

# IMPACT OF ASTHMA ON STUDENTS' MENTAL, PHYSICAL HEALTH AND ACADEMIC ACHIEVEMENT AT SECONDARY SCHOOL LEVEL DUE TO U.S DRONE STRIKES IN NORTH WAZIRISTAN AGENCY

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**ABSTRACT:** Asthma is a disease affecting the airways that carry air to and from your lungs. People suffering from this chronic condition (Long lasting or recurrent) are said to be asthmatic. The inside walls of an asthmatic's airways are swollen or inflamed. This swelling or inflammation makes the airways extremely sensitive to irritations and increases susceptibility to an allergic reaction. Symptoms are wheezing, chest tightness, breathing problems and coughing etc. The prevalence of asthma in Pakistan is increasing day by day with an annual increase of 5% of which 20% to 30% are between 13 and 15 years of age (Teenage). Nearly 12 million people about 12% of Pakistani adult population is already suffering from this disease. The study was descriptive in nature. The population of the study consisted of all 10th Class students of Govt. High Schools in North Waziristan Agency. Four hundred and three respondents were selected as sample from the selected Govt. High Schools in North Waziristan Agency. Respondents were selected by applying simple random sampling technique. The study was delimited to only 10th class students of thirty schools (15 male and 15 female Govt. High Schools (GHS) in North Waziristan Agency in which 202 were male and 201 were female. The main purpose of the study was to identify the impact of asthma on students' mental, physical health and academic achievement at Secondary school level due to U.S drone strikes in North Waziristan Agency. Data was collected through face-to-face questionnaire having five options 'Always', 'Frequently', 'Occasionally', 'Seldom' and 'Never' carrying values 5, 4, 3, 2 and 1 respectively in order to get the responses of the respondents easily and clearly. Data was entered into SPSS (Version 16.0). The size of sample was taken according to John Curry (1984) formula. Arithmetic Mean, Std. deviation and Pearson Correlation were used for data analysis. Both the results and discussion clearly shows that asthma caused due to U.S drone attacks in North Waziristan Agency negatively affected and influenced students psychologically due to which they showed poor academic grades at Secondary school level. The study concluded that U.S drone attacks caused asthma in North Waziristan Agency in which students suffered a lot mentally, physically and academically.

**Key Words:** U.S. drone attacks, asthma, students' mental & physical health, academic achievement and schools

## INTRODUCTION

Asthma affects 20 to 30% of students that lead to lower school performance [10]. Among chronic diseases, asthma is the most important cause of school absence and accounts for three times more lost school days than any other reason [8]. Many students miss school annually because of asthma [3]. Asthma is rife among school-aged African Americans and it is negatively related with educational achievement [2]. Asthma affects students' ability to concentrate, their attention powers, their participation in physical activities, their thinking power and even their energetic feelings also suffered a lot due to asthma and all these factors are highly responsible for their poor and low academic grades [5]. Asthma is a chronic lung disease and is one of the most common chronic diseases among children; it causes airway inflammation; when this inflammation occurs, the lungs react and produce muscle tightening, mucous, and swelling in the breathing tubes of the lungs and people with asthma started wheezing, cough, felt chest tightness, and had hard time breathing [4]. Approximately 75-80% of students with asthma are suffering from allergies; coughing is the most common symptom of asthma and children with asthma often start coughing after running, laughing, or crying [5]. Students suffering from asthma also suffer from allergy and more than 80% of the students with asthma have allergy sensitization [11]. The risk of dying from asthma is highest in elders and asthma deaths are more common among those living in less well-off localities [7]. Asthma is a chronic

inflammatory disorder of the airways in which many cells and cellular elements play a vital role in Lymphocytes, macrophages, mast cells, Neutrophils, eosinophil and epithelial cells [9]. In susceptible individuals, this inflammation causes breathlessness, wheezing, and coughing and chest tightness particularly at night or in the early morning. Asthma is a chronic lungs' disease and students suffering from asthma feel muscle tightening, swelling, wheeze and cough; and such type of students are feeling overwhelming too due to which they can't concentrate and can't pay attention to their studies; they have no interest in taking part in other physical activities and such type of students can't think clearly [1, 6]. Asthma is the third cause of hospitalization in schools; in case of carelessness and no proper treatment of asthma, most students face death also particularly poor and minority children suffer a lot due to asthma [12, 15].

Asthma influences a child's performance and students suffering from asthma mostly confront concentration problems, memory problems and sleep disorders [15]. Asthma is a fatal and long-term lung condition that causes serious attacks due to which a patient with asthma faces other health problems also such as coughing, wheezing, pain or chest tightness, lack of energy and shortness of breath etc. and students with asthma are particularly at risk [13]. Asthma is a fatal lung disease prevalent among children; it causes airway infection and when this

inflammation occurs, the lungs produce swelling and muscle tightening in breathing tubes of the lungs; asthmatic patient then face wheezing, chest tightening and cough and such type of patient always get tough time breathing [16, 18]. Round about sixty three million are suffering from asthma in USA [21]. Majority of the students don't grow out of asthma; almost 75 % of children with asthma suffer from other fatal disease also [17]. Students with asthma have poor concentration and attention power; they can't think clearly and such types of students lost their energy [16]. Ten million students miss schools in USA because of asthma [18].

Students suffering from asthma also suffer from other diseases such as allergies, viral respiratory infections (bronchitis, colds), and gastric reflux [16].

Emotional stress is responsible for asthma e.g. when a child laughs or cries then he or she begins to breathe rapidly; anxiety also causes asthma in children [16]. Asthma is divided into four levels or

steps based on the seriousness of the symptoms. The symptoms include shortness of breath; wheezing; rapid, shallow breathing; or needing to use stomach muscles to breathe [20]. A student with asthma lessen the energy of students; during asthma, a student is totally out of breathe and he is unable to talk; his hairs and lips also turn blue or gray; his chest suck in with each breath and his neck

muscles tighten with each breath etc. [19]. Asthma is a fatal and long-term lung condition that causes serious attacks due to which a patient with asthma faces other health problems also such as coughing, wheezing, pain or chest tightness, lack of energy and shortness of breath etc. and students with asthma are particularly at risk [14, 21].

**RESEARCH METHODOLOGY**

**Research Design**

The study was descriptive in nature.

**Population of the Study**

The population of the study consisted of all male and female students of Secondary Schools in North Waziristan Agency under the jurisdiction of BISE Bannu.

**Sampling Technique**

Stratified Random Sampling technique was used.

**Sampling Size**

The population was divided into two strata i.e. urban and rural. 30 Secondary Schools (15 urban and 15 rural) were selected randomly in which nine boys' Secondary Schools and six girls' Secondary Schools were urban. Similarly, six boys' Secondary Schools and nine girls' Secondary Schools were rural. The total numbers of respondents taken as sample were 403 as shown in the table 1 below:

**Table 1: The Sampling Framework**

Male & Female Secondary Schools of Urban Areas along with respondents as samples				Male & Female Secondary Schools of Rural Area along with respondents as samples			
Male Schools	Sampled Respondents	Female Schools	Sampled Respondents	Male Schools	Sampled Respondents	Female Schools	Sampled Respondents
9	122	6	80	6	80	9	121
<b>Grand Total of Sampled Respondents = 403</b>							

The size of the sample was determined according to John Curry (1984) formula.

**Sample Size Rule of Thumb**

10-100	100%
101-1000	10%
1001-5000	5%
5001-10000	3%
10000 +	1%

**Data Collection**

Data collection is among the vital activities in research. All successive steps depend upon precise, logical, valid and to the point latest data. In order to start with, the researcher tried his best to identify the novel research problem by deeply studying different books, magazines, journals, newspaper and internet etc. The researcher conducted various seminars with different expert psychiatrist, psychologists and educationists regarding psychotraumatic problem (Asthma) caused by U.S drone attacks and its impact on students' mental, physical health and academic achievement at Secondary school level in North Waziristan Agency. The researcher was also highly

interested to take data personally from students at Secondary schools level in North Waziristan Agency.

**Data Collection Instrument**

As a tool of data collection, the questionnaire is among the most popular and authentic instruments in the field of research. Questionnaire is less technical and easy to manage. The researcher developed a very novel questionnaire named as "Face-to-face Questionnaire" for the purpose of data collection from students about asthma caused by U.S. drone attacks in North Waziristan Agency and its impact on students' mental, physical health and academic achievement at Secondary schools level in North Waziristan Agency.

**Measurement Scale**

Like likert's scale, a novel five point measuring scale of five options "Always", "Frequently", "Occasionally", "Seldom", "Never" carry values of 5,4,3,2 and 1 respectively was used to measure the opinions of respondents. The scale is shown in the table below:

**Table 2: Illustration of Scale Applied for Data Collection**

Version	Always	Frequently	Occasionally	Seldom	Never
Numerical Values	5	4	3	2	1

**Pilot Study**

Pilot Study known as feasibility study as well, is considered to be an important part of a good research design. A very useful purpose of this study is to validate the data collection instrument through pre-testing before launching a full scale research project. In the present study, the validity evidence of the data collection instrument was cumulated through a pilot study. For the purpose of validity initial draft of the face-to-face questionnaire was administered to 13 experts i.e. 5 psychiatrists, 6 psychologists and 02 educationists etc. The experts were encouraged to suggest corrections, changes or modification in the phrases, wordings or conceptions of the questions. Final draft of the questionnaire was developed on the basis of valuable suggestions made by the experts during the preparatory phase.

For the purpose of reliability the questionnaire was administered to 50 respondents (10<sup>th</sup> class students). Chronbac Alpha formula was used for assessing the reliability of the study. Those items were dropped whose item-total correlation was .25 or less than .25. As a result, 5 items were dropped from the scale. Retained items were 32. Obtained Chronbac Alpha was .789.

**Statistical Treatment of the Data (Data Analysis)**

Arithmetic Mean, Std. deviation and Pearson Correlation was used for data analysis.

**RESULTS AND DISCUSSION**

The following tables and the graphs show a clear result that asthma caused by U.S drone attacks badly influenced the academic careers of the students at Secondary School level in North Waziristan Agency.

**Table 3: Correlation between Asthma and Academic Achievement of 10<sup>th</sup> Class Students in North Waziristan Agency**

Psycho-traumatic problems Caused by U.S drone attacks in North Waziristan Agency	Mean	S.D	r	Sig
Asthma	3.0943	1.48828	-.460**	.000

N = 403 \*p<0.05 \*\*p<0.01(2-tailed)

Table 3 shows that the Mean of Asthma = 3.0943, S.D = 1.48828, r = -.460\*\* and p = .000 so the value of p is less than 0.05 and the value of 'r' is negative therefore, there is

negative correlation between asthma and academic achievement of 10<sup>th</sup> class students in North Waziristan Agency.

**Table 4: Respondents' responses regarding Asthma Caused by U.S Drone Attacks in North Waziristan Agency**

Gender	Students' Responses					Total
	Never	Seldom	Occasionally	Frequently	Always	
Male	31 (15.34%)	08 (3.96%)	22 (10.89%)	71 (35.14%)	70 (34.65%)	202 (50.12%)
Female	36 (17.91%)	48 (23.76%)	57 (28.35%)	31 (15.42%)	29 (14.42%)	201 (49.87%)
Total	67 (16.62%)	56 (13.89%)	79 (19.60%)	102 (25.31%)	99 (24.56%)	403 (100%)

Table 4 denotes that the total numbers of respondents are 403 (100%) in which 202 (50.12%) are male and 201(49.87%) are female. Out of total 202 (50.12%) male respondents, the responses of 31 (15.34%) were never regarding the impact of asthma on students' mental, physical health and academic achievement at Secondary schools level due to U.S. drone attacks in North Waziristan Agency; 08 (3.96%) respondents showed seldom response; 22 (10.89%) respondents gave occasionally response; 71 (35.14%) revealed frequently response and 70 (34.65%) respondents gave always response respectively about the impact of asthma on students' mental, physical health and academic achievement at Secondary schools level due to U.S. drone attacks in North Waziristan Agency. In the same way out of total 201 (49.87%) female respondents, the responses of 36 (17.91%) respondents were never regarding the impact of asthma on students' mental, physical health and academic achievement at Secondary schools level due to U.S. drone attacks in North Waziristan Agency; 48 (23.76%) respondents showed seldom responses; 57 (28.35%) revealed occasionally response; 31 (15.42%) gave frequently response and 29 (14.42%) respondents showed always responses about the impact of asthma on students' mental, physical health and academic achievement at Secondary

schools level due to U.S. drone attacks in North Waziristan Agency. Similarly out of the total sampled 403 (100%) respondents including both males and females, 67 (16.62%) respondents gave never response about the impact of asthma on students' mental, physical health and academic achievement at Secondary schools level due to U.S. drone attacks in North Waziristan Agency; 56 (13.89%) respondents showed seldom response; 79 (19.60%) respondents revealed occasionally response; 102 (25.31%) respondents gave frequently response and 99 (24.56%) respondents showed always response respectively regarding the impact of asthma on students' mental, physical health and academic achievement at Secondary schools level due to U.S. drone attacks in North Waziristan Agency.

**CONCLUSIONS**

Based on analysis and interpretation of data, it was concluded that the correlation tables clearly showed that asthma had high negative impact on students' academic achievement at secondary school level in North Waziristan Agency and asthma stricken students were highly disturbed physically, mentally and psychologically and they always showed poor academic achievement due to intense asthma.

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