



Medical Sciences

MORBIDITY PATTERN IN TEXTILE WEAVERS OF URBAN BELGAUM: A COMMUNITY BASED CROSS SECTIONAL STUDY

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Abstract

Objective: To study the morbidity pattern in adult textile weavers.

Study Design: Community-based cross sectional study

Period of the study: one year (November 2004 to October 2005)

Study participants: 377 adult textile weavers residing in Khasbag, Belgaum

Setting: Khasbag urban field practice area of J. N. Medical College, Belgaum

Analysis: Frequency distribution in EXCEL 2000 Software

Results: The most common morbidities found were noise induced hearing loss (NIHL) - 125 (33.2%), followed by dental stains – 109 (28.9%), hypertension 81 (21.5%), acid peptic disorders - 75 (19.9%), sleep disorders - 69 (18.3%), dental caries - 67 (17.8%), backache - 63 (16.7%), myalgia / fatigue - 60 (15.9%), URTI - 58 (15.4%) and anemia -35 (9.3%).

Keywords: Textile weavers, Morbidity, Noise induced hearing loss

Introduction

The textile industry is one of the oldest and most technologically complex of all industries, accounting for 20% of industrial output in India.¹ The current burden of occupational health diseases is estimated to be around 18 million cases and among them, the annual incidence of chronic respiratory disorders is forty five lakhs, dermatitis is thirty lakhs and musculoskeletal disorders is seventy five thousand cases. Thirty percent of hospital admissions and twenty eight percent of limb injuries are related to occupation diseases morbidities.²

Hence the situation needs to be addressed through various occupational health programmes to protect and promote the health and work ability of workers, which in turn, lead to increased productivity and economic growth of the country.

Objective

To study the morbidity pattern in adult textile weavers at Urban Field Practice Area, Khasbag, Belgaum

Materials and Methods

A cross sectional study of 377 adult textile weavers residing in Khasbag, Belgaum was conducted during November 2004 to October 2005.

Ethical Clearance was obtained from Institutional Ethics Committee and written informed Consent of the study subjects was obtained.

The subjects were interviewed with pre-designed and pre-tested questionnaire and hearing acuity were assessed using Tuning fork tests (Rinne's test, Weber's test and absolute Conduction test) using standard methods. Data analysis was done using EXCEL 2000 software.

Results

Table No I: Distribution of study participants according to age and sex

Age (in years)	Males		Females		Total	
	No.	%	No.	%	No.	%
20 – 29	93	24.6	17	4.5	110	29.1
30 – 39	92	24.4	19	5.1	111	29.5
40 – 49	49	13.0	11	2.9	60	15.9
50 – 59	77	20.4	19	5.1	96	25.5
Total	311	82.4	66	17.6	377	100.0

Out of 377 study participants, 82.4%(311) were males and 17.6% (66) were females. More than half i.e.

58.6% (221) of them belonged to the age group 20 –40 years.

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Table No. II: Socio-demographic distribution of study participants

Characteristics	No	%
Religion		
Hindus	365	(96.8%)
Muslims	12	(3.2%)
Educational status		
Illiterates	43	(11.4%)
Primary	200	(53.6%)
Secondary	97	(25.8%)
Higher Secondary	24	(6.4%)
Graduates	13	(3.4%)
Socio-economic status (Modified B.G. Prasad's classification)		
Class I	1	(0.3%)
Class II	7	(1.9%)
Class III	74	(19.6%)
Class IV	191	(50.7%)
Class V	104	(27.6%)
Marital status		
Unmarried	57	(15.1%)
Married	305	(80.9%)
Widow/ Widowers/ Divorced	15	(4.0%)
Type of Family		
Nuclear	169	(44.8%)
Joint	205	(54.4%)
Three Generation	1	(0.3%)
Broken	2	(0.5%)

The socio-demographic characteristics of the study population showed that most of them (96.8%) were Hindus and nearly half of the participants were Educated up to primary school (53.6%). According to

modified B G Prasad's classification, half (50%) of them belonged to social class IV. Majority of them were married (80.9%) and 54.4% belonged to joint family.

Table No III: Distribution of Participants according to Work & Habits

Characteristics	No	%
Work experience in years		
1-10 years	145	(38.5%)
11-20 years	113	(30.0%)
More than 20 years	119	(31.5%)
Duration of working hours per day		
Less than 8 hours	73	(19.4%)
8-10 hours	232	(61.5%)
More than 10 hours	72	(19.1%)
Personal Habits		
Smoking Tobacco	58	(15.4%)
Consumption of Alcohol	136	(36.1%)
Tobacco chewing	137	(36.3%)

It was observed that one third (31.5%) of textile weavers had worked for more than 20 years and 80.62% of them worked for more than 8 hrs per day.

In the present study the prevalence of oro-dental conditions were 176 (46.7%). Among these the prevalence of dental stains was 109 (28.9%) and prevalence of dental caries was 67 (17.8%).³

Table No. IV: Distribution of morbidities among study participants according to systems (arranged in decreasing order of prevalence)

Morbidities	Study participants (n=377)	
	Number	Percentage
Oro-dental problems	176	46.7
Musculoskeletal system	170	45.1
Ear, Nose and Throat disorders	166	44.0
Cardiovascular system	107	28.4
Gastrointestinal system	103	27.3

In the present study out of 377, 170 (45.1%) had musculo-skeletal disorders. Among them 63 (16.7%) had backache, 60 (15.9%) had myalgia/fatigue, arthralgia in 27 (7.2%), fracture in 13(3.4%), cervical brachialgia 04 (1.1%) and sprains 03 (0.8%).

In the present study out of 377, 156 (40.4%) had E.N.T. disorders. Among them, 14 (3.8%) had chronic suppurative otitis media, 05 (1.3%) had tinnitus and 137 (36.3%) suffered from hearing impairment. (Nose

& throat morbidity is combined with Respiratory system as URTI).

Our study revealed that the prevalence of gastrointestinal conditions were 107 (28.4%). Out of these, most common condition was acid peptic disorder - 75 (19.9%), followed by hemorrhoids/fissures 12 (3.2%), amoebiasis 10 (2.7%), constipation 5 (1.3%) and worm infestation 1 (0.3%).

Table No. V: Top ten leading causes of morbidity in the study group

Morbidity	Study participants (n=377)	
	Number	Percentage
Noise induced hearing loss	125	33.2
Dental stains	109	28.9
Hypertension	81	21.5
Acid peptic disorder	75	19.9
Sleep disorders	69	18.3
Dental caries	67	17.8
Backache	63	16.7
Myalgia / fatigue	60	15.9
U.R.T.I.	58	15.4
Anemia	35	9.3

In the present study, the most common morbidity found was noise induced hearing loss (NIHL) - 125 (33.2%), followed by dental stains - 109 (28.9%), hypertension 81 (21.5%), acid peptic disease - 75 (19.9%), sleep disorders - 69 (18.3%), dental caries - 67 (17.8%), backache - 63 (16.7%), myalgia / fatigue - 60 (15.9%), URTI - 58 (15.4%) and anemia -35 (9.3%).

Discussion

The prevalence of oro-dental problems was 46.7%, out of which 28.9% had dental stains and 17.8% had dental caries. In a study conducted on textile workers of Wardha revealed the prevalence of dental stains was 5.6% and dental caries was 8.2%, which was very low compared to the present study, probable reason being that majority of participants in the current study were tobacco or gutkha chewers (36.3%).³

45.1% weavers had musculoskeletal disorders; out of these 16.7% were having backache followed by myalgia or fatigue 15.9%, arthralgia 8.2%, cervical

arthralgia 1.1% and joint sprains 0.8%. A study conducted in textile workers of Wardha revealed the prevalence of backache was 11.1%⁴ and in another study conducted by ICMR in Jodhpur, the prevalence of backache was found as 19.4% among textile workers, which was similar to the present study.⁵ Prevalence of backache was found to be higher in textile workers due to forceful exertions during manual material handling, awkward trunk postures, and whole body vibrations or due to stress and strain to spine while working.

In the present study, noise induced hearing loss was more common among E.N.T. disorders (36.3%), followed by Otitis media (3.8%) and tinnitus (1.3%), which was found to be almost similar to study conducted in textile weavers of New Delhi which revealed that hearing loss was found in 43.5% and tinnitus in 2%.⁶

28.4% of the workers had cardio-vascular disorders, out of these 21.5% had hypertension, 4.5% varicose veins and 1.9% myocardial infection. The

prevalence of Cardiovascular disorders was higher in our study compared to other study conducted in textile workers of Coimbatore (11%).⁷ The prevalence of hypertension was also higher in our study compared to the study conducted in textile workers of Wardha (1.9%).

The prevalence of gastrointestinal disorders was 28.4%. Majority of them had acid peptic disorder 19.9%, followed by hemorrhoids and anal fissures in 3.2%, amoebiasis 2%, constipation 1.3% and worm infestation 0.3%. In a study conducted in Wardha the prevalence of acid peptic disorder was 1.2%, amoebiasis 4.1% hemorrhoids 0.2% and worm infestation 0.2%.³ Acid peptic disorders were found higher in present study because of irregular food habits, consumption of Spicy foods, high prevalence of Gutkha and tobacco chewing and alcoholism.

Conclusion and Recommendations

In the present study every third textile worker was suffering from noise induced hearing loss and two out of ten weavers were having hypertension. The other morbidities encountered were dental stains (28.9%), acid peptic disorder (19.9%), sleep disorders (18.3%) and dental caries (17.8%).

It is essential to create awareness in general population and industrial workers in specific, regarding the potential health hazards of noise and modes of prevention of the noise induced hearing loss by health education

Screening by pre-placement examination and periodic health check-ups of the workers, so as to ensure early diagnosis and prompt treatment of symptoms. It is also essential to motivate workers to use personal protective devices like ear muffs, ear plugs and canal caps during working hours.

Proper posture adoption at work place will help in reducing musculoskeletal disorders. Strict enforcement of legislation regarding control of noise pollution at the work place and implementation of maximum working hours should be monitored. Conduction of Yoga and meditation classes for promotion of positive health and recreational facilities to the workers like sports and clubs may be provided for relaxation.

The un-organized sectors should be brought Under Coverage of Employees' State Insurance Scheme for the promotion and protection of health of these workers.

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