies at baseline had children with better asthma related quality of life six months later, and those who relied more on avoidance coping techniques at baseline had children with poorer asthma related quality of life six months later.

In view of the above it is important that these children should be identified and targeted for intervention, with the ultimate goal of optimizing overall psychological and physical health and also on helping to teach parents how to better cope with the daily issues of managing a child with a chronic illness. Child-life specialists, social workers and counselors have the training in family relationship and could help these parents and families, and assist them with understanding that it takes more than just medicine to treat all aspects of asthma.

CONCLUSION

Result of the present study indicates that parents of children with bronchial asthma had higher level of stress and maladaptive coping techniques. Higher level of stress impairs the quality of life for both parents and their children. Studies have documented that in chronic conditions, providing social support to parents has been effective in reducing anxiety and worry²²⁻²³. Results of the present study suggest that intervention should be planned for chronically ill children and focus of the intervention should be on improvement in behavior of the child. Further, coping techniques play as an important role in the parent/child psychological functioning and quality of life, it is recommended that parents should be counseled to use positive way of coping (problem focused coping) to deal with stressful situation.

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