



### Original Research Article

## Morbidity profile of Beedi workers and their dependants attending Beedi Workers Welfare Fund dispensary in Vetapalem, Prakasham district, Andhra Pradesh

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### Abstract

The International Labour Organization reported that ailments of the beedi workers include postural to eye problems, burning sensation in throat, asthma, Tuberculosis, irregular, heavy menstrual cycles, Anemia and dizziness. Smokeless tobacco use accounts for about 3.5 lakh deaths every year in India out of total 13.5 lakh deaths that are attributed to the use tobacco. Beedi workers in India are the third largest component of workforce only after agriculture and textile workers. They live in the conditions of poverty and exploitation and have limited access to their health services. The dependants on the beedi workers are also equally exposed to smokeless tobacco dust. Hence this study was taken up to identify the health profile of both beedi workers and their dependants.

### Objectives

1. To study the morbidity pattern of the beedi workers attending the B.W.W.F dispensary in Vetapalem, Prakasham district.

**Methodology:** A facility based cross sectional study was taken up in the B.W.W.F dispensary in Vetapalem, Prakasham district in the month of December 2017 to identify the beedi workers and their dependants and their health related issues. The total population of 1198 was covered and the morbidity pattern was assessed. Data entry was done in Microsoft excel 2007 version. Descriptive Statistics were employed to analyze the data. Analysis was done by using Epi info version 7.2.1.0.

**Results:** Majority (95%) of the beedi workers were women. 50% of the study population had one or the other morbidity. The most common morbidity patterns identified were gastro intestinal disorders (15.64%) followed by hypertension (13.14%), respiratory illnesses (11.64%) and diabetes mellitus (11.31%).

**Keywords:** Beedi rollers, Morbidity.

## Introduction

“Bidis” or “beedis” are slim, hand-rolled, unfiltered cigarettes. Beedi rolling industry is the one of the largest unorganized sectors in India. According to government estimates quoted by International Labour Organization, there are close to 5 million workers involved in rolling of beedis in India. The All India Beedi, Cigar and Tobacco Workers Federation estimates women comprise about 90-95 % of the beedi manufacturing population.

The International Labour Organization reported that ailments of the beedi workers include postural to eye problems, burning sensation in throat, asthma, Tuberculosis, irregular, heavy menstrual cycles, Anemia and dizziness<sup>1</sup>. Smokeless tobacco use accounts for about 3.5 lakh deaths every year in India out of total 13.5 lakh deaths that are attributed to the use tobacco<sup>2</sup>.

Exposure to smokeless tobacco during pregnancy is associated with adverse fetal outcomes like poor birth outcomes, including causation of a negative effect on anthropometric measurements of newborns<sup>3</sup>.

According to the studies done in tobacco grown states like Gujarat and Andhra Pradesh, tobacco growers suffer from “Green Tobacco Sickness.” The symptoms include headache, giddiness, nausea and vomiting leading to absenteeism<sup>4</sup>.

Sustainable development goals also have special emphasis on tobacco control to ensure healthy lives and promote well being for all at all ages. One of the targets (3a) of this goal is to strengthen the implementation of the World Health Organization framework convention on tobacco control in all countries<sup>5</sup>.

## Need for the Study

Beedi workers in India are the third largest component of workforce only after agriculture and textile workers. They live in the conditions of poverty and exploitation and have limited access to their health services<sup>6</sup>. The dependants on the beedi workers are also exposed to smokeless tobacco dust as they roll beedies at home. Hence

this study was taken up to identify the health profile of both beedi workers and their dependants.

## Objectives

1. To study the morbidity pattern of the beedi workers attending the B.W.W.F dispensary in Vetapalem, Prakasham district.

## Methodology

A facility based cross sectional study was taken up in the B.W.W.F dispensary in Vetapalem, Prakasham district in the month of December 2017 to identify the beedi workers and their dependants and their health related issues. The survey covered a population of 1198. The morbidity pattern of the study population was assessed by the Medical Officer.

Data entry was done in Microsoft excel 2007 version. Descriptive Statistics were employed to analyze the data. Analysis was done by using Epi info version 7.2.1.0.

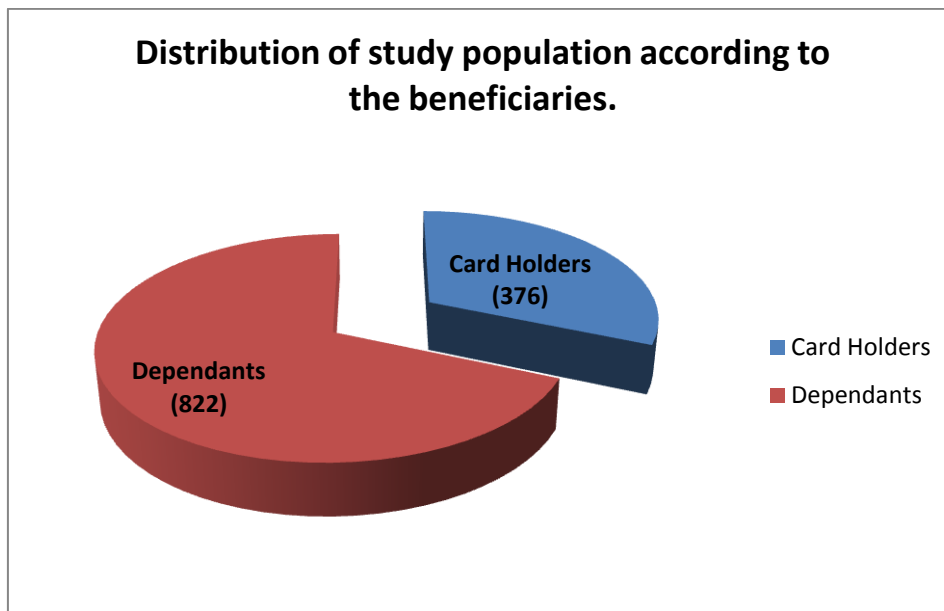
## Results

Beedi Workers Welfare Fund dispensaries are located in the areas where beedi workers form a greater part of the population. One such location is Vetapalem of Prakasham district.

Majority (90%) of the beedi workers are women.

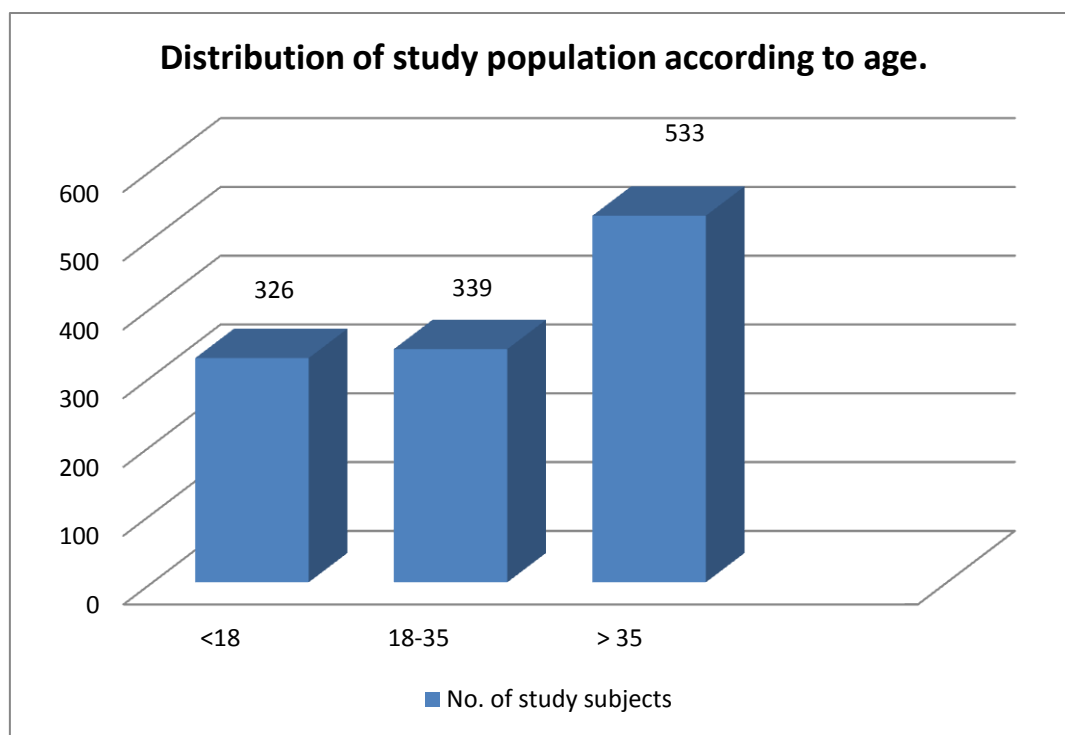
**Table 1:** Total number of beedi workers and their dependants

Sl no	Beneficiaries	Number
1.	Card Holders	376
2.	Dependants	822
3.	Total	1198



**Table 2:** Distribution of the study population according to age

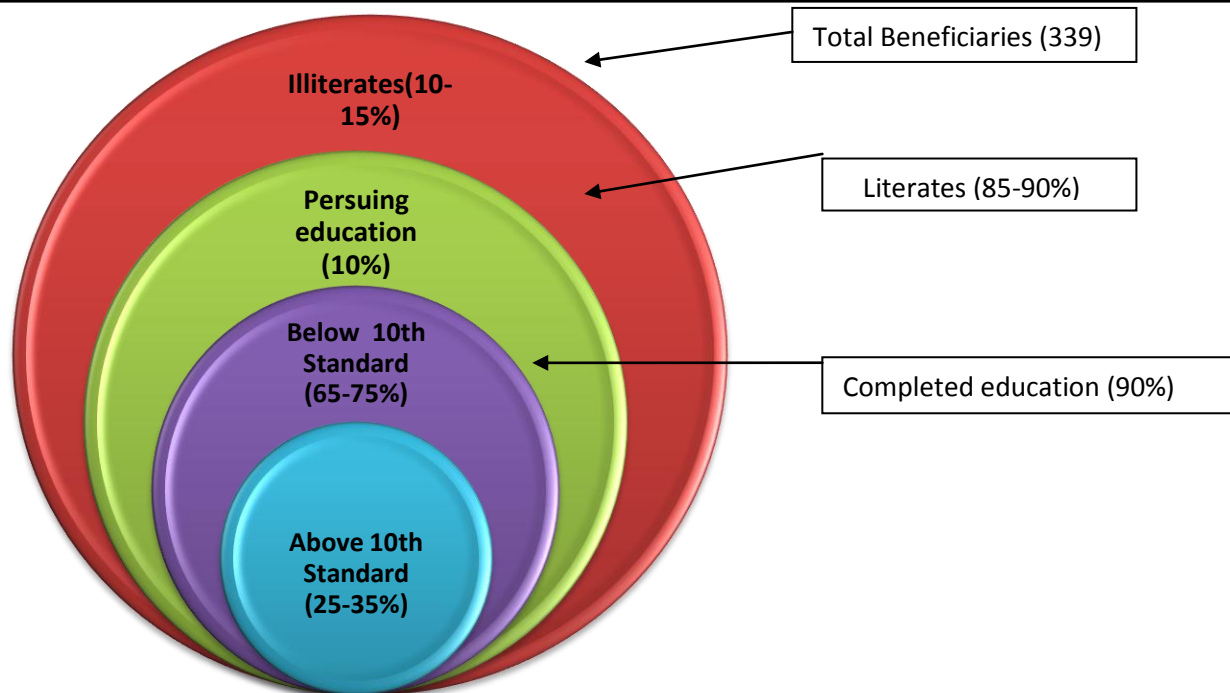
S/no	Age in years	Number
1.	< 18 years	326
2.	18-35 years	339
3.	>35 years	533
4.	Total	1198



**Educational status of the study population:**

Out of 339 total eligible beneficiaries, 10-15% is illiterates and 85-90% are literates. Out of total literates, 10% are continuing their education and

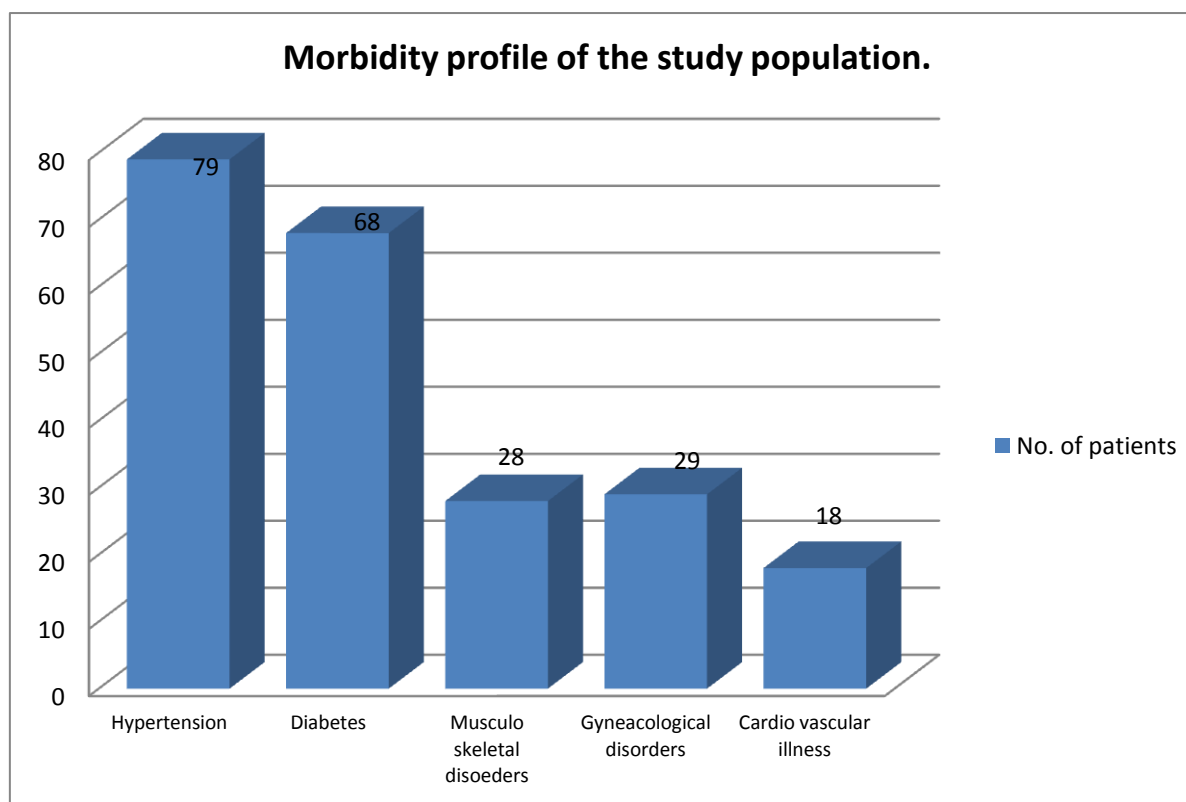
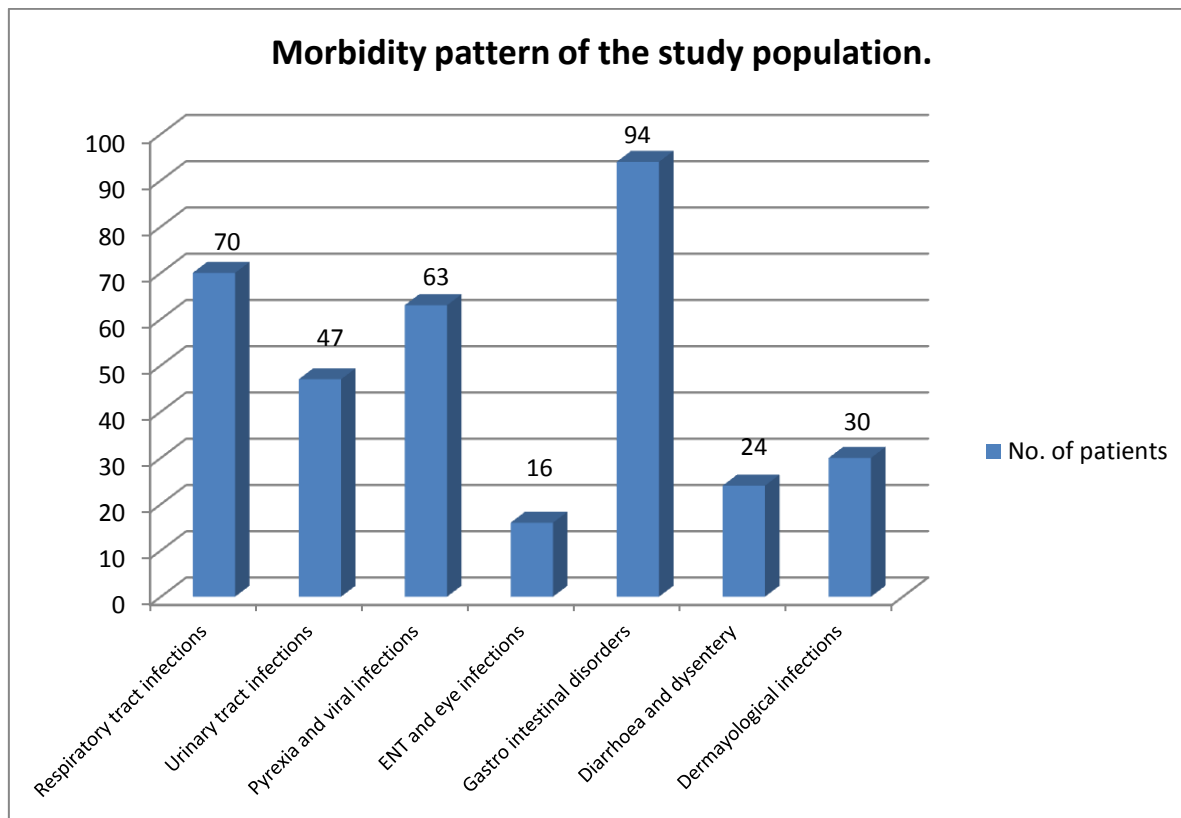
90% of them completed their education. Out of those who completed their education, 65-75% belonged to below 10<sup>th</sup> standard and 25-35% completed their secondary school education.



**Table 3:** Morbidity profile of the study population

Out of the surveyed 1198 population, 601(50.16%) were suffering with one or the other below mentioned morbidities.

Sl.no	Disease Particulars	No. of patients	Percentage
1.	Respiratory tract infections	70	11.64%
2.	Hypertension	79	13.14%
3.	Musculo skeletal disorders	28	4.65%
4.	Gynecological disorders	29	4.82%
5.	Gastro intestinal disorders (Other than diarrhea and dysentery)	94	15.64%
6.	Diarrhea and dysentery	24	3.99%
7.	Diabetes Mellitus	68	11.31%
8.	Urinary tract infections	47	7.82%
9.	Pyrexia	46	7.65%
10.	Dermatological manifestations	30	4.99%
11.	Ear, nose and Throat, Eye infections	16	2.66%
12.	Cardio vascular diseases	18	2.99%
13.	Vitamin Deficiencies	11	1.83%
14.	Tuberculosis, Cancer, Kidney disease	0	0
15.	Viral Infections	17	2.82%
16.	Other miscellaneous	24	3.99%
17.	Total	601	100%



**Discussions**

Majority of the respiratory tract infections include upper respiratory tract infections like sore throat, pharyngitis, laryngitis etc. Lower respiratory tract illness like pneumonia and bronchial asthma are

rare. Musculoskeletal disorders include low back ache, pain at the elbow and wrist joints. Majority of the beedi workers are females, who work from their home. They get involved in various household activities during the process of beedi

rolling. This might be the contributing factor relatively low musculoskeletal morbidity in the present study. Gastro intestinal disorders include pain and irritation in the throat, epigastric pain, gastritis, gastro esophageal reflux disease. Gynecological disorders include white discharge and menstrual abnormalities. Diabetes was most commonly found as it is associated with physical inactivity among the beedi rollers and their dependants. Hypertension was common for both beedi workers and their dependants. It can be attributed to the effect of tobacco/nicotine or due to physical inactive nature of beedi rollers. Dermatological manifestations include tinea infections and nail bed infections which can be due to unhygienic conditions. Cardio vascular morbidity was specifically seen among dependants of beedi rollers which include Coronary artery disease and dyslipidemia.

A study done by Anil et al (2012)<sup>7</sup>, in Mangalore, Karnataka has shown that the most common morbidity among beedi workers were musculoskeletal disorders (64%), gynecological problems (42%), gastro intestinal disorders (44%) and respiratory morbidity (36%).

A study done by Madhusudhan et al (2014)<sup>8</sup>, in Coastal Karnataka, has shown that the most common morbidity among beedi workers were musculoskeletal disorders (34.6%) followed by ocular morbidity (31.2%) and respiratory morbidity (12.07%). The association between the duration of service of beedi rolling and musculoskeletal problems and ocular morbidity was found to be statistically significant with P value less than 0.05.

A study done by Kollur et al (2015)<sup>9</sup>, in Dharward, Karnataka, has shown that 44.82% were suffering with morbidity.

A study done by Sabale et al (2012)<sup>10</sup>, in Mumbai has shown that the most common morbidity was muscle ache and fatigue (88.5%), followed by lower backache (78.8%), pain in the knee(42.3%), palpitations(36.5%), headache(32.7%), blurring of vision(26.9%), menstrual irregularities(26.9%), epigastric pain(23.1%), breathlessness(21.2%),

cough(13.5%), double vision(13.5%), watering of eyes (11.5%), pain in and around eyes(11.5%), chest tightness (11.5%), hoarseness(9.6%), thickening of the skin(7.7%), proximal muscle weakness(7.7%), Throat irritation(5.8%), syncopal attacks(5.8%), loss of hearing(3.8%), painless hematuria(1.9%).

A study done by Mukherji et al (20)<sup>11</sup>, in Murshidabad of West Bengal, has shown that most of the beedi workers or their family members suffered from diseases like tuberculosis (22.5%), oral diseases (36.7%), ulcers (24.2%). A majority (89.2%) of the respondents replied that they suffer from irregular menstruation followed by cough (76.7%), Hypertension (65.8%), throat ache (64.2%), fatigue (59.2%), callosities (56.70%), numbness in the hands (55.8%) and other respiratory diseases (52.50%).

### Conclusions

50% of the population was suffering with morbidity which should be seriously taken into consideration. They should be educated regarding the health services available to them which will provided free of cost by Govt of India. Health education regarding the diseases associated with handling of smokeless tobacco and necessary precautions to prevent them.

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**Conflicts of Interest: None**

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