Study of working conditions & morbidity profile amongst tailors in small scale garment manufacturing outfits in a suburban slum of Mumbai: A quant⇒Qual mixed method study

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Abstract
Context: Tailors in Malvani work for long hours in dismal conditions. Most are migrants & may not have authorized documents to validate their residency or workplace. Moreover they report to the medical facilities only after incurring significant out of pocket expenditure.
Aims: To evaluate the working conditions and study morbidity profile of tailors working in the small scale garment manufacturing outfits in a suburban slum of Mumbai and identify lifestyle or workplace related factors which affect their health status.
Settings and Design: A sequential quantitative⇒qualitative Mixed method study was conducted in 110 tailors working in the new collector compound (NCC) area of Malvani.
Methods and Material: Interviews and examination was conducted in OPD & data collected about morbidity profile. This was followed by visit to their workplace and in depth interviews conducted to obtain qualitative data.
Statistical analysis used: Descriptive analysis using percentage and graphical representation.
Results: All 110 tailors were males working for hours ranging from 10-12 hours per day and work often extended to 16 hours during pre-festival & marriage period. Workplaces were single rooms of either 10/10 ft. or 12/26 ft. dimensions that had poor light and were congested. Most workplaces had no attached toilets. The morbidity pattern amongst tailors indicates that they are vulnerable to chronic morbidities which are compounded by their occupational profile.
Conclusions: The working conditions & nature of occupational demands make tailors a vulnerable population for occupational health risks. Most of these health risks are preventable through preventive, promotive, curative & rehabilitative interventions.

Keywords: Tailors, morbidity, urban slum, mixed methods

Introduction
In India, the readymade garment industry had its beginning during the first half of the 20th century and has witnessed impressive growth during the last four decades. It is reported to be the second highest contributor to India's export basket, after 'gems and jewellery' [1]. There are around 70,000 garment manufacturing units in the country providing employment to more than 3 million persons [2].
The Malvani area is a slum located in Malad which is a Suburb in the city of Mumbai. This slum comprises of ghetto like housing with about 60 houses in a block placed in a grid. Tailors in slum area of Malvani work for long hours in dismal conditions both at home & workplace. Most of the tailors are employed by sub-contractors who take bulk orders from shopping outlets and other garment brands. Most of the tailors are migrants with limited formal education.
Observation made in OPD indicates that they seem to be reporting to the medical facility after being treated empirically by private doctors. Formal observation & interaction revealed that they do not have authorized documents to validate their residency or workplace. Keeping this background in mind the current study was undertaken to understand morbidity profile and effect of their work environment on health.
The study aimed to evaluate the working conditions and study morbidity profile of tailors working in the small scale garment manufacturing outfits in a suburban slum of Mumbai and identify lifestyle or workplace related factors which affect their health status. Make recommendations to improve access to health care.
Subjects and Methods
A sequential Quantitative → Qualitative study was conducted in all the tailors working in small scale garment manufacturing outfits in the area. A preliminary survey of the New Collectors Compound area helped identify 110 tailors all of whom were explained study objectives and procedures and their consent was obtained prior to the study. One on one interviews were conducted using a semi-structured schedule that included information pertaining to socio-demographic details, personal history, occupational history, family history and health seeking behaviour. Common health complaints were noted and general physical examination was conducted.

Shops and workplaces of tailors were visited and work environment was inspected. Inspection of workplace included hygiene of workspace and surroundings, size of work space, lighting, ventilation, number of sewing machines, space per person, sitting arrangements and instruments. The lighting arrangement was observed and illumination on work desk was checked with help of a lux meter. Four readings were taken from 20 workplaces each covering most of the workspace. Mean reading from each workplace was compared with recommended values.\(^3,4\) Formal & Non formal discussions were held with tailors and in depth interviews were conducted to gain quality inputs.

Results
All the participants were males of ages ranging from 14 to 42 years, the mean age being 27.5 years. Of the 110 study participants 15.5% (17/110) were Hindus, 77.3% (85/110) were Muslims & 7.2% (8/110) were Buddhist by faith. Enquiry of educational status showed that 4.5% (5/110) were illiterate, 14.5% (16/110) were literate but uneducated, 32.7% (36/110) had completed primary education, 23.6% (26/110) middle school & 24.5% (27/110) had attended high school.

About sixty per cent of participants were first generation migrants and had come to Mumbai seeking livelihood from poorer provinces in the hinterlands. Only 21(19.1%) tailors had own house. The rest lived in rented houses or lived in the workplace itself. Most came from joint families 68% (75/110), while 32% (35/110) come from nuclear families. Seventy one (64.6%) were married, 33.6% (37/110) were unmarried and 2 were widowers. Thirty eight tailors (34.5%) lived away from their families and could visit their native place only once or twice a year. The working hours ranged from 8 to 12 per day the mean being 10 hours. During peak season the tailors sometimes have to work for more than 16 hours. They usually take a break for an hour to have lunch. The mean monthly income is 11000 rupees (165 USD). It can range from 6000 to 15000 rupees (90-225 USD/ month). There is was no written employee-employer contract or fixed minimum wage. Wages were cut for absenteeism. Many tailors restricted visits to native place to once a year and found that prolonged absence made reemployment difficult. The mode of payment is cash in hand a significant portion of which had to be transferred to the families in case of migrant workers.

Certain documents are important for identification and availing government schemes and programs in India. Only 56.3% (62/110) had election card (id & address proof), 62.7% (69/110) had ration card (to avail food at subsidized rates), 39% (43/110) had Aadhar Card (unique ID number akin to social security number) and 25.4 % (28/110) had no documents. None of tailors had a medical plan. All expenditure on healthcare was out of pocket. The average expenditure on health was 300 rupees per month range being Rs. 200-600. Private hospitals were preferred over public hospitals for seeking treatment. About Eighty three per cent sought medical treatment from private hospitals while 17% sought treatment from government hospitals. Most commonly cited reason was that getting treated in public hospital took time and caused loss of daily wages. Chewing Tobacco was the most common addiction found in 52.7% (58/110) tailors followed by smoking 29.1% (32/110) and alcohol consumption in 20.1 (23/110). Those who reported chewing tobacco had started in early teens and still persisted chewing. They have never tried to quit and maintained that they needed tobacco to function properly.

Assessment of Workplace

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Values in evening were higher as tube lights were used only after dusk.

**Sitting Arrangement**
Workers sat on plastic chairs or stools without cushions and proper back support. Most workplaces had no attached toilets and public toilets were used by workers.

**Type of work**
Most of the tailors take bulk contracts from garment makers. They work in an assembly line. So there are specializations among them. Elastic stitching, Sew shirts, Sew Pants Gents / Ladies Tailors & Helpers (apprentices).

**Instruments**
Heavy iron pair of scissors with metal grip were used by most tailors. Some tailors had put tape on the grip as a measure to reduce friction. On General examination 37 tailors had Friction injuries and callosity over fingers were found in tailors. On inquiry the durability of heavy metal scissors was the factor that took precedence over comfort with most tailors quoting “Adat ho jati hai” in hindi (We get used to it)

**Common Ailments on General Examination:**

<table>
<thead>
<tr>
<th>Common Health Complaints of Tailors in Small Scale Garment Industries</th>
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<tr>
<td>MuskuloSkeletal Pain</td>
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<td>Fatigue</td>
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<td>Diminision of Vision</td>
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<td>Skin Diseases</td>
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<td>Headache</td>
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<td>Abdominal Pain/Burning</td>
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<td>Hypertension</td>
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<td>Diabetes</td>
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<td>Chest Discomfort</td>
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**Graph 1:** Common Health Complaints of Tailors in Small Scale Garment Industries
Graph 2: Common Findings on Examination of Tailors in Small Scale Garment Industries

**Discussion**

The tailors work for long hours & suffer from many health risks due to work related irregularity. The morbidity pattern amongst tailors indicates that they are vulnerable to chronic diseases which are compounded by their occupational profile. Long waiting period in public hospitals and lack of proper documents were identified as major bottle necks in health service provision. Staying away from families in poor work conditions encouraged high risk for infectious diseases.

The work environment in a majority of these units is unsafe and unhealthy. These include poorly designed workstations, unsuitable furniture, lack of ventilation, inappropriate lighting, excessive noise. People working in such poor or substandard environment are prone to occupational diseases. Workplace should be designed ergonomically including space, furniture, lighting, ventilation and equipment. Cost effective avenues should be made available for same. Health Education for planning work pattern, following most basic ergonomic norms and advocating their importance for improving health and productivity in workers to be undertaken. Interventions like frequent short rest periods & basic physiotherapeutic exercises at workplace must be done. Periodic health screening linked with local health centres should be developed. Issue of Aadhar cards, Labour cards, ration cards without corruption will facilitate access to affordable healthcare. Most of these health risks are preventable through preventive, promotive, curative & rehabilitative “Tailor Made” interventions

**References**

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