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Awareness and Impact of Chronic Obstruct Pulmonary Diseases (COPDs) Asthma on the Global Economy

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Abstract:

Majority of Africans knows that Asthma is hereditarily caused. Developing Asthma at a later stage in life is spiritually caused and are not aware of the environmental and lifestyle as causes of Asthma. In 2016, the Global Burden of Disease collaboration estimated that 420,000 people in the world died from asthma – more than 1000 per day. International mortality statistics for asthma are limited to those countries reporting detailed causes of death exceeding the death rate of any pandemic globally in a single year. Over 330 million individuals in the world have asthma, with future increases expected. Not only is the prevalence of asthma increasing, but per-patient costs also appear to be on the rise. Developing countries are facing an even steeper increase in the future burden of asthma, and patients often do not have reliable access to the essential asthma medicines. Chronic Obstruct Pulmonary Diseases such as Asthma is gradually becoming a thorn in the flesh of the world economies. It is not only reducing the productive hours of the active labour force, but is equally draining the gains made by the individuals who have it.

Keywords: Asthma, chronic obstruct pulmonary disease, hereditary, environment, spiritual

1. Introduction

According to new estimates for 2030, Chronic Obstruct Pulmonary D is predicted to become the third leading cause of death. The global scenario of diseases is shifting from infectious diseases to no communicable diseases, with chronic conditions such as heart disease, stroke and chronic obstructive pulmonary disease (COPD) now being the chief causes of death globally. World health statistics 2008 based on data collected from WHO's 193 Member States. This annual report is the most authoritative reference for a set of 73 health indicators in countries around the world. (WHO, 2008; The Global Asthma Report 2018). Many people in Africa though are aware of the disease.

A prevalence disease but yet silent that is sweeping many lives unnoticed, crashing families and robbing economies of the world of their expertise is Asthma, one of the Chronic Obstruct Pulmonary Diseases. Though it is a known disease according to science, yet no laboratory experiment and other clinical innovations has been able to find a cure for it. Majority of the people in Africa believes that with the exception of hereditary (birth) transmission of Asthma, any other person who develop Asthma at a later stage in life may be the activity of witchcraft (spiritual factor).

Until the recent novel Covid-19 struck the world and made many of the greatest economies powerless, COPD such as Asthma has been an albatross on the neck of many nations causing them to loss both manpower and resources. It is believed that Asthma takes more life in Africa than any other known disease but lacks proper attention at most of the health facilities in Africa. Nebulising, antibiotics, inhalers and other medicines such as Viscof-S and Salbutalin are the known means of curtailing the disease. It a known fact in Africa that when detected at the early stage in a child's life, traditional medicines can treat it but the same cannot be treated if the person grows with it. The study seeks to establish the actual causes of COPDs such as Asthma in Africa, what can be done to reduce its economic impacts, as well as the direct economic impact in terms of monetary value to the global economies.

2. Literature Review

Several academic researchers have not been able to discover its specific cause of COPD such as Asthma but attribute the development of Asthma to many factors ranging from environmental to lifestyle, respiratory infection and not forgetting hereditary (Shuan J.,2015) and (Zumin S., Per N., Lise L.H., et al (2012). According to National Heart, Lung and Blood Institute (2014) there are several causes of asthma such as allergies, food and food additives, exercise, heartburns, smoking, sinusitis, medications, weather and smoke. International Study of Asthma and Allergies in Childhood (ISAAC), 2011 further states that about eighty percent (80%) of asthma causes are allergies related. The American Lung Association (2016) stated in their publications that genes and environmental factors such as early infection with respiratory viruses increase the risk of childhood asthma. D'Amato G, Pawankar R, Vitale C, Lanza M, Molino A, Stanziola A, et al 2016; indicates that studies in animals and peoples have increasingly implicated a gene called ORMDL3 in asthma

development. The study continues that genes variants that increase ORMDL3 increase asthma risk. In addition to this, stimulation of human blood cells with rhinovirus, an asthma trigger, increases production of ORMDL3. Focus Medica (2018) also states that extreme emotional responses, medications such as aspirin, beta-blockers or NSAIDs can contribute to asthma. Additional causes include gastro oesophagus reflux diseases, dietary insufficiencies such as in vitamins C and E, and Omega-3 fatty acids Britton J., (2003); Ma Y, Zhao J, Han ZR, Chen Y, et al (2009). Other causes according to Focus Medica are motherhood at young age, poor maternal nutrition, lack of breast feeding, premature birth and low birth weight. These causes as has been stated by Focus Medica is very complicated and makes everybody irrespective of one's family background, age, race or gender become susceptible to asthma due to its numerous factors that can causes the disease (Suisa S, Ernst P, Boivin JF, and Horwitz RI, et al (1994); and EUROSTAT (2014).

NHIS (2018) in their survey revealed that an indirect assessment of the adverse effects on health of environmental factors in a vulnerable age group as babies indicates that the post-neonatal infant death rate from respiratory diseases depends on many different factors, including indoor and outdoor air pollution. Yangzong et al (2012). It is well known that the prevalence of asthma has been reported to increase in many places around the world during the last decade. According to Abba K, Clarke S, Cousins R, (2004), the causes of asthma and why asthma seems to have increased is still not well understood. The increase in asthma prevalence has been suggested in some way to be related to western lifestyle factors, as most often increased prevalence rates are reported from westernized countries. (Wei XJ, Li MX, Jiao P, Ma SX (1993); and Asthma cases have risen dramatically in China over the past decade along with ever deteriorating air pollution, according to leading respiratory specialists. The prevalence of asthma nationwide stands at 1 to 2 percent, while in some cities it can reach more than 10 percent, ISAAC (2011). The potentially fatal disease has risen quickly across the nation, with Shanghai recording the fastest increase in prevalence of 190 percent over the past decade (Shuan J, 2015; and Lee SL, Wong W, Lau YL, 2004). According to the Centres for Disease Control and Prevention (2018), Asthma causes swelling of the airways. This results in narrowing of the airways that carry air from the nose and mouth to the lungs. Allergens or irritating things entering the lungs trigger asthma symptoms. Symptoms include trouble breathing, wheezing, coughing and tightness in the chest. Asthma can be deadly. (Ellwood P, Williams H, Ait-Khaled N, Bjorksten B, 2009; and Zhang F et al 2003).

2.1. Prevalence of Asthma

WHO published its first Air Quality guidelines for Europe in 1987, with a second edition in 2000? After partial updating in 2005, the fully revised WHO Air Quality guidelines have now been published. According to WHO's assessment of the burden of disease, more than two million premature deaths occur each year worldwide and this can be attributed to the combined effects of indoor air pollution from the use of solid fuel (approximately 1.5 million deaths) and urban outdoor air pollution (approximately 800 000 deaths) (World Health Organisation, 2009).

Global Initiative for Asthma (2014) and The Global Asthma Report (2014) indicated that on average, 12.9% of post-neonatal deaths in European countries are due to respiratory diseases and these diseases caused 0.5 deaths per 1000 live births (Slack R, Godley CC, and Graham LM, and Divgi V, 2011) This average rate, however, masks wide variations ranging from zero deaths per 1000 live births in Austria, Finland, Luxembourg and Slovenia to 4.6 per 1000 live births in Kyrgyzstan (Greiling AK, Boss LP, Wheeler LS, (2005). In general, rates are considerably higher in Eastern than in Western Europe (WHO Global Surveillance 2007). Mortality data from 2006 show that respiratory diseases contributed substantially to the overall post-neonatal infant death rate in Romania (55.7%), Kyrgyzstan (52.6%) and the Republic of Moldova (38.9%), (Gennaro D, Carolina V, Antonio M, & Anna S, et al 2016; Wong GW, Hui DS, Chan HH, and Fok TF, et al (2001). A major cause of the high infant death rates seen in Eastern Europe is the relatively worse economic and environmental situation in those countries, which could also be why a greater proportion of acute respiratory infections are severe (World Health Organisation, 2009); It could be said however that the environmental conditions in these countries as stated is better than many other countries in the world. Therefore, a high incidence of death rate among children in these countries indicates a very bad picture for the other countries such as those in Africa.

2.2. Asthma Prevalence in China

In the International Study of Asthma and Allergies in Childhood (ISAAC) articles the lifetime prevalence of asthma varied between 1.1% in Lhasa (Tibet) and 11.0% in Hong Kong. The lifetime prevalence was higher among children in Hong Kong compared with children from other cities like Beijing and Guangzhou both among children aged 9–11 and 12–14 years (Ma Y, Zhao J, Han ZR, and Chen Y, et al 2009). In contrast, the lifetime prevalence of asthma among children aged 6–7 years was higher in Beijing compared with Hong Kong and Urumqi. One article from Beijing reported that the lifetime prevalence was higher in an urban compared to a rural area (6.3% vs. 1.1%) while lifetime prevalence was lower in an urban than a rural area based on reports from two studies in Tibet (1.1% vs. 2.5%). One article reported current prevalence of asthma among 10-year-old children in Hong Kong, Beijing and Guangzhou (3.3%, 2.3% and 2.1%, respectively) Lee SL, Wong W, Lau YL, (2004; and ISAAC, 2011).

Lifetime prevalences of all five asthma symptoms based on ISAAC, were highest in Hong Kong. Tibet had the lowest reported prevalences of asthma symptoms and the prevalences were higher in the rural area of Tingri and Sakya than in an urban area of Lhasa (Droma Y, Kunii O, Yangzom Y, and Shan M, et al (2007). In Guangzhou the prevalences of asthma symptoms were higher in 2001 than in 1994–1995 for four of the symptoms. Lifetime prevalences of all five asthma symptoms based on ISAAC video questionnaire, were highest in Hong Kong. Tibet had the lowest reported prevalences of asthma symptoms and the prevalences were higher in the rural area of Tingri and Sakya than in an urban area of Lhasa. In Guangzhou the prevalences of asthma symptoms were higher in 2001 than in 1994–1995 for four of the symptoms (ISAAC, 2011).

For the asthma prevalence based on the Chinese diagnostic criteria, the current prevalence of childhood asthma from 42 different places in China, most of the results are extracted from two national surveys of a total of 399,193 children aged 0–14 from 1990 and 287,329 in 2000 all living in urban areas. The average current prevalence of asthma increased from 0.9% to 1.5% based on estimates from a national survey of children in 27 cities in 1990 and 2000 and statistically significantly increased in 22 out of 27 cities with estimates from both time points. Age stratified analysis showed that the prevalence has increased in most age groups [13]. In addition, the researchers identified three more articles from urban areas carried out in the same period. The highest current prevalence was found in Chongqing (2.6%) and the lowest in Lhasa (0.1%) in 1990. In 2000, the highest current prevalence was found in Hefei (3.9%) and the lowest in Xining (0.1%). With a few exceptions, cities located in eastern China had higher current prevalences than cities in other parts of the country. There was no clear trend in current prevalence of childhood asthma according to the study populations' living altitude besides that the lowest current prevalence was reported from Lhasa (3,700 meters above sea level) and Xining (2,200 meters above sea level) (ISAAC 2011; Shuan J, 2015)

Shuan J., (2015) states that asthma is the leading cause of hospitalization among children in China and imposes a significant burden on their families. Patients with the condition have increased rates of work absenteeism. She added that A 36-year-old patient surnamed Wang, from Hebei province, said he used to be hospitalized three times a year in Beijing for serious asthma attacks. He was diagnosed with the disease after having it for more than a year. The Asia Asthma Development Board said China has the world's highest mortality rate from asthma, with 36.7 out of 100,000 patients failing to survive. (Shuan J, 2015).

The hospitals and ante natal clinics should not obtain the residential and occupational addresses of the expectant mothers to be able to contact them and know where the expectant mothers are coming from but rather the information obtained from them can be used to determine whether the environment where the expectant mother lives or works contain some risk factors that can influence the possibility of the baby getting a COPD such as Asthma. Ascertaining the risk factors influence can then prompt the health providers to give the expectant mother medicines that have the probability of stopping the environmental risk factors on having effect of the baby such as the health providers do for the expectant mothers as deworming and Malaria at the ante natal care. This measure is necessary since the causes of COPDs such Asthma and why it continues to increase is not well understood (Zumin S, Per N & Lise LH., et al 2012).

There is also a strong believe that traditional medicines can help eradicate Asthma. Therefore, the Governments should focus much attention on researching into traditional medicines and extend it to cover homeopathic and naturopathic medicines since the orthodox means of curtailing the Chronic Obstruct Pulmonary Diseases such as Asthma has not been that effective in its efforts to find cure for it but rather stresses on effective management of the situation (Centres for Disease Control and Prevention, 2018).

Wang KK, Jain S, Blanton L, & Dhara R., et al (2012) states that COPD's such as Asthma is caused by several factors such as allergies etc., institutions whose environment contain factors that may create the possibility of the workers getting the disease must put mechanisms that are effective enough to ensure that the environment does not have such impact on the workers and or the impact be reduced to its barest minimum and the employees given health risk packages (Centres for Disease Control and Prevention, National Vital Statistics Report 2013). Scientific measures would have to be adopted to reduce the propensity of parents passing on and or engaging in activities that will cause the unborn babies from contracting Asthma.

The effect of the COPD's if not checked can be drastic for the economies of the world since it is in every country. It is therefore incumbent on the various Governments to deploy adequate resources into finding solution to this gradually growing menace. CDC, (2017), and Abba K, Clarke S, Cousins R, (2004) states that Asthma attack on the child or an employee means loss of working time and thus loss in productivity that affect the GDP of the country. Investing and finding solution to this menace will also create employment for the country and help generate income and foreign exchange for the nation through export sales and or overseas production.

2.3. Prevalence of Asthma in the United States

Centres for Disease Control and Prevention (2018), indicates that there is no cure for asthma, but it can be managed with proper prevention of asthma attacks and treatment (Matsui E.C, Abramson S.L, Sandel, M.T, 2016; National Health Interview Surve (2018). According to the publication, more Americans than ever before have asthma and that it is one of the country's most common and costly diseases and that 1 in 13 people have asthma. They further stated that more than 25 million Americans have asthma and that represents 7.7 percent of adults and 8.4 percent of children (National Cooperation Group on Childhood Asthma (NCGCA), (1998). Asthma has been increasing since the early 1980s in all ages, sex and racial groups in the United States. Asthma is more common in adult women than adult men. African-Americans in the U.S. die from asthma at a higher rate than people of other races or ethnicities (Royal College of Physicians 2014; Targonski PV, Persky VW, Ramekrishnan V, 1995; Wijesinghe M, Weatherall M, Perrin K, and Crane J, et al 2009; and Hill TD, Graham LM, Divgi V, 2011). More than 11.4 million people with asthma, including more than 3 million children, reported having had one or more asthma episodes or attacks in 2017. Asthma is the leading chronic disease in children (Kurukulaarachy RJ, Fenn M, Twiselton R, & Matthews S., 2012). Asthma is more common in children than adults (Zhao SW, Wang WG, Lu AP, and Wang J., et al 2002). Asthma is more common in boys than girls. Currently, there are about 6.2 million children under the age of 18 with asthma in the United States alone. In 2017, 1 in 12 children had asthma. It was the top reason for missed school days. In 2013, about 13.8 million missed school days were reported due to asthma. (Centres for Disease Control Prevention 2018; Centres for Disease Control and Prevention National Current Asthma Prevalence 2017; and Asher MI, Keil U, Anderson HR, Beasley R, and et al 1995). According to Centre for Disease Control and Prevention (2016), In 2015, however 47.5 percent of children age 18 and younger who had asthma reported having

one or more asthma attacks in the past year. Asthma episodes have declined in children from all races and ethnicities from 2001 through 2016 (Manning PJ, Goodman P, O'Sullivan A, Clancy L, 2007; Wijesinghe M, Weatherall M, Perrin K, and Crane J, et al 2009). In 2016, about 50 percent of children under the age of 5 with asthma had an episode. Emergency Department and Urgent Care Center (which in other jurisdictions is known as Intensive Care Units) visits are highest among Black children under 4 years old (Centre for Disease Control and Prevention, 2018). Asthma accounts for 9.8 million doctor's office visits, 188,968 discharges from hospital inpatient care and 1.8 million emergency department visits each year. Each day, ten Americans die from asthma, and in 2017, 3,564 people died from asthma. Many of these deaths were avoidable with proper treatment and care (US Department of Health and Human Services, 2018; CDC, 2018). From 2008-2013, the annual economic cost of asthma was more than \$81.9 billion – including medical costs and loss of work and school days: \$3 billion in losses due to missed work and school days, \$29 billion due to asthma-related mortality, and \$50.3 billion in medical costs. The annual per-person incremental medical cost of asthma was \$3,266 (US Dollars) in 2015 (Astsournals.org. 2018; Global Initiative for Asthma, 2014; CDC, 2018).

Asthma and Allergies Foundation for America's (2016), published with the National Pharmaceutical Council its ground-breaking research report on Disparities in Asthma Care. Racial/ethnic differences in asthma frequency, illness and death are highly connected with poverty, city air quality, indoor allergens, not enough patient education and poor health care (Zureik M, Neukirch C, Leynaert B, and Liard R, et al 2002). This may account for the reason why asthma is higher in Africa particularly and some Less Developed Countries in the world. American Lung Association (2012) states that the prevalence of asthma episode is highest among Puerto Ricans compared to all ethnic groups. African-American children have the highest prevalence of asthma. African-Americans in the U.S. die from asthma at a higher rate than people of other races or ethnicities. African-Americans are three times more likely to die from asthma, especially African-American women, than any other group. African-Americans are three times more likely to stay in the hospital from asthma. D'Amato G, Pawankar R, Vitale C, and Lanza M, et al (2016). About 13.4 percent of African-American children have asthma, compared to about 7.4 percent of white children with asthma (CDC, 2019). The National Health Interview Survey (Data), (2017), the National Centre for Environmental Health (2018) report updated and published by the Centre for Disease Control and Prevention (2019) presented the current National Asthma Prevalence for both adults and children in the United States.

2.4. *The Economic Burden of Asthma*

Moshen S, Solmaz EA, Mark F, and Tari H, et al (2018); Global Asthma Report (2018) indicates that Asthma continues to be a major source of global economic burden in terms of both direct and indirect costs. Given that asthma cannot be cured or effectively prevented, attempts at reducing costs should focus on better disease management (Centres for Disease Control and Prevention (2018); Boulet LP, (2014). This approach is consistently associated with significant reduction in asthma costs. Improving access to care, especially to controller (including preventer) therapies, and better adherence to such therapies can significantly reduce the economic burden of asthma. The economic burden of a disease is the product of its prevalence; the costs due to consumable healthcare services and products such as hospital services, doctor visits, and medicines (direct costs of the disease); and costs to society, due to loss of work productivity of patients or their caregivers (indirect costs of the disease) (Global Initiative for Asthma 2014; Kaur BP, Lahewala S, Arora S, and Agnihotri K, et al 2015). There are challenges in estimating each of these components. For example, diagnosis of asthma may be subjective, resulting in underdiagnoses of asthma in some jurisdictions and over-diagnosis of asthma in others. Estimating direct costs is also challenging. For example, in a patient who suffers from both clinical depression and asthma, it is difficult to decide if clinical depression is because of asthma symptoms and as such should count towards costs of asthma (Alvarez GG, Schulzer M, Jung D, Fitzgerald JM, 2005). Robust estimation of the impact of asthma on work productivity is challenging and those that have addressed the issue mostly overlook the fact that individuals with asthma might have reduced work performance even if they attend the workplace (presenteeism) (Mohsen S, Ehteshami-Afshar S, et al 2018); (National Health Interview Survey, 2019).

Chung KF, Wenzel SE, Brozek JL, and Bush A, et al (2014); National Health Interview Survey. (2018) and Artsjournals.org (2018), states that a recent review on the economic burden of asthma demonstrated wide variations in costs across countries. Annual direct costs varied from less than US\$150 per patient (Abu Dhabi, United Arab Emirates) to more than US\$3,000 per patient (United States of America (USA), a 20-fold difference). At the national level, the total annual asthma costs in the USA increased from US\$53 billion (US\$60 billion*) in 2002 to US\$56 billion (US\$64 billion*) in 2011. Total costs of asthma for people aged 15 to 64 living in Europe were €19.3 billion (US\$24.7 billion*) during 1999-2002, while in the United Kingdom alone the costs were £5 billion (US\$9.8 billion*). Unfortunately, reliable national estimates of costs are not available for the vast majority of developing countries. (World Health Organisation, Global Surveillance 2007; Global Asthma Report, 2018; Zureik M, Neukirch C, Leynaert B, Liard R, et al 2002).

In North America and Europe, asthma medicines were the largest component of direct medical costs. On the other hand, in the Middle East and Southeast Asia, outpatient costs, doctor visits, and visits to Emergency Departments were responsible for a greater proportion of the total costs. Cost estimates often ignore indirect costs but studies reporting indirect costs of asthma consistently demonstrate that these costs constitute a significant aspect of the economic burden. (Global Asthma Report 2018; www.globalasthmareport.org)

The 2002 cost of asthma in the USA of about \$60 billion is a 6-10 years Gross Domestic Product of a country in a developing world. If upon all the huge cost of asthma in the US and the other powerful countries, asthma is still prevalence and sweeping lives away unexpectedly in the USA, Europe, China etc., then in other countries without the shucks of these countries, lives are been blown away as wind blows dust. Proper data on this particular disease may even be absent and if available may not reflect the actual figures.

Male Both Female								
1	KIRIBATI	40.79	62	LIBERIA	10.02	123	CHINA	1.72
2	SRI LANKA	32.23	63	SAMOA	9.93	124	ARGENTINA	1.69
3	MALI	31.85	64	DJIBOUTI	9.67	125	CUBA	1.67
4	MYANMAR	31.72	65	MOROCCO	9.65	126	TURKMENISTAN	1.60
5	CENTRAL AFRICA	26.87	66	BHUTAN	9.43	127	GEORGIA	1.54
6	LAOS	25.96	67	MOZAMBIQUE	9.22	128	MACEDONIA	1.50
7	FIJI	24.96	68	VIET NAM	9.19	129	VENEZUELA	1.50
8	SIERRA LEONE	23.72	69	RWANDA	9.01	130	BAHAMAS	1.48
9	NEW GUINEA	23.65	70	TANZANIA	8.77	131	MEXICO	1.42
10	CAMBODIA	21.95	71	CAPE VERDE	8.73	132	UKRAINE	1.36
11	CHAD	21.85	72	GABON	8.54	133	ISRAEL	1.34
12	LESOTHO	21.50	73	ZAMBIA	8.21	134	BRAZIL	1.31
13	COTE D IVOIRE	21.22	74	IRAN	8.11	135	BOSNIA/HERZEG.	1.26
14	TIMOR-LESTE	19.55	75	PAKISTAN	7.84	136	KYRGYZSTAN	1.24
15	PHILIPPINES	19.47	76	THAILAND	7.76	137	AUSTRALIA	1.21
16	MADAGASCAR	19.36	77	SEYCHELLES	7.66	138	PERU	1.18
17	AFGHANISTAN	19.26	78	KENYA	7.62	139	CHILE	1.17
18	INDONESIA	19.23	79	TUNISIA	7.11	140	BOLIVIA	1.17
19	ANGOLA	18.99	80	BRUNEI	6.16	141	ESTONIA	1.11
20	SOMALIA	18.87	81	NORTH KOREA	5.80	142	RUSSIA	1.06
21	SWAZILAND	18.11	82	LIBYA	5.74	143	UNITED KINGDOM	1.06
22	DR CONGO	17.72	83	BAHRAIN	5.10	144	NEW ZEALAND	1.00
23	TOGO	17.27	84	MALAYSIA	5.10	145	LATVIA	0.99
24	SAO TOME	16.94	85	MONGOLIA	5.07	146	BELARUS	0.97
25	BENIN	16.91	86	UZBEKISTAN	5.03	147	FRANCE	0.96
26	NEPAL	16.38	87	BELIZE	4.83	148	UNITED STATES	0.95
27	NIGER	16.37	88	ALGERIA	4.68	149	NORWAY	0.93
28	GUINEA	15.85	89	MALDIVES	4.65	150	COSTA RICA	0.89
29	GAMBIA	15.67	90	TRINIDAD/TOB.	4.55	151	SPAIN	0.89
30	GUINEA-BISSAU	15.60	91	GUYANA	4.43	152	POLAND	0.86
31	SOLOMON ISL.	14.74	92	LEBANON	4.40	153	IRELAND	0.81
32	EQU. GUINEA	14.63	93	DOMINICAN REP.	4.15	154	LITHUANIA	0.81
33	CAMEROON	14.27	94	ARAB EMIRATES	4.14	155	ECUADOR	0.76
34	NAMIBIA	14.23	95	SAUDI ARABIA	4.09	156	COLOMBIA	0.76
35	ERITREA	14.16	96	EGYPT	3.75	157	LUXEMBOURG	0.74
36	BURUNDI	14.12	97	SAINT VINCENT	3.73	158	FINLAND	0.74
37	NIGERIA	13.90	98	ANTIGUA/BAR.	3.61	159	ARMENIA	0.73
38	SOUTH AFRICA	13.61	99	GUATEMALA	3.34	160	SWEDEN	0.71
39	ZIMBABWE	13.24	100	TURKEY	3.34	161	ROMANIA	0.70
40	SOUTH SUDAN	13.12	101	IRAQ	3.33	162	SINGAPORE	0.69
41	VANUATU	13.11	102	JORDAN	3.30	163	BELGIUM	0.69
42	HAITI	12.94	103	NICARAGUA	3.17	164	CZECH REPUBLIC	0.68
43	COMOROS	12.65	104	ALBANIA	3.12	165	GERMANY	0.67
44	MICRONESIA	12.58	105	EL SALVADOR	3.03	166	JAPAN	0.66
45	BOTSWANA	12.57	106	KUWAIT	3.02	167	MALTA	0.63
46	BURKINA FASO	12.45	107	TAJIKISTAN	2.96	168	HUNGARY	0.62
47	YEMEN	12.34	108	SURINAME	2.93	169	QATAR	0.62
48	TONGA	12.27	109	BARBADOS	2.88	170	SWITZERLAND	0.60
49	MAURITANIA	12.08	110	URUGUAY	2.68	171	CROATIA	0.60
50	ETHIOPIA	11.98	111	JAMAICA	2.42	172	PORTUGAL	0.58
51	GHANA	11.82	112	HONDURAS	2.41	173	SLOVENIA	0.58
52	SENEGAL	11.80	113	SOUTH KOREA	2.37	174	SLOVAKIA	0.54
53	KAZAKHSTAN	11.61	114	PANAMA	2.09	175	DENMARK	0.52
54	SYRIA	11.39	115	SERBIA	2.08	176	MOLDOVA	0.49
55	INDIA	11.35	116	PARAGUAY	2.08	177	CANADA	0.45
56	BANGLADESH	11.32	117	AZERBAIJAN	1.99	178	ICELAND	0.42
57	MAURITIUS	10.99	118	SAINT LUCIA	1.97	179	AUSTRIA	0.42
58	CONGO	10.95	119	CYPRUS	1.96	180	NETHERLANDS	0.39
59	UGANDA	10.82	120	OMAN	1.91	181	GREECE	0.39
60	MALAWI	10.46	121	GRENADA	1.89	182	BULGARIA	0.38
61	SUDAN	10.23	122	MONTENEGRO	1.78	183	ITALY	0.34
Rank	Country	Rate	Rank	Country	Rate	Rank	Country	Rate

Table 1: ASTHMA Death Rate Per 100,000: Age Standardized

ICD-10 CODES: J45-J46

Data rounded. Decimals affect ranking.

Data Source: WORLD HEALTH ORGANIZATION

Age Adjusted Death Rate Estimates: 2017

Calculations Provided by World Life Expectancy

Data Accuracy Not Guaranteed

WHO Excludes Cause of Death Data For the following countries: Andorra, Cook Islands, Dominica, Marshall Islands, Monaco, Nauru, Niue, Palau, Saint Kitts, San Marino, Tuvalu.

3. Methodology

The researchers established a group of students to assist in the data gathering and thus used snowball nonprobability sampling and visited one hundred and sixty-three (163) deep litter poultry farms belonging to individuals running it under sole proprietorship. One hundred and twenty-seven (127) building and road construction sites were visited by the researchers in Ghana, where a group of artisans such as masons, steel benders, plumbers, labourers and a team of engineers on site. One hundred and eighty-five (185) painters including the contractors, sub-contractors and their labourers worked on both private projects and government contracts. One hundred and fifty (150) carpenters ranging from large scale to small scale manufacturers of all kinds of furniture were also visited. The researchers visited these groups of workers to ascertain the impact of the environment in relation to chronic obstruct pulmonary diseases on the blind side of people ignorant of this serious and deadly disease. From the observation made by the researchers and some interviews held with people with allergens and asthma diseases, it appears the environment contributes greatly to this disease than hereditary and other causal agents or factors as in the case of CDC (2016) Report. Among workers in the wood products manufacturing industry, 57.3% reported having an asthma attack in the last year which was the highest rate of all industries. Workers in the plastics and rubber products manufacturing were second most likely to suffer from an asthma attack, at a rate of 56.7%.8. According to Table 1 published by the World Health Organisation (2017), it has been clearly established that the death rate per 100,000 is higher in Africa than any other continent of the world due to ignorance and negligence.

4. Discussion

In 2016, the Global Burden of Disease collaboration estimated that 420,000 people in the world died from asthma – more than 1000 per day with over 330 million patients having Asthma. International mortality statistics for asthma are limited to those countries reporting detailed causes of death. This death rate exceeds that of any of the global pandemic death rate in a single year but it is not receiving much attention in the world particularly the Less Developed Countries.

Figure 1: Causes of Asthma

It is a known fact on the continent of Africa that Asthma is a problem from birth and thus in the blood line. It is therefore difficult for one to believe of getting the disease at a later stage in life. Asthma is believed on the African continent to be among the diseases that can be transmitted or in other words bought for a person spiritually because those believed to be possessing evil spirits in one's family wants to prevent the affected person from fulfilling his dreams on earth. Causes of Asthma such as lifestyle, environmental factors and respiratory infection are not much known but rather, it is highly believed to be caused spiritually. There are many untarred roads in human settlements where dust has changed the green leaves of plants and houses in the communities brown. There were senior high schools located along many of these dusty untarred roads particularly in the Ashanti, Volta, Eastern and some parts of the Greater Accra Regions in Ghana where the researchers visited. If houses and trees had turned brown, then what is the effect of this dust on the human respiratory system of the people and students living in these communities? Some people because of their belief of spiritually caused Asthma, instead of seeking medical attention resort to spiritual sources to deal with the problem. Instead of seeking scientific support to prevent attacks from Asthma, they rather resort to fetish priests, Mallams for concoctions with no scientific proof whilst others resort to pastors for prayers. Most people with the believed spiritually caused Asthma may report to the health facilities at a time and stage when it is difficult to manage the problem. This therefore contributes to the high death rate of Asthma but are not factored into the national statistics (mortality rate) and thus the inaccurate records of the disease in Africa.

Figure 2: Artisans and Level of Protective Gear Usage

Predominantly artisans in Africa do not use any protective gears at their various fields of work. Either that the cost of using the protecting gear will reduce their profits, or do not see the need to protect themselves. The high prevalence rates of Chronic Obstruct Pulmonary Disease such as Asthma in Africa is due to ignorance, negligence and unawareness for the possibility of being infected with the disease. There was a case in Koforidua Technical University where there wasn't a single person wearing a protective gear within the engineering school whilst the entire workers were working on concretes and thus tearing cements and mixing it with sand. Since the economic disadvantage of COPDs are very devastating on the world economies particularly that of Africa requires very serious sensitisation among artisans, construction labourers, poultry farmers and other identifiable groups to use protective gears on-site to reduce environmental causes of COPDs. Voluntary groups in communities, Universities and Senior High Schools should be established across each country in Africa and other high COPD prevalence rate countries to ensure its reduction. From the discussions held with the respondents, it was established that most of the artisans weren't aware of the fact that they could contract a respiratory infectious disease from the dust they inhale into their system which could drain them from all their gains in terms of savings made for their life time.

Health professionals must educate expectant mothers in the communities that they live and the consequences it may have on their babies during the ante natal period when the address they give and the activities within their neighbourhood and the work they themselves do will have on their expecting babies to enable them reorganise themselves to reduce the probability of the babies contracting the COPDs. The information taken by the health professionals obtain from expectant mothers should go beyond their house number, and the work they do to include the environment they live and the kind of activities that goes on in the community so they can give appropriate advice. Vaccines must be developed to be given to babies between a day old to the age of five as has been done for polio and tuberculosis to prevent children from developing COPDs. In this area, the United Nations and the World Health organisation has provided funds for some individuals with specialities in this field and Center for Scientific Research into Plant Medicine for further studies and to find solution to this all-important disease but the researchers also suggest more funding into homeopathic and naturopathic perspective into finding and end to this all-affected problem.

Asthma continues to be a major source of global economic burden in terms of both direct and indirect costs. Given that asthma cannot be cured or effectively prevented, attempts at reducing costs should focus on better disease management. This approach is consistently associated with significant reduction in asthma costs. Improving access to care, especially to controller (including preventer) therapies, and better adherence to such therapies can significantly reduce the economic burden of asthma. In view of this people living in dusty areas and construction sites including those selling along dusty roads must be educated to put on nose mask to reduce the rate of inhaling the dust into their system. Much education should go into the communities by using information centres broadcasting devices and making of posters to file at public places. Radio and television documentaries should be developed in attempting to reduce the menace in the future in Africa. Sensitising the masses about the causes and contraction of respiratory problems that culminates into Chronic Obstruct Pulmonary Diseases will reduce the further spread and thus reduce the economic burden on the global economies.

5. Conclusions

African Governments and politicians must bear in mind that nations are built with people must reduce spending and misusing public funds on political activities but direct most of the funds into the health sector to support the needy and the poor who cannot bear their medical expenses and equipping the health facilities with modern health facilities and giving specialised training to the health professionals. From 2008-2013, the annual economic cost of asthma in the United States was more than \$81.9 billion – including medical costs and loss of work and school days: \$3 billion in losses due to missed work and school days, \$29 billion due to asthma-related mortality, and \$50.3 billion in medical costs. The annual per-person incremental medical cost of asthma was \$3,266 (US Dollars) in 2015. 30 million people in mainland China having Asthma with the per capita direct medical cost of RMB 525 (USD 75). According to Shanjuan, the average cost of hospital treatment for Asthma is 11,000 Yuan (USD 1,590) in China. Asthma costs the U.K economy 5 billion GBP (9.8billion USD) and 28 billion USD in Australia every year. A sum of the cost of Asthma on these Powerful economies of the world not forgetting Europe and others gives the indication that Asthma is a major threat to the world economies than any of the pandemics the world has ever experienced with exception being given to the novel Covid-19, as these costs

keeps emerging and increasing year after year. Even with these, reliable estimates of costs are not available for the vast majority of the developing countries. Asthma must be given attention as HIV/AIDS and thus require massive sensitisation amongst all categories of people and the enactment and application of more practicable policies to ensure great reduction in the spread and transmission of Asthma. Effective monitoring system to ensure the use of protective gears by the artisans should be implemented. Radio and television stations supported by the various Ministries of health should develop education campaigns at least thrice in a week on their stations. Asthma is not spiritually caused and thus affected persons must seek for medical attention.

The researchers are of the view that the impact of Chronic Obstruct Pulmonary Diseases (COPDs) on the world economies though silent and gradual but very devastating than most of the pandemic diseases such as HIV, Sars, Ebola, Swine Flu, Bird Flu amongst others which hits the economies of the world once in a while. Prevention of COPDs such as Asthma is key to global economic growth and reduction to both individual and Governmental spending on the disease. Governments and other agencies must ensure strict compliance of the 'Ten Points of Clearing the Air of Asthma Triggers and Making Your Home Friendly' developed and published by the Environmental Protection Agency in 2004.

6. Contribution

Inadequate sensitisation and ignorance are causing Asthma to drain the world with its best and untapped human resources and preventing individuals from living their full and normal lives. The researchers therefore wish to ensure effective educating and sensitisation of the masses especially the youth on the subject matter so as to limit its impact on the people and the economies globally particularly in Africa directly and indirectly.

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