General Health Status of Women Beedi Workers in Mysuru City

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ABSTRACT
The present study is an attempt to find out the health status of the beedi workers representing unorganized sector of Mysuru. A total of 900 respondents were selected from eight different areas of Mysuru. Based on the availability of respondents and the majority of contribution from female employees who are home based beedi workers. The tools used for the study were General Health Questionnaire (GHQ) which identifies minor psychiatric problems such as depression, sleeplessness, anxiety, feelings of worthlessness, insecurity, pessimism and suicidal tendencies. The results revealed that the whole 53.3% of the selected beedi workers sample expressed somatic symptoms, 51.9% of them expressed anxiety, 42.6% of them were suffering from social dysfunction and 32.8% of them had severe depression. Area of the beedi workers had significant influence over somatic symptoms, where respondents from Udayagiri expressed highest somatic symptoms, anxiety, social dysfunction and severe depression too. Respondents from Kesare expressed lesser GHQ symptoms of somatic symptoms, anxiety, social dysfunction and severe depression.

Keywords: Women beedi workers, Health status, Quality of life, unorganized sector

Beedi is a forest product and also called poor man’s smoke or poor man’s cigarette. A standard beedi contains about 0.2grams of rolled tobacco flakes. Tobacco tendu leaf is also known as kendu or tamburni. Beedi rolling is an entirely manual process. Laborers painstakingly place tobacco inside a small tendu leaf, tightly roll the leaf and secure the product with a thread. This process is largely home-based and is dominated by women and children. An average roller achieves an output of about 1000 beedis per day. Beedi rolling remains extremely popular in India especially amongst women though being identified as hazardous occupation. Hour after hour of rolling beedis, takes a huge toll on the health of the beedi workers, many of whom live in unspeakable poverty. Even as the WHO carries on a relentless global campaign against the consumption of tobacco, little concern is exhibited about women beedi workers. These women who sit in one position for 10-16 hours a day rolling beedis inhale huge amounts of tobacco dust. Although beedi rolling has been identified as a hazardous occupation, the health and working conditions of beedi workers has not been in the forefront of public consciousness. The reasons for this could be the lack of mobilization among beedi workers themselves. Beedi workers make out a living like helpless puppets amid unspeakable poverty, unemployment and hunger, unable to raise their voices.

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Beedi rolling is just inhalation of tobacco dust that causes health problems, but other factors that affect their health – like lack of nutritious food, clean environment and pollution and working in a dark, ill-ventilated room affects health adversely. The irony is that the women are not even aware that this work is ruining their health. Health is affected rolling beedi robotically. Years of this kind of work and a beedi roller end up with as bad a lung condition that of an active smoker and also make more prone to disease like tuberculosis, asthma and other diseases of the lung. Ingesting tobacco also has adverse consequences on reproductive health. Despite all this, these women prefer to work in the beedi factories rather than as agricultural laborers. In Dakshin Kannada, a young girl who rolls beedis has high value in the marriage market.

According to the government of India 22,00,000 lakh women making beedis belong to lower socio-economic groups (extreme poverty). They have long working hours and limited or no alternative sources of livelihood; they face exploitation at the hand of the middlemen or contractors and legislative provisions that would be of assistance to them are not implemented. Experience over the years has shown that increasing ‘feminization of the work force’ or the segregation of women into certain kind of low-paid, dis-empowering jobs has adverse implication on their health. The resulting health problems include weakening of the eye sight, backache, headache, loss of weight, loss of hearing, extreme tiredness and fatigue. Studies being conducted by the department of women’s in Mysore University have found that emphasis is only on getting better wages. Problems concerning the social, psychological and health aspects of the workers are still not being addressed. A study was conducted by the National Institution of occupation Health (NIOH), Ahmedabad and the result showed that the main hazard in the beedi industry is tobacco dust, burning of the eyes, conjunctivitis, bronchitis and emphysema. A descriptive report on exploiting women and children, focused on various problems faced by women and children employed in beedi industries. According to government estimates, beedi rolling employs nearly 4.45 million people, of whom 65% are women and 15 to 25% are children. Women often face discrimination and are paid less than men. Children are even worse with no wages structure and usually get paid the least. Most families in the beedi industry live below the poverty line. While the children work at home, usually more girls stay home to roll beedi than boys, who are more likely to attend school.

Unlike in other areas of diseases, especially occupational health hazards, no research is done on diseases caused by exposure to tobacco. Women work during advanced stage of pregnancy also affects the unborn child. The living condition are pathetic, they live in rented small rooms and find it difficult to pay even rent; in 80% houses there is no electricity, no water and women have to stand in queue to fetch water. The occupational health hazards of beedi workers remained neglected since long time and there is a need to study the health hazards predominant in beedi workers and to reduce if not eliminate the hazards of the beedi workers for greater safety and health. Therefore, there is a need to identify the general health status of women associated with the beedi workers in India and to suggest remedial measures in order to bring about possible automation in the process with a view to eliminate the problems of safety, health and improper ergonomic conditions faced by the workers.

**METHOD**

**Sample**
The sample for the study was selected from eight different places of Mysuru. A total of 900 respondents who were 20% of the total population in the particular area were selected. The eight places chosen are based on the availability of respondents, major contribution of female employees who are home based women beedi workers. Table 1 presents the selected sample...
of beedi workers from various areas of Mysuru by their age. It can be seen that 30.7% of the sample were aged less than 30 years, 39.0% of them were in the age group of 31-40 years and remaining 30.3% of them were in the age group of 41-50 years.

Table 1, Distribution of selected sample of women beedi workers by area and age groups

| Area                   | Frequency | Age groups (in years) | Total |
|------------------------|-----------|-----------------------|-------|
|                        | <30       | 31-40                 | 41-50 |       |
| Mandi Mohalla          | 9         | 21                    | 10    | 40    |
| %                      | 22.5      | 52.5                  | 25.0  | 100.0 |
| Udayagiri              | 17        | 47                    | 36    | 100   |
| %                      | 17.0      | 47.0                  | 36.0  | 100.0 |
| Azeez Sait Nagar       | 46        | 53                    | 41    | 140   |
| %                      | 32.9      | 37.9                  | 29.3  | 100.0 |
| Beedi Colony           | 52        | 51                    | 37    | 140   |
| %                      | 37.1      | 36.4                  | 26.4  | 100.0 |
| Kalyanagiri            | 26        | 38                    | 36    | 100   |
| %                      | 26.0      | 38.0                  | 36.0  | 100.0 |
| Lashkar Mohalla        | 19        | 19                    | 32    | 70    |
| %                      | 27.1      | 27.1                  | 45.7  | 100.0 |
| Kesare                 | 32        | 28                    | 20    | 80    |
| %                      | 40.0      | 35.0                  | 25.0  | 100.0 |
| Haleem Nagar           | 22        | 27                    | 21    | 70    |
| %                      | 31.4      | 38.6                  | 30.0  | 100.0 |
| Shantinagar            | 38        | 41                    | 31    | 110   |
| %                      | 34.5      | 37.3                  | 28.2  | 100.0 |
| Suni Chowk             | 15        | 26                    | 9     | 50    |
| %                      | 30.0      | 52.0                  | 18.0  | 100.0 |
| Total                  | 276       | 351                   | 273   | 900   |
| %                      | 30.7      | 39.0                  | 30.3  | 100.0 |

Tools

1. General health questionnaire. (GHQ): (Goldberg, 1997).

The general health questionnaire is a tool used to test the minor psychiatric problems in the community like depression, sleeplessness, anxiety, feeling of worthlessness, in security, pessimistic in nature, suicidal tendencies. The General Health Questionnaire (GHQ) is a screening device for identifying minor psychiatric disorders in the general population and within community or non-psychiatric clinical settings such as primary care or general medical out-patients. Suitable for all ages from adolescent upwards – not children, it assesses the respondent’s current state and asks if that differs from his or her usual state. It is therefore sensitive to short-term psychiatric disorders but not to long-standing attributes of the respondent.

The self-administered questionnaire focuses on two major areas:

- The inability to carry out normal functions
- The appearance of new and distressing phenomena.

GHQ-28 is a self-administered questionnaire is an ideal screening device for identifying non-psychotic and minor psychiatric disorders to help inform further intervention. GHQ-28 assesses somatic symptoms, anxiety and insomnia, social dysfunction and severe depression. The reliability for GHQ-28 as assessed by Cronbach’s alpha, split-half coefficients and test-
retest reliability were 0.9, 0.89 and 0.58 respectively (Malakouti, Fatollahi, Mirabzadeh & Zandi, 2007). GHQ-28 has sufficient validity too.

**Procedure**

Data collection is the component that serves as the major contributor in any research. This research uses primary data for the study. Primary data is gathered straight by the researcher. This study collects the primary data from the respondents directly through personal investigations and Interview schedules. The investigator has tried to be ethical by getting a prior permission from all the respondents before surveying them and explaining them the purpose of the survey. The researcher personally visited all the respondents in eight different areas of Mysuru, and administered data to the selected sample. Whenever, the respondents had problem of writing, the researcher did the enumeration job too.

**RESULTS**

Table 2, Distribution of the selected sample of women beedi workers by area and somatic symptoms & anxiety and results of test statistics

| Area           | Somatic symptoms | Anxiety/Insomnia | Total |
|----------------|------------------|------------------|-------|
|                | Yes | No  | Yes | No  |       |
| Mandi Mohalla  | 18  | 22  | 21  | 19  | 40    |
| Frequency      |     |     |     |     | 100.0 |
| %              | 45.0| 55.0| 52.5| 47.5| 100.0 |
| Udayagiri      | 89  | 11  | 79  | 21  | 100   |
| Frequency      |     |     |     |     | 100.0 |
| %              | 89.0| 11.0| 79.0| 21.0| 100.0 |
| Azeez Sait Nagar | 66  | 74  | 65  | 75  | 140   |
| Frequency      |     |     |     |     | 100.0 |
| %              | 47.1| 52.9| 53.6| 46.4| 100.0 |
| Beedi Colony   | 92  | 48  | 86  | 54  | 140   |
| Frequency      |     |     |     |     | 100.0 |
| %              | 65.7| 34.3| 38.6| 61.4| 100.0 |
| Kalyanagar     | 40  | 60  | 40  | 60  | 100   |
| Frequency      |     |     |     |     | 100.0 |
| %              | 40.0| 60.0| 60.0| 40.0| 100.0 |
| Lakshar Mohalla| 33  | 37  | 35  | 35  | 70    |
| Frequency      |     |     |     |     | 100.0 |
| %              | 47.1| 52.9| 50.0| 50.0| 100.0 |
| Kesare         | 23  | 57  | 21  | 59  | 80    |
| Frequency      |     |     |     |     | 100.0 |
| %              | 28.8| 71.2| 73.8| 26.2| 100.0 |
| Haleem Nagar   | 46  | 24  | 40  | 30  | 70    |
| Frequency      |     |     |     |     | 100.0 |
| %              | 65.7| 34.3| 42.9| 57.1| 100.0 |
| Shantinagar    | 59  | 51  | 59  | 51  | 110   |
| Frequency      |     |     |     |     | 100.0 |
| %              | 53.6| 46.4| 46.4| 53.6| 100.0 |
| Suni Chowk     | 14  | 36  | 21  | 29  | 50    |
| Frequency      |     |     |     |     | 100.0 |
| %              | 28.0| 72.0| 58.0| 42.0| 100.0 |
| Total          | 480 | 420 | 467 | 433 | 900   |
| Frequency      |     |     |     |     | 100.0 |
| %              | 53.3| 46.7| 48.1| 51.9| 100.0 |

Test statistics

|                | X²=4.00; p=.046 | X²=1.28; p=.257 |
|----------------|-----------------|-----------------|
|                | CV=.346; p=.001  | CV=.271; p=.001  |

**Somatic symptoms and anxiety/insomnia**

From table 2 the results reveal that the 53.3% of the respondents suffered from somatic symptoms and remaining 46.7% of them did not have somatic symptoms. Chi-square test revealed a significant difference between presence and absence of somatic symptoms (X²=4.00; p=.046), confirming that majority of the sample experienced somatic symptoms. Further, between areas and absence/presence of somatic symptoms, a significant association was observed, (CV=.346; p=.001), where we find that respondents from Udayagiri (89.0%), Beedi colony & Haleem Nagar (65.7%) and Shantinagar (53.6%), and 51.9% of suffered
more and respondents from Kesare (28.8%) and Sunni Chowk (28.8%) had least somatic symptoms.

In the case of anxiety/insomnia, results reveal that the 51.9% of the respondents suffered and remaining 48.1% of them did not have anxiety symptoms. Chi-square test revealed a non-significant difference between presence and absence of anxiety/insomnia symptoms. However, a significant association was observed between area and symptomatology (CV=.271; p=.001). The most affected area in anxiety symptoms was found to be in Udayagiri (79.0%), Beedi colony (61.4%), Haleem Nagar (57.1%), Shantinagar (53.6%), Mandi Mohalla (52.5%) and Lakshar Mohalla (50.0%) and least was in Kesare Area.

**Table 3. Distribution of the selected sample of women beedi workers by area and social dysfunction & severe depression and results of test statistics**

| Area            | Social dysfunction | Severe depression | Total |
|-----------------|--------------------|-------------------|-------|
| Frequency       | Yes | No | Yes | No |       |
| Mandi Mohalla   | 18  | 22 | 17  | 23 | 40    |
| %               | 45.0| 55.0| 42.5| 57.5| 100.0|
| Udayagiri       | 56  | 44 | 41  | 59 | 100   |
| %               | 56.0| 44.0| 41.0| 59.0| 100.0|
| Azeez Sait Nagar| 51  | 89 | 39  | 101| 140   |
| %               | 36.4| 63.6| 27.9| 72.1| 100.0|
| Beedi Colony    | 69  | 71 | 66  | 74 | 140   |
| %               | 49.3| 50.7| 47.1| 52.9| 100.0|
| Kalyanagar      | 41  | 59 | 25  | 75 | 100   |
| %               | 41.0| 59.0| 25.0| 75.0| 100.0|
| Lakshar Mohalla | 30  | 40 | 24  | 46 | 70    |
| %               | 42.9| 57.1| 34.3| 65.7| 100.0|
| Kesare          | 20  | 60 | 17  | 63 | 80    |
| %               | 25.0| 75.0| 21.2| 78.8| 100.0|
| Haleem Nagar    | 31  | 39 | 19  | 51 | 70    |
| %               | 44.3| 55.7| 27.1| 72.9| 100.0|
| Shantinagar     | 47  | 63 | 31  | 79 | 110   |
| %               | 42.7| 57.3| 28.2| 71.8| 100.0|
| Suni Chowk      | 20  | 30 | 16  | 34 | 50    |
| %               | 40.0| 60.0| 32.0| 68.0| 100.0|
| Total           | 383 | 517| 295 | 605| 900   |
| %               | 42.6| 57.4| 32.8| 67.2| 100.0|
| Test statistics | X²=19.95; p=.001 | X²=106.78; p=.001 |
|                | CV=.159; p=.007  | CV=.180; p=.001    |

From table 3 the results reveal that the 42.6% of the respondents suffered from social dysfunction and remaining 57.4% of them did not have somatic symptoms. Chi-square test revealed a significant difference between presence and absence of social dysfunction symptoms (X²=19.95; p=.001), confirming that majority of the sample did not have somatic symptoms. Further, between areas and absence/presence of somatic symptoms, a significant association was observed, (CV=.159; p=.007), where we find that respondents from Udayagiri (56.0%), suffered more from social dysfunction and respondents from Kesare (25.0%) had least symptoms of social dysfunction.

In the case of severe depression results reveal that the 32.8% of the respondents experienced depression and remaining 67.2% of them did not have severe depression symptoms. Chi-
square test revealed a significant difference between presence and absence of depression symptoms indicating lesser prevalence of severe depression. Further, a significant association was observed between area and symptomatology (CV=.180; p=.001). The most affected area in severe depression symptoms was found to be Mandi Mohalla (42.5%) and Udayagiri (41.0%) and least affected area was Kesare (21.2%) and others in between.

**DISCUSSION**

**Major findings of the study**

- On the whole 53.3% of the selected beedi workers sample expressed somatic symptoms, 51.9% of them expressed anxiety, 42.6% of them were suffering from social dysfunction and 32.8% of them had severe depression.
- Area of the beedi workers had significant influence over somatic symptoms, where respondents from Udayagiri expressed highest somatic symptoms, anxiety, social dysfunction and severe depression too.
- Respondents from Kesare expressed lesser GHQ symptoms of somatic symptoms, anxiety, social dysfunction and severe depression.

The composition of beedi workers in terms of age and gender varies from place to place. Age has an inverse relationship to productivity and earnings in beedi making (Dharmalingam 1993; Mohandas and Kumar 1992; Mukherjee 1985) pointed out that young worker can roll 1000 beedis in 8 hours, while aged workers could roll only 400–450 beedis a day. From the results we can infer that the women beedi workers suffer from somatic symptoms, anxiety/insomnia, social dysfunction and severe depression, which is definitely more when compared to general population. The reasons could for such issues would be that these beedi workers suffer from various health factors such as somatic symptoms as they refrain from going outside their home, poor wages, inhaling the tobacco dust, poor lighting environments, lack of medical facilities and lack of decent working conditions which altogether promote the feelings of anxiety, social dysfunction and severe depression. Many studies which support the results are listed below.

Low wages, irregular employment, exploitation by middlemen/agents; poor credit access, debt of money, child labor, health hazard, illiteracy, poor working and living conditions, lack medical facilities etc. are some of the common elements which most of the beedi workers suffer from (Sudarshan & Kaur 1999, Srinivasan 1999, Thangaraju 1993, Vadomalai 1990). Excessive legislations but poor implement could be held responsible for plight of beedi workers (Avachat 1978, Mishra 2000, Basu 1978). On account of low level of income accompanied by situation of under-employment; the workers are unable to meet even their basic necessities and studied the general profile of the women workers in beedi industry which was at corporate industrial level on the line of cottage industry in states of West Bengal, Kerala and Tamil Nadu. He found through his study that in beedi industry women’s earnings were meager. They worked on piece rate basis and earned as low as Rs. 40 per 1000 beedi srolled. He also found that the beedi workers were exposed to dust, nicotine, causing respiratory diseases and infertility in young women.

Women’s involvement in beedi rolling has been linked to the ease of learning the skill, its manual operations, can be carried out at home and so on (Nair 1990; Pande,Rekha1999.; Karunanidhin.d. 1997). Simultaneously, it is noted that men earn more and their wages are higher (Labour Bureau, 1995; Bhattay 1987). Ghoshet.al ( 2005) in his study stated that the main problem for beedi workers is their poor socio-economic status, education, and training.
which forces them to work in unsafe environmental conditions and improper working postures. It throws light on various welfare measures and schemes for the beedi workers like, Welfare measure for beedi workers, Health schemes, Education schemes, Housing scheme, Social security, etc. In spite of various welfare measures, the socio economic status of the beedi workers remain at low level since the welfare measures are insufficient in comparison to the number of beedi workers in India.

George (1990), in his study covered unorganized women beedi workers in Tamil Nadu, Kerala and Karnataaka. This study was based on the observations concerning working conditions and related matters. From the study it was found that a large number of married women than unmarried/ divorced or widowed women were engaged in beedi rolling. Most of them were illiterate. There were more Muslim women among beedi workers than from any other religious group. Married women rolled more beedis and thus earned more income than unmarried women. Women from the higher age groups worked for longer hours. The desire for savings was more evident with the younger age group. The housing conditions of workers were below par but their health status was generally good. A sizeable number of women beedi workers were indebted but incidence of bonded labor among them was negligible. Their income was a major portion of their family income. A large number of workers worked for 7-12 hours per day and rolled about 501-1000 beedis per day. Most women workers were taking the advantage of less than two hours of rest period per day. A large number of women workers were unaware of the Beedi and Cigar Act and Welfare Act but aware of the Minimum Wages Act.

It is clear now that the general health status of beedi workers is very low and alarming compared to general population. There is an urgent need to investigate and plan future strategies to reduce the illness and wellbeing among these down trodden beedi workers. On the basis of findings of the study it was suggested for the women beedi workers that the government should make the provisions to educate them to know their rights and to strengthen their united power. The government through voluntary organizations should help them to form co-operatives – on a profit sharing basis to give them free loans to buy raw materials and to build well ventilated, hygienic work sheds and to market their products. Effective social-work interventions could be of great help for the beedi workers who are suffering from various ailments and without any medical assistance.

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Conflict of Interest
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