

A STITCH IN TIME ... ANNUAL HEALTH APPRAISAL OF GARMENT INDUSTRY EMPLOYEES

Bobby Joseph¹, Pretesh Rohan Kiran²

ABSTRACT

Objectives: The objectives of the study were to document the morbidity profile of the workers working in garment factories while treating them for the same and to document any likely occupational problems faced by the workers and suggest measures to improve work and health conditions.

Methodology: This study was conducted in 2003-2004 at eight garment factories employing more than 4000 workers. Data was obtained from the records of the annual medical check up that was provided for the workers of this industry. The records of the annual medical check up for 3858 were perused. The data was entered into Excel spreadsheet and analysed.

Results: The workforce consisted mainly of women in the 21-30 years age group, while males being more in the supervisory and mechanical cadres. None of them had undergone a periodic medical examination. Musculoskeletal problems were the commonest pre-existing morbidity reported by workers and the same problem was reported by most as being a probable occupational problem. Malnutrition at both ends of the spectrum was also detected. Hypertension was found in nearly 2.5% of the employees.

Conclusions: An annual medical check up provided to the workers is likely to yield a large number and variety of morbidity as seen in our study. Our experience has shown that the support of the management of the factory is crucial to the success of such a large scale programme.

KEY WORDS: Garment industry, Morbidity, Annual health appraisal.

Pak J Med Sci January - March 2008 Vol. 24 No. 1 104-108

INTRODUCTION

The garment industry in India is among the largest in Asia and, indeed, in the world. The industry has the advantage of a large available workforce, low cost raw material and low wages compared to any part of the world. However the turnover in the industry in terms of the labour force is also huge. Karnataka boasts of a huge garment industry sector, producing finished material both for the home sector and international markets.¹ Karnataka is a major apparel sourcing destination for the global market and after information technology, the garment sector leads the pack of export-oriented units, which with its 38 units contributes to 28% of the total turnover amount to Rs.1,015 crores.² Officially there are 780

-
1. Bobby Joseph MD, DNB
 2. Pretesh Rohan Kiran, MD
- 1,2: Division of Work Environment,
Department of Community Health
St. John's Medical College,
Bangalore - 560034,
India.

Correspondence

Dr. Bobby Joseph MD, DNB
Professor,
Community Health,
Division of Work Environment,
St. John's Medical College,
Bangalore - 560034
India.
E-mail: dowejohns@dataone.in

- * Received for Publication: November 6, 2007
- * Revision Received: December 26, 2007
- * Revision Accepted: December 30, 2007

garment manufacturing units in Bangalore alone with nearly 80% of the workforce comprising of women.³

Over the past few years there have been positive moves within the apparel manufacturing industry to provide better health care for the workers. Our Department has been involved in setting up and maintaining the health systems in a number of these factories. This process included the setting up of the ambulance rooms, assisting in the hiring of nurses and doctors, training them to provide appropriate health care services, conducting annual health checkups for the employees and monitoring the occupational health and safety provisions in the factory premises.

This report pertains to the results of the medical examinations conducted in the year 2003-2004 at eight garment factories belonging to one of India's largest export oriented garment manufacturing companies. All the factories are located around Bangalore city.

The objectives of the examination were as follows:

- * To study the health status of the workers in the factories visited.
- * To document any likely occupational problems and factors associated with these.
- * To suggest measures to improve the existing health conditions among the workforce examined.

METHODOLOGY

A walk through inspection of the factory floor of each of the eight factories was done before starting the Health Examination of the workers. The findings with regard to the manufacturing process and the activity of the workforce in each were noted. Subsequently the medical examinations were done. During these examinations, the medical records of the workers were scrutinized, so as to identify any past and family history of the individuals examined.

A complete clinical examination was conducted during which height, weight and distant vision were noted followed by the

examination of the vitals and a systemic examination. Workers with simple health problems were provided treatment with drugs available at the ambulance room of the factory, while those with more serious illnesses were referred to the nearest Employees' State Insurance Hospital for further management. The data so obtained was entered into an Excel spreadsheet and analyzed through use of common statistical programmes.

RESULTS

A total of 3858 workers were examined during the course of the annual health appraisal in the 8 factories visited. Of the total workforce examined, 571 (14.8%) were males and the remaining 3287 (84.2%) were females. Nearly 60% of all workers were in the age group of 21-30 years. The Age and Sex distribution of the workforce is shown in Table-I.

Tailors contributed to a large proportion of the workforce examined constituting nearly 49% of the entire workforce. The other occupational groups examined included helpers, checkers and those in the ironing and finishing department. (Table-II)

Majority – 3479 (90.2%) – of the workers examined had been employed in the present factory for the past five years or less, of these 601 (15.6%) had been employed for less than a year. Around 694 (18.0%) of all workers examined had applied leave due to illness – what is commonly called “ESI Leave” in the local garment industry parlance. Of these only 104 (2.7%) had applied for leave extending to more than 15 days. The reasons for taking sick leave were varied such as recovery from a road

Table-I: Age and Sex distribution (n=3858)

<i>Age Group</i>	<i>Males</i>	<i>Females</i>	<i>Total</i>
18 - 20 yrs	28	587	615
21 - 25 yrs	185	1122	1307
26 - 30 yrs	173	832	1005
31 - 35 yrs	95	413	508
36 - 40 yrs	54	219	273
41 - 45 yrs	26	84	110
> 45 yrs	10	30	40
Total	571	3287	3858

Table-II: Job distribution (n=3858)

<i>Job description</i>	<i>Males</i>	<i>Females</i>
Operators	15	36
Cutters	33	31
Checkers	19	259
Electricians	33	0
Helpers	86	530
Ironers	50	230
Mechanics	34	0
Supervisors	80	63
Tailors	53	1797
Trimmers	1	78
Miscellaneous	167	263
Total	571	3287

NB: Miscellaneous includes canteen employees, security guards, computer operators, house-keeping staff & others.

traffic accident, surgeries for various reasons, etc. While we may consider this number to a true reflection of those who had a serious morbidity, it is possible, as is well documented, that the actual reason for leave among those who availed 15 days or less, need not necessarily have been due to illness.⁴

None of these workers had been provided a periodic medical check up in the factory they were working in. However, 91 (2.4%) of the workers had undergone a general medical check up in the last one year. The main reason for visiting a health facility in the last one year being musculo-skeletal problems – 79 cases

(86.8%). Among the previously diagnosed illnesses (Table-III) reported by the persons examined, (17.5 %) of them reported to having one or more previously diagnosed illnesses. Majority of the illnesses were GIT disorders (19.3%), gynaecological disorders (10.9%) and musculoskeletal disorders (11.9%) among others. 29 (4.3%) of the workers reporting a previous illness stated to having more than one problem.

Of the workers examined 692 (17.9%) reported the presence of a family history of illness. Among these, 229 (33.1%) reported hypertension and 149 (21.5%) reported diabetes as a significant family history. On being asked if they had any illness that they would attribute to the occupation that they were involved in, 1066 (27.63%) of the workers responded in the affirmative. Of these, 670 (62.85%) reported the problem as being musculoskeletal with backache (369) being the predominant complaint. (Table-IV)

Of the 3287 women examined, 51 had attained menopause. Of the remaining 3236, 532 (16.4%) reported one or more menstrual disorders. Of these menorrhagia was the commonest problem accounting for 426 (80.1%) followed by dysmenorrhoea which accounted for 91 (17.3%) cases.

The Body Mass Index (BMI) was calculated for all the persons examined, 990 (25.7%) of

Table-III: Previously diagnosed illnesses

<i>System Involved</i>	<i>Common morbidity</i>	<i>Number</i>
GIT Disorders	Acid Peptic Disease	136
Musculo-skeletal problems	Backache, Joint pains	94
Gynaecological problems	Dysmenorrhoea, Menstrual irregularities	86
Nervous system disorders	Headaches including migraine	39
Respiratory disorders	Asthma, Bronchitis	31
Cardio-vascular disorders	Angina	26
Blood Disorders	Anemia	24
Allergies	Urticaria	21
Ophthalmic problems	Refractive Errors	20
ENT disorders	-	20
Metabolic Disorders	Diabetes	8
Dental problems	Caries	4
Others	Fevers, Mild Respiratory Infections, Abdominal Pain etc.	195
Total		704

Table-IV: Likely Occupational problems
(as reported by the persons examined)

<i>Likely problem reported</i>	<i>Total</i>
Musculoskeletal problems	670
Tiredness	97
Headache	88
Allergy to Dust	50
Gastritis	48
Eye problems	66
Giddiness	18
Others	29
Total	1066

those examined were underweight (BMI < 18.5), 456 (11.8%) were overweight (BMI 25 to 29.99) and 111 (2.9%) were obese (BMI > 30).

Among the 3858 persons examined, 94 (2.44%) of them were detected to be hypertensive and were, unfortunately not aware of the problem or not on treatment for the same. They were declared hypertensive after their blood pressures were found to be exceeding the recommended limits of normalcy at rest, on three separate occasions. A larger proportion of the supervisory cadre was hypertensive when compared to the workers. A dental examination revealed that 867 (22.47%) of all the workers examined had a dental problem. Among these, caries was a major problem.

Four of the workers were blind and were working in relatively non hazardous sections. Refraction was done using the Snellen's chart and 569 workers were found to have uncorrected refractive errors, exceeding a visual acuity of 6/9. Near vision was not tested.

DISCUSSION

A large proportion of the workers examined were women. Distribution of males in the workforce was more in jobs that were mechanical or supervisory in nature. This is consistent with findings that the industry has a women dominated workforce.² Majority of these workers were employed in the industry for five years or less, again consistent with the finding that there is a constant turnover of the workforce in the industry.¹ Although many of the work-

ers had previously diagnosed illnesses or a family history of illness, none of them had been provided a periodic medical check up in the factory they were working in. Undetected illness resulting from the absence of a periodic medical examination can definitely affect productivity and work performance. It could also result in increased absenteeism.⁴

While the Factories Act provides for a periodic medical examination for those workers employed in only hazardous industries, there is no mention of a periodic medical examination in other industries.⁵ Of the large number of the workers who complained of their occupation being the cause of their health problems, a majority reported these to be musculoskeletal problems with backache being predominant among these. This is consistent with previous studies where tiredness, body ache, back pain and joint pains are the commonest health problems attributed to work by the employees of garment industries.^{4,6} This could also be correlated with the finding that a large number of the workers in this study seeking medical attention for any illness, reported the reason as being due to musculoskeletal causes (followed by gastritis among others).

The menstrual history revealed that the vast majority of the problems could be easily treated. All those detected to be hypertensive were either not aware of their problem or were not on treatment, underlining the importance of a periodic medical examination. Incidentally, a larger proportion of the supervisory cadre was hypertensive when compared to the working class. Nutritional problems in the form of being overweight or obese were also detected in nearly 15% of the workforce examined. No gross systemic defects were revealed during the course of these examinations probably due to the large part of the workforce being in younger age groups. Workers with simple health problems were provided treatment with drugs available at the ambulance room of the factory, while those with more serious illnesses were referred to the nearest Employees' State Insurance (ESI) Hospital for further management.

Despite the fact that the garment industry is considered to be a non hazardous industry, an annual medical check up provided to the workers is likely to yield a large number and variety of morbidity as seen in our study. The treatment and management of a majority of these morbidities is simple and our experience has revealed that the workers appreciate this 'extra effort' on the part of the management. This being a female dominated workforce, the presence of a Lady Medical Officer on a regular basis will help address the large number of gynecological morbidity that was seen. To ensure optimal results of such a huge exercise, a good linkage has to be created between the ambulance room of the factory and the nearest ESI Hospital. Once again our experience has shown that with the support of the management of the factory, most of the employees avail their rightful benefits from the ESI.

From an Occupational Health point of view, having identified the pattern of morbidity among these workers, our Department is constantly training the Health Care Providers, Welfare Officers and Medical Officers in these factories to address these issues.

REFERENCES

1. RoyChowdhury S. Labour activism and women in the unorganized sector – Garment export industry in Bangalore, *Economic and Political Weekly* 2005;40:2250-5.
2. Anand N. Karnataka records 25 percent hike in export revenue in the City Express, *The New Indian Express*, Bangalore dated 20th August 2002.
3. Kruijtbosch M. Child and adult labour in the export-oriented garment and gem polishing industry of India with case studies from Tirupur, Bangalore, Jaipur and Trichy (monograph on the Internet) Utrecht: India Committee of the Netherlands (updated 2001, Oct 10th; cited 2006, Nov 17th) Available from: <http://www.indianet.nl/chadlab.html>
4. Charles S, Joseph B, Subbana J. Absenteeism in the Garment Manufacturing Industry, *Indian J Occupational Environmental Medicine* 2000;4:78-82.
5. Puliani S (ed). *The Factories Act, 1948 along with the Karnataka factories rules 1969 and allied laws*, 4th Edition Bangalore. Karnataka Law Journal Publications 2000.
6. Tiwari RR, Pathak MC, Zodpey SP. Low back pain among textile workers. *Indian J Occupational Environmental Medicine* 2003;7:27-9.