

Asthma Control Impact on the Quality of Life and Parent's Educational Degree Effect on Asthma Control among Pediatric Patients in Saudi Arabia, Riyadh City

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Abstract

Asthma is Common, Chronic, and Serious respiratory disease which affect all age groups, especially children, Asthma according to GINA 2016 now days affecting 1-18 % of the population of many different countries around the world. (1) in 2013 a study has been conducted in Saudi Arabia, findings showed that those diagnosed with asthma in KSA do not have good control over their condition; incidence of asthma attacks and referral to hospitals for asthma management were considerably high. (2) The objective of this study is to be able to describe in detail the level of Asthma control among participant and to find the correlation between the control level of the disease and the impact on the pediatric asthmatic patients' quality of life. Also, as a secondary objective we were looking for any correlations with the control of asthma with the parents' education degree. This study was carried out from 5 October 2017 until 3 November 2017, cross-sectional study with a questionnaire which was distributed. A total 559 child who was diagnosed by asthma were included in the study, For the asthma control test (see figure 1), we found the majority had uncontrolled asthma (45.1%), Most of the children scored 'Never' in Quality of Life Questionnaire when asked in nearly all twelve aspects of the child life. Our results suggest that uncontrolled asthma associated with low quality of life, we did not find any association between asthma control level and Educational degree of the parents.

Keywords: Asthma, Asthma control, prevalence of asthma, Saudi arabia, chronic airway disease

1-Introduction

Asthma is Common, Chronic, and Serious respiratory disease which affect all age groups, especially children, Asthma according to GINA 2016 now days affecting 1-18 % of the population of many different countries around the world, Asthma due to it is chronic course and variety of the intensity of the symptoms over time and because asthma could be triggered by weather changing, viral respiratory infection, exposure to allergen or irritant, it may interfere with the child life quality, where we in our study would like to investigate and measure the impact of Asthma control on children life quality in Riyadh city. ⁽¹⁾

1.1-Previous Studies:

Many studies have had been conducted all around the world studying Asthma, in 2013 a study has been conducted in Saudi Arabia to measure the prevalence of asthma, study revealed findings showed that those diagnosed with asthma in KSA do not have good control over their condition; incidence of asthma attacks and referral to hospitals for asthma management were considerably high. Another study 2015 in Ireland where 31 Asthmatic patients participated (21 female), aged 22-76yrs (mean age 43) in 8 venues. They found asthma had a significant impact on quality of life because of symptoms suffered, amount of medication required and the constant fear of exposure to triggers or events. ⁽²⁾

1.2-Theoretical framework and hypotheses to be tested:

Research into asthma control and its impact on children life quality could take many perspectives, control prospective and how well a child asthma controlled by medications and clinical follow up, and The Asthma impact prospective on child psychology, and physical activity.

Asthma control difficulty not simply due to neglect or carelessness, but could be a result of many factors including socioeconomic status, the accessibility to health care centers, proper diagnosis and proper medication compliance and adherence, patient knowledge about asthma and level of education. ⁽³⁾

Asthma impact on child life quality based on how well the asthma controlled by medication and clinical follow up, where those with low level of asthma control will suffer more than those with better level of control. The impact on the child psychology may affect the social interaction with others, school performance, and overall child behaviors, physical interfere with child play time with peers and performance in sports classes or even practice any kind of exercise. ⁽³⁾

the educational degree of the parents was not correlated with the prevalence of asthma exacerbations, found that it is not a factor to affect the asthma exacerbations, but in research has limitation in sampling the subjects, which was the unequal distribution of the educational degree among the sampled subjects, and some subject had

history of hospitalization unlike other subject, which may affect their knowledge regarding the asthma exacerbation and how to avoid it. ⁽⁴⁾

1.3-outcomes and their pedagogical implications:

The objective of this study is to be able to describe in detail the level of Asthma control among participant and to find the correlation between the control level of the disease and the impact on school performance, psychology and mood, and physical activity. Also, identify which aspect of child life is mostly affected by asthma and to make more consideration to asthmatic children in school environment and classes that has physical activity. To best direct the resources of education to the specific population who needs it, we were looking for any correlations with the control of asthma with the parents' education degree as a secondary objective.

2-Methods

All the asthmatic pediatric patients in the kingdom of Saudi Arabia, Riyadh city, are considered the population of this study, the study was carried out from 5 October 2017 until 3 November 2017. A cross-sectional study with a questionnaire which was distributed in three secondary hospitals and one tertiary hospital in Riyadh city, in the outpatient pediatric clinics waiting areas, in one school with three Primary, intermediate and high-level sections, and multiple teachers to reach the parents or the care givers of the children with asthma.

The questionnaire had demographic questions include gender, age of the child, educational degree of the parents, we also used The Arabic version of Asthma Control Test (ACT) ⁽⁵⁾, along with the Arabic version of Quality of Life questionnaire (QOL) which has been examined by community health experts who reviewed the questionnaire, the questionnaire includes physical, psychological, social, environmental health questions. Inclusion criteria any child living in Riyadh and has a history of asthma. Sampling method is convenient sampling. Statistical analysis was administered using the statistical package for social sciences (SPSS).

3-Results

3.1-Subjects characteristics:

A total 559 child who was diagnosed by asthma were included in the study, the median age of the children was 8.7 ranging from months to 18 years. About 30% of the children were females. Their age on diagnosis was distributed mainly from birth till 5 years 50% and 6 years till 12 years 49%. The father's education was Higher education in 26%, Diploma or Bachelor degree in 31% and High School in 23%, the remaining were distributed among Intermediate school (9%), Primary school (7%) and Illiterate (3%). The mother's education was Higher studies in 18%, Diploma or Bachelor degree in 37% and high school in 21%, the remaining intermediated school (8%), Primary (6%) and Illiterate (8%). See table 1 for demographic characteristics of the participants.

3.2-ACT:

For the asthma control test (see figure 1), we found the majority were uncontrolled (45.1%), with equal distribution of the children between Partial controlled (%27.2) and Controlled (%27.7).

Child Satisfaction:

results show the satisfaction of the children who were assessed in three aspects, about health, school and life and the results shows most of the children scoring 'not satisfied' regarding health (40%), School (30%) and Life (26%).

3.3-QOL:

Most of the children scored 'Never' in Quality of Life Questionnaire when asked in nearly all twelve aspects of the child life, including fitness (42%), participating in sports (31%), capacity to run (30%), good mood (26%), practicing his hobbies (28%), getting enough sleep (31%), Irritation and anger (32%), comfortable going to school daily (30%), concentration (23%), boredom (32%) and school performance (27%).

4-Discussion

Asthma Control level in correlation with QOL

Most of the children who chose 'never' in QOL questions have uncontrolled Asthma. In our research, we studied the correlation between the control of Asthma and the Quality of Life among children, our results show correlation between uncontrolled asthma and low quality of life in all aspects, physical, emotional, social and school functioning.

Asthma Control level in correlation with Parents Educational Degree

There were no correlations between parents' educational degree and Asthma Control level. Furthermore, there is was no increase in level of asthma control with increased level of education, although, higher Educational Degree were found not associated with >20 level of Asthma control, we found high number of uncontrolled asthma children have parents (the mother and father 80% and 68% respectively) with 'higher Studies' level of

education (Master and PHD, etc..).

Modifications and improvements

Some parents report difficulties to assess the child's Quality of Life and Asthma Control Test, we suggest using multiple pictures showing all aspects to accurately complete the child's Quality of Life Questionnaire. Also, we suggest using Asthma Control Test with more pictures to better assess the control of the asthma in children. Our sampling method was convenient sampling, we suggest using random sampling to better represent the population. Include a question about previous hospitalization which may play a role in the quality of life of the child would be interesting. There was under-sampling and the number of parents with low level of education were lower than the parent with high level of asthma

Contribution to the field

Our study did confirm the findings of the previous studies regarding the correlation between the level of asthma control and Quality of Life. Our study did not have significant results regarding correlation between level of education of the parents and the Asthma control level, which is the same as previous studies.

5-Conclusion

Our results suggest that uncontrolled asthma associated with low quality of life, uncontrolled asthma represents a gap in health care in school, home or health care center which will affect the child's quality of life, environmental improvement in the school and involve the child in hobbies may improve the school performance these children. We did not found any association between asthma control level and Educational degree of the parents, and thus it should not count as a strong factor that affect control of asthma.

5-References

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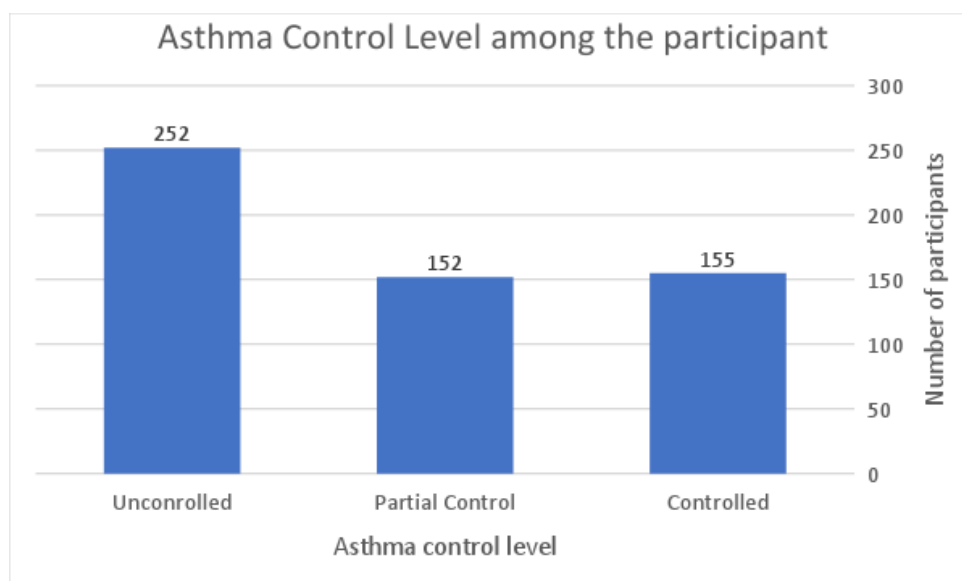


Figure 1 Asthma Control Level among the participants

Table 1. Participants Demographic Characteristics

Participants Demographic Characteristics	Minimum - Maximum		Mean	
Age	0 – 18 years		8.7 years	
	Frequency		Percent	
Gender				
Male	389		69.6	
Female	170		30.4	
Age on Diagnosis				
Birth – 5 years	288		51.5	
6 – 12 years	246		44.0	
13 – 18 years	25		4.5	
Father and Mother's Educational level respectively	frequency		percent	
Illiterate	17	43	3.0	7.7
Primary	40	35	7.2	6.3
Intermediate	50	47	8.9	8.4
High	132	119	23.6	21.3
Diploma or bachelor	174	212	31.1	37.9
Higher studies	146	103	26.1	18.4
Total	559		100.0	