CERTIFICATE

SANGAMESHWAR COLLEGE, SOLAPUR

DEPARTMENT OF STATISTICS

A

PROJECT REPORT

ON

"STATISTICAL STUDY IN SCOPE OF BEEDI INDUSTRY IN SOLAPUR CITY"

BY

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INDEX

INTRODUCTION

Beedi industry is one of the most important unorganized agro industry which occupies important place in the national economy beedi rolling is manual in its stage no tools are used to expect ordinary scissors winnows and wire net there are beedi tobacco and beedi leaves(tendo or kindo leaf) they fit beedi in the beedi industry where no foreign exchange, machinery electric power, skilled labour or any others infrastructure are required. The instruments of production only the unskilled female labours that rolls out the bee dies and supplement their family income.

The beedi industry discuss legislation and polices developed by Indian government aimed at protection of consumers a society monitoring working condition and providing social security benefits for the welfare of labours and fiscal policies with regard to tobacco control. Beedi smoking, having oriented in India, is currently practiced all over the country and is most popular form of tobacco use. Tobacco is the single largest Coues of premature adult deaths throughout the work.

India is being the developing country. Many families are from very low socio-economic level and female have to support their family economy. Solapur is city in Maharashtra well known for textile industry but recently beedi industry has become leading industry in city and about 70000 populations is involved in beedi rolling. These are courage industry spread out in many houses in slum areas and almost all workers are illiterate females. There are about 300 major manufactures of branded beedi and thousands of small scale manufacture cum contractors account for bulk of the beedi production in India. Since most of the production is undertaken in homes, production is widely dispersed and it is difficult to plot clear cut employers-employee relationship.

AIM AND OBJECTIVE

1... To study the future of the beedi production in Solapur City.

2. To compute the status of year by year beedi production in Solapur City.

RESEARCH

The present study is based on both primary and secondary data. The primary data is collected through field work. The interview of 151 female workers conducted and data is collected. In this process the observations, questionnaires techniques are applied.

All Quantitative Variables are presented using descriptive statistics (Mean, Mode, Median, S.D, range) and year wise percentage change is beedi production is calculated and same is presented using graphs. To test year by year significance difference of beedi production one way ANOVA is used, at 5% Level of significance. To find the year wise significance difference Bonferroni Multiple comparison test is used.

TOOLS USED FOR DATA

1. Questionnaire.

Questionnaire was prepared so as to gather information from Beedi workers in Solapur City.

2. Discussions.

Discussions with the various middle class woman Beedi workers in Solapur city.

1. Mr. T G. Ghatage (2018).

The commercial beedi manufacturing is having more than hundred year history. Till today, the manufacturing of beedi carried out in three phase i.e. individual, self-employed beedi workers (who operate and even market beedis locally) and a branded beedi company. Different scholars have classified the beedi workers as per need of study as well as perspective of researcher. In this study all possible classification are incorporated.

2. C. S. Bhanumate (2015).

Solapur is one of the important cities in Maharashtra state. It is located at the border of Karnataka and Andhra Pradesh. Beedi industry is one of the important economic activities in the Solapur. This industry facing problem because of government policy, if this industry is stopped, there is the effect of unemployment in city. The economic condition will collapse automatically of most of workers working in beedi industry.

3. A.N. Suryakar (2010).

Workers in beedi industry are constantly in contact with tobacco powder. Illnesses like cancer, asthma, chronic bronchitis, backache, joint pain and arthritis are reported to be common among beedi workers. These disorders induced by tobacco dust and nicotine absorption seems partly be mediated by increase in oxygen free radicals. The present study was carried out to assess exposure effects of tobacco on oxidant and antioxidant status which may induce related health hazards.

4. Mohd Shamim Ansari (2014).

The central idea of this paper is to explore link between socio-economic positions of women working in unorganized sector with special reference to beedi rolling. In India Beedi making is an age old industry and one of the largest job providers for women in the unorganized sector. Women are having inherent advantage in this job in this job of beedi rolling due to deft fingers; yet significant gender bias exists. The job is mainly done by weaker economic class in the country who don't have adequate education and skill to look for alternate job.
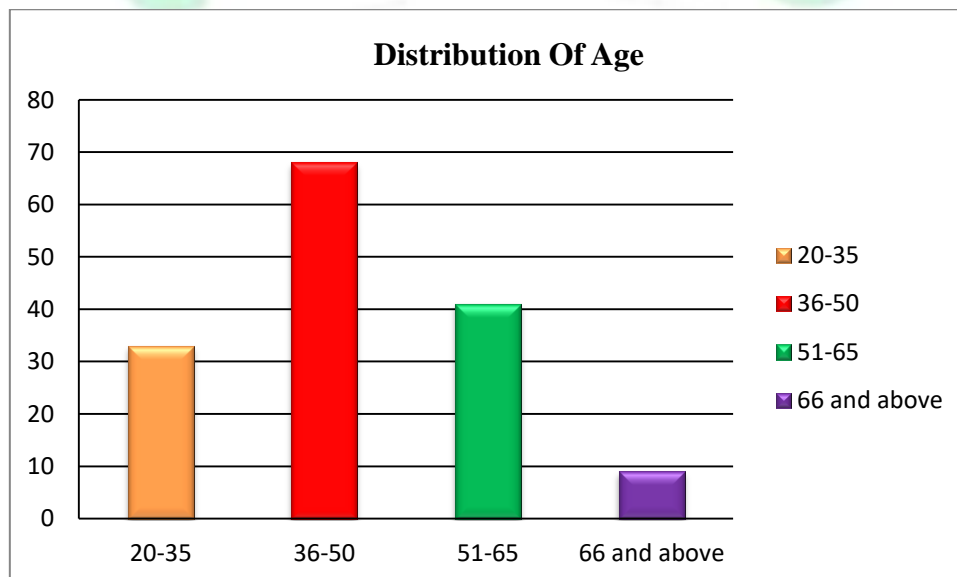
1. Age Group Wise Distribution of Women Beedi Workers:

Age is important characteristic of female workers' life. It refers to physical and psychological maturity of a person and also serves as an indication of her experience, knowledge and worldly wisdom. A most of the beedi workers are found to be neither very young, nor very old. There is a general tendency after 50. It is experimental from the almost beedi workers are from active age group, and it affects the physical and mental condition of beedi workers.

Table 1: Descriptive Statistics:

Descriptive Statistics of Age							
	N	Range	Minimum	Maximum	Mean	Std. Deviation	Variance
AGE_OF_WORKERS	151	54	21	75	46.48	12.411	154.025
Valid N (list wise)	151						

The table 1 reveals the age group classification of female workers. The table indicates that, the percentage of female beedi workers belonging to the age of 36 to 50 years is maximum i.e.45.64 %, whereas the percentage of female beedi workers between 51 to 65 years is

27.52% it means that the most of the female beedi workers i.e. 63.75% (250) are belonging to the age group of 21 to 40 years. It is experimental from the above that almost all female beedi workers are from active and age group.

Graph No.5.1, It shows 45.64% female beedi workers belong to age group between 36 to 50 year, while 27.52% female workers are between 51 to 65 years. And 20.81% fall in the 20 to 35 year age group and 6.01% female workers are above 66 years.

2. Working Years Of Workers In This Field:

The beedi workers are from different age groups. Each beedi worker is working for particular factory and having an employment card. Hence there is proper record beedi worker and officially the starting age of beedi worker is 18 years and end at year 60 that is the age of retirement.

Table 2: Descriptive Statistics:

Descriptive Statistics of working years							
	N	Range	Min.	Max.	Mean	Std. Deviation	Variance
Since How Many Years You Working In This Field	151	58	3	61	28.01	13.280	176.353
Valid N (list wise)	151						

Hence on record there is no child labour in beedi workers. But it is observed that women who are above 60 years and girls below 15 years are helping the actual beedi worker to fulfil her daily quota. The range of working years of women beedi workers is 58.

3. CLASSIFICATION OF BEEDI PRODUCTION YEAR BY YEAR:

The data was collected beedi production in one day of the 2018, 2013, 2008 and 2003 are calculated. The percentage change between these years is given below.

a) Production In Year 2013 - 2018:

The production of beedi between years 2013 and 2018 is calculated as below

Table No. 3: Descriptive Statistics

	N	Range	Min.	Max.	Mean	Std. Deviation	Variance
Difference Between 2008and 2018	150	153.33	-80.00	73.33	16.4420	21.79090	474.843
Valid N (List Wise)	150						

Table no 2 represents the percentage change of beedi production, 2018 as compared to 2013 is decreased by 16%

b) Production in year 2008 - 2018

The production of beedi between years 2008 and 2018 is calculated as below

Table No. 4: Descriptive Statistics

	N	Range	Min.	Max.	Mean	Std. Deviation	Variance
Difference Between 2008and 2018	141	773.33	-700.00	73.33	21.7998	64.98433	4222.963
Valid N (List Wise)	141						

Table no 2 represents the percentage of beedi production in 2018 as compared to 2008 is decreased by 21%
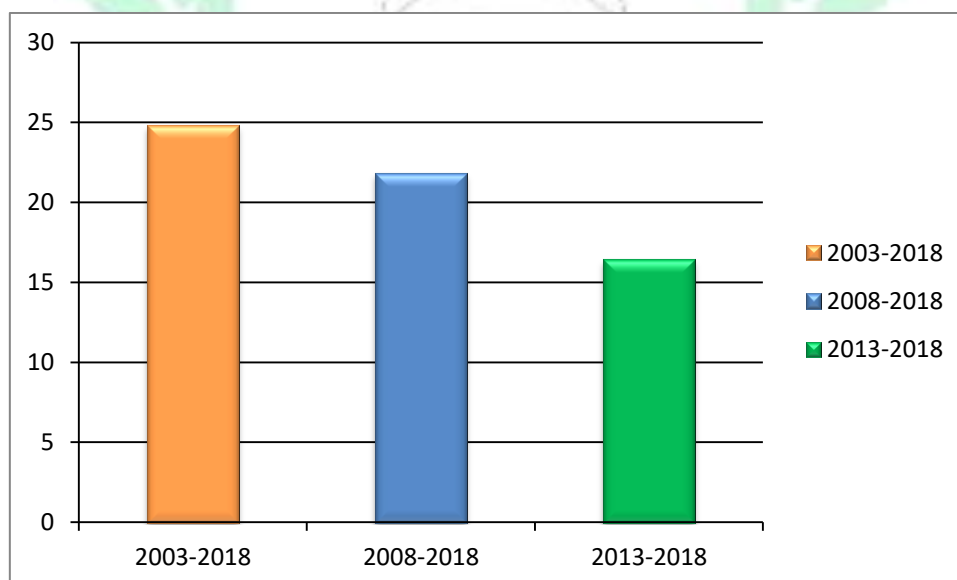
c) Production In Year 2003 - 2018

The production of beedi between years 2003 and 2018 is calculated as below

Table No. 5: Descriptive Statistics

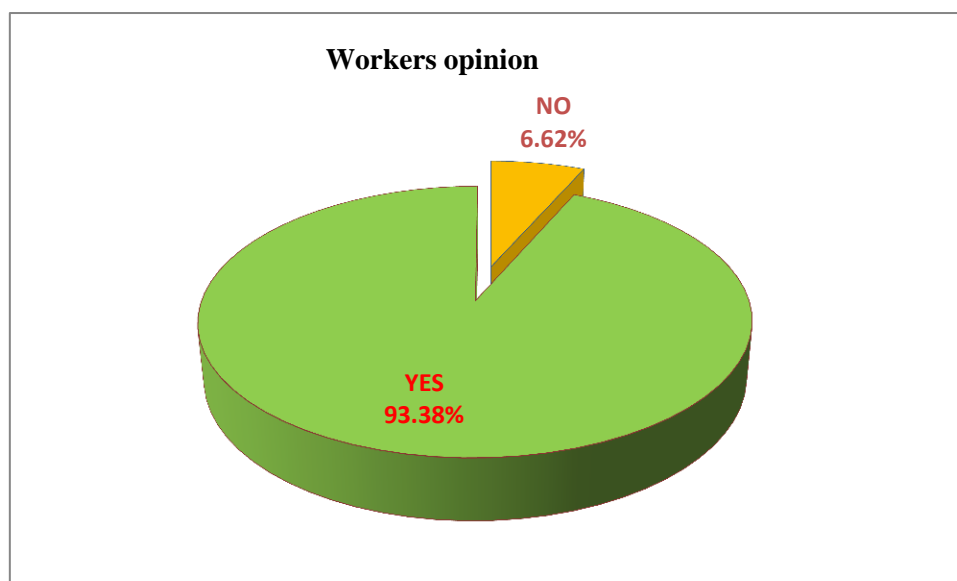|	N	Range	Min.	Max.	Mean	Std. Deviation	Variance
Difference between 2003 and 2018	132	783.33	-700.00	83.33	24.8238	71.07697	5051.936
Valid N (list wise)	132						

Table no 2 represents the percentage of beedi production in 2018 as compared to 2003 is decreased by 24%
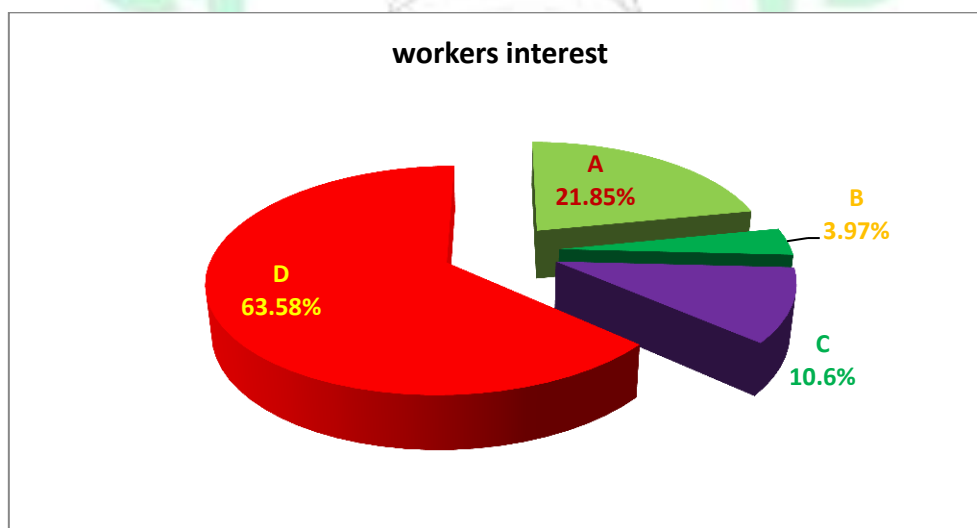
Percentage change

From above graph it is clear that decreases in beedi production from 2003 to 2018

4. WORKERS VIEW ON DECREASES IN BEEDI PRODUCTION:

Above chart represents the most of the women realise the decrease in beedi production 93.38% of the sample is says that there is decrease in beedi production.

5. INTEREST IN FIELDS OTHER THAN BEEDI WORKERS:

From above chart it clear that most of the women are prefer to work at home respective there is also more women want beedi work only because there personally reasons. There is 63%, women are interested to do work at home and 21% women's are interested to do beedi work,

10% women are interested to do officially work and remain 3% women's are interested in industrial work.

6. HYPOTHESIS:

H_0: there is no significant difference in beedi production.

H_1 : there is at least one group is differ

Decision rule:

If $p < \alpha$ then we reject H_0

(At α=5% level of significance)

7. ANOVA

The one way analysis of variance (ANOVA) is as below

Table No. 6: ANOVA

	Sum of Squares	Degree of freedom	Mean Square	F	Sig.
Between Groups	2.181E7	3	7270314.584	54.769	.000
Within Groups	7.580E7	571	132743.919		
Total	9.761E7	574			

From the anova table we conclude that there is statistically significant difference between average productions in year 2018 to 2003.

Here p (0.000) < α there we reject the H_0

To find out the pair wise significance difference between production years Bonferroni

multiple comparison tests is used.

Table No. 7: BONFERONNI

Time 1	Time 2	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
2013	2018	218.00000[*]	42.07040	.000	329.3807	106.6193
2008	2018	386.10329[*]	42.65883	.000	499.0418	273.1648
2003	2018	523.73434[*]	43.39394	.000	638.6190	408.8496

From above table no.7, there is statistical significance difference in beedi production between

the year 2013 and year 2018.

Similarly, there is statistical significance difference between the year 2008 and year 2018

And also there is statistical significance difference between the year 2003 and year 2018.

11

CONCLUSION

- There is significant change in beedi production since from 2003-2018.

- In year 2013 to 2018 the beedi production is decreased by 17%.

- In year 2008-2018 the beedi production is decreased by 22%.

- And in year 2003 to 2018 the production rate is decreased by 25%

- Actually the beedi production, year by year should be increased in order to develop the social economical status of beedi workers. But it is observe that from the study that there is on an average **21%** decline in beedi production in Solapur city.

- From above discussion it is we conclude that

    "A proper policy should be developed in order to increase the beedi production in Solapur City or some alternative sources of income should be generated for beedi workers".

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- C. S. Bhanumate (2015). Socio-economic condition of male Beedi workers in Solapur

- A.N. Suryakar (2010). A study of oxidative stress in Beedi industry workers from Solapur City.

- Mohd shamim ansari (2014). Socio-economic status of women beedi workers in bundelkhand region of uttar pradesh: an empirical analysis1

ANNEXURE

Q.1 What Is Your Age?

Q.2 since How Many You Working In This Field?

Q.3 on an Average How Many Beedi Did You Complete In One Day?

Q.4 Do You Think Beedi Production Decreases Year By Year?

Q.5 Which Type Of Work You Want To Do Instead Of Beedi Work?