

Clinical Assessment on Knowledge of Garments Dust Induced Bronchial Asthma among Kongu Nadu Textile Workers

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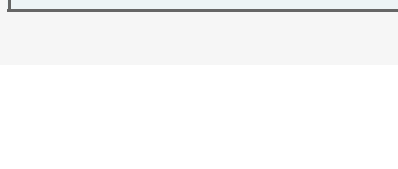
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ABSTRACT:

One of the major factors that influence proper management of asthma is patient's education. Prior knowledge of etiology, usage of medication regarding asthma is a necessity for better patient compliance. Evaluation of knowledge of diseases and attitude is very important for the patient's wellbeing, which hinders asthma complication and also synergises health improvement. Data regarding disease knowledge and drug adherence for occupational asthma is negligible in India. Hence the evaluation of knowledge of garment induced bronchial asthma amongst textile workers which was conducted in a few textile industries adds in to the data. In reference to this regard, patient required information had been taken from 857 patients with a response rate of 96%. Majority of the participants were between 30-60 years of age. Ratio of male and female was found to be 39.08% (334) and 61.02 % (523) respectively. The participants received a score value of 20 and 15 for disease knowledge and attitude towards asthma respectively. Therefore present clinical study concluded that patients lack the knowledge and medication adherence which also induces misunderstanding in management of disease condition precisely in patients suffering from occupational asthma.

KEYWORDS: KonguNadu Textile workers, work related asthma, knowledge of asthma, drug adherence, and asthmagens.

INTRODUCTION:

Asthma is a condition in which, the patient's airway gets narrowed and inflamed with production of excess mucus which hinders the proper respiration. Currently, occupational asthma is the most common form of lung disease in the world^{1,2,3}. In garments, asthmagens are cotton fibres, dust, dyes etc^{3,4,5}. Medical adherence and patient awareness play a major role to determine therapeutic outcomes^{6,7}. Lack of knowledge and drug adherence erodes the benefits of current medical care and in turn produces financial burden on patient and healthcare systems⁸. On a scale of about 40%-60% patients do not attend the medical council when scheduled and do not take medicines as prescribed according to the time of administration⁹.

World Health Organization concluded that improving medical adherence would have a beneficial impact on health outcome which is better than improving specific treatment for asthma^{10,11,12}. The main aim of this study is to investigate the clinical survey on knowledge and drug adherence and knowledge of asthma victims towards asthma.

MATERIALS AND METHODS:

The study was conducted at various hospitals in Karpagam faculty of medical sciences and research hospital and Sri Vinayaga Hospital rural and urban area. This study was approved by the (IHEC/114/Pharmacy/09.2017) Institutional Human Ethics Committee (IHEC). This study was carried out for a minimum duration of two and a half months and total 1157 patients were interested. Patients were enrolled after procuring their informed assent and asthmatic patient data collection forms and standard questionnaire forms were approved by 'Asthma Guidelines of Global Initiative for Asthma 2018'. Patients were initially evaluated for knowledge and prevalence of occupational asthma using standard questionnaire validated by Dr Morisky.D.E and qualitymetric.com¹⁰ (<http://creativecommons.org/licenses/by/4.0/>) (<https://ita.qualitymetric.com/seos/1000/mpd/uid/7032018e08e86ccac12394857551251488326c6>).

Inclusion Criteria:

- Patients above 18 and below 60years
- Both female and male were considered as a sample
- Patient weight above 50kg and below 80kg
- Normal BMR only considered
- Patients are working as textile workers
- Out patients were only enrolled
- Asthmatic patients on diet

Exclusion Criteria:

- Patients are below 18 not considered
- Inpatients were not considered
- Patient are below 50kg not considered
- Pregnant/Lactating women
- Subjects with respiratory disease like tuberculosis and pneumonia
- Subjects with cardiac and cardiovascular disease

Table 1: Demographic variables of participants (n=857)

Variables	Number of participant	Percentage of response
Gender		
Male	334	39.08
Female	523	61.02
Age		
18-40	584	68.28
40-60	273	31.85
Allergic disease in addition		
Fish	167	19.50
Drug	302	35.21
Garment dust	388	45.29
Personal details		
Smoking	65 (male)	19.46
Alcohol	85 (male)	25.44
Tobacco	148 (female)	28.29
Smoking +alcohol+ Tobacco	174 (male)	53.70
Education level		
Middle school	564	65.80
HSC	251	29.28
Graduate	42	04.90
Asthma duration		
<1	136	15.97
1-2	243	28.50
2-4	308	36.03
4-6	102	11.96
>6	68	7.94
Asthma severity		
Mild	230	26.83
Moderate	247	28.83
Severe	370	43.24

RESULTS:

This observational analysis included 857 patients in the age of 18 to 60 years which included 39.08% males and 61.02% females. The subjects were known to have just elementary levels of education. 65.80% of patients have middle school educational level. Smokers accounted for 19.11% (male) and chronic drunkards were 25.44% (male) and tobacco consumption for female is 28.29% and the demographic details were shown in (Table-1).

The score of knowledge was found to be 11. The patients were informed that their air pipes and lungs were affected and narrowing due to asthma. 95% of patients were informed that smoking can worsen asthma. The textile workers were informed that garment dust induces asthma, among which 411 patients strongly agreed, 330 agree, 116 disagreed and 219 patients disagreed that even though one has asthma, it does not affect the pleasure in one's life. During the questionnaire 460 said that they were not worried to let people know about their disease exposure. 610 patients were not hesitant in taking asthma medications in public places. The prevalence of bronchial asthma was shown in (Table-2).

Table 2: Evaluation of asthma knowledge questions

Asthma knowledge questionnaire	Participant answered		N/A
	Yes	No	
Lungs and air pipes are affected when I have asthma	282	541	34
There are no disadvantages for asthma patients for being in close contact with home pets (dogs or cats and hens)	199	624	34
Asthma patients may have increase in symptoms or attacks of asthma during hot weathers	377	446	34
Coughing and difficulty in breathing are the common symptoms of asthma patients.	317	506	34
Smoking can worsen asthma	771	42	34
Medicines used for asthma attacks constrict air pipes.	744	79	34
Medicines used for asthma helps in reducing inflammation of air of air pipes	385	438	34
Some of the medicines used for asthma may have to be used even when I am not having asthmatic symptoms	728	95	34

DISCUSSION:

It is all because of the combined effort of health care professionals and public officials that the public is now aware of occupational/industrial asthmagens and now there is a remarkable increase in the number of occupational bronchial asthmatic individuals who are slightly aware of their condition^{13,14,15}. Most of the asthmatic victims now take precautions to avoid chronic conditions and also bring appreciable changes in their lifestyle if needed which will improve their well being and health^{16,17,18,19}. Here change in lifestyle refers to balanced diet, which is including ample amount of fruits, vegetables avoid fat excess of sugar and salt intake and including exercise in their schedule avoid alcohol and Smoking which remarkably reduce bronchial spasm^{20,21, 22,23}. Use of mask while stepping out because pollen grains and dust are one of the major asthmagens²⁴. The textile workers should mandatorily use mask to avoid inhalation of textile fibres²⁵. The precautions and lifestyle changes must be taken into consideration and must be practised on regular basis along with their drug regimen^{26, 27}.

CONCLUSION:

This evaluation has concluded that the most of the Textile workers are suffering from respiratory abnormalities and are at the urge of being a victim of asthma. Abnormalities such as lung impairment increase with the increase of exposure to asthmagens. As the textile workers cannot give up their occupation they can rather stick to the precautions mentioned in the discussion. Asthma has become the most common disease in this era of civilization. The disease has to be curtailed in order to maintain public health. Asthma is not incurable and death due to asthma is uncommon. Effective management can reduce the risk of chronic condition and bring back the asthmatic patient's good health. This is possible because the level of an individual's asthmatic condition merely depends on medical adherence and management of the disease.

CONFLICTS OF INTEREST:

All Authors declare no conflicts

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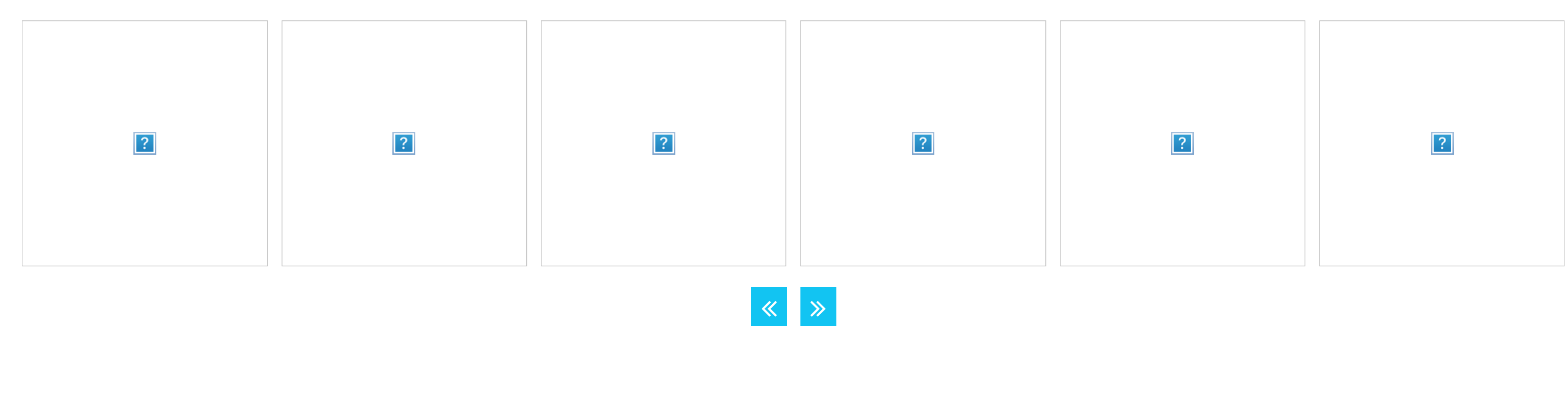
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