



“A Study To Assess The Prevalence Of Risk Cases Of Oral Cancer And Identify The Impact Of Small Group Teaching Programme On Preventive Measures Of Oral Cancer Among Tobacco Chewers In Selected PHC At Vijayapura District.”

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Abstract: Oral cancers are dreadful, deadly and merciless disease, if left leads to death. Oral cancers can appear as a growth or sore in anywhere of the mouth that does not cure. It includes any malignant neoplasm which is found on the lip, floor of the mouth, cheek lining, gingiva, palate or in the tongue. Around world one third of oral cancer cases are present in India. Oral cancers are one among the top three types of cancers in India. It is one of the major public health problems in India. 90 95%% of oral cancer patients are affected with Squamous cell carcinoma. Everyday 5 people in India die due to oral cancer every hour. The International agency for research on cancer has predicted that India's incidence of cancer will increase over 1.7 million in 2035. Men age over 50 has the highest risk of developing oral cancer than women.⁽²⁾ In the pre-test, the majority of participants (83.3%) had inadequate knowledge, while 16.7% had moderately adequate knowledge, and none (0.0%) had adequate knowledge. However, after the implementation of the small group teaching programme, a remarkable improvement was observed in the post-test. The majority of participants (83.3%) attained adequate knowledge, 13.3% had moderately adequate knowledge, and only 3.3% remained with inadequate knowledge.

Methodology: This study researcher used a **one-group pre-test/post-test design** to assess the prevalence of high-risk oral cancer cases and evaluate the impact of a small-group teaching programme on oral cancer preventive measures among tobacco chewers. The study was conducted at a selected Primary Health Centre (PHC) in the Vijayapura district, with a sample size of **300 tobacco chewers**. Oral cancer assessment was performed using **Lugol's Iodine Solution**. Data were collected using a socio-demographic questionnaire and a structured knowledge questionnaire. The content validity and reliability of the research instruments were established, and a pilot study was conducted on 30 tobacco chewers prior to the main study. Ethical approval was granted before the commencement of the pilot study.

Result: The study findings revealed that the highest proportion of tobacco chewers belonged to the 36–45 years age group (35.7%), followed by those above 45 years (26.3%), while the least proportion was observed in the 16–25 years age group (18.3%). The majority of participants were males (80.3%), indicating a higher prevalence of tobacco chewing among men. Most participants had secondary education (35.7%), whereas 26.3% were illiterate. Regarding occupation, private employees constituted the highest proportion (44.7%), followed by farmers (35.7%). Nearly half of the participants (46.0%) had a monthly income between ₹10,001–20,000, and the majority were married (81.7%). Gutkha was the most commonly consumed form of tobacco (44.7%), and more than half of the participants (54.0%) had been chewing tobacco for 1–5 years. Most participants consumed tobacco 1–2 times daily (38.0%), and 81.7% did not keep tobacco in the mouth for a prolonged duration. Family and friends were the major source of information regarding oral cancer (33.3%), while 28.0% had no prior information. None of the participants reported a family history of substance use or cancer. Lugol's iodine test identified 10.0% of participants as being at risk for oral cancer. Pre-test findings showed that 83.3% of participants had inadequate knowledge regarding oral cancer prevention. However, after the small group teaching programme, 83.3% attained adequate knowledge, demonstrating that the teaching programme was highly effective in improving awareness and knowledge regarding the prevention of oral cancer among tobacco chewers.

Key Words: Prevalence, risk cases, oral cancer, small group teaching programme etc

INTRODUCTION: According to Indian council of Medical and research stated that in India males are most commonly affected with lip and oral cavity cancers, and it also reported that the number of fresh cancer cases and deaths have been rising since 2012. According to the India fact sheet of GLOBOCAN 2018, cancer of the lip and oral cavity showed a huge increase of 114.2% with 56,000 cases in 2012 that increased to 119,992 in 2018.) ⁽³⁾ Oral cancer (mouth cancer) is the broad term for cancer that affects the inside mouth. Oral cancer can look like a common problem with your lips or in mouth, like white patches or sores that bleed. Overall, about 11 people in 100,000 will develop oral cancer during their lifetime. Men are more likely than Women to develop oral cancer. People who are white are more If likely to develop oral cancer than people who are Black. ⁽⁴⁾If any person suffering with any of these following symptoms for more than two weeks, then consult the dentist or a doctor

PROBLEM STATEMENT

“A study to assess the prevalence of risk cases of oral cancer and identify the impact of small group teaching programme on preventive measures of oral cancer among tobacco chewers in selected PHC at Vijayapura district.”

OBJECTIVES

1. To assess the prevalence risk cases of oral cancer by using Lugol's iodine among tobacco chewers in selected PHC at Vijayapura district.
2. To assess the knowledge towards prevention of oral cancer among tobacco chewers
3. To evaluate the effectiveness of small group teaching programme among diagnosed risk cases of oral cancer.
4. To find out the association between pre-test knowledge regarding oral cancer prevention and selected demographic variables among.

Assumptions

The study assumes that.

- Tobacco chewers may have risk of diagnosing oral cancer as well as unfavorable knowledge regarding oral cancer prevention

Hypotheses:

The hypotheses will be tested at 0.05 of significance.

- **H₁:** There is significant difference in knowledge regarding oral cancer prevention.
- **H₂:** There is significant association between knowledge score with selected Demographic Variables.

Materials and Methods**Research design**

“Quasi Experimental one group pre-test post-test design”

Setting and population

This study was conducted at selected PHC of Vijayapura District.

Sample technique and Sample size

The sample size for the present study was 300 selected through simple random sampling technique

Inclusion criteria:

- Tobacco chewing adult population
- Adult population who are willing to participate in the study.
- Adult population who are available during the study.

Exclusion criteria

- Tobacco chewing adult population who are not available at the time of study
- Tobacco chewing adult population who are critically ill.

Variable under study are

Research variable: Oral cancer and knowledge

Demographic variables: Age, Family History, Area of Residence, Educational status, oral hygiene practice, bad habits, occupation, Family history of any cancer and previous knowledge on oral cancer etc.

Method of data collection and tool description: The data were collected through questionnaires consist

Section A: Socio-demographical perform

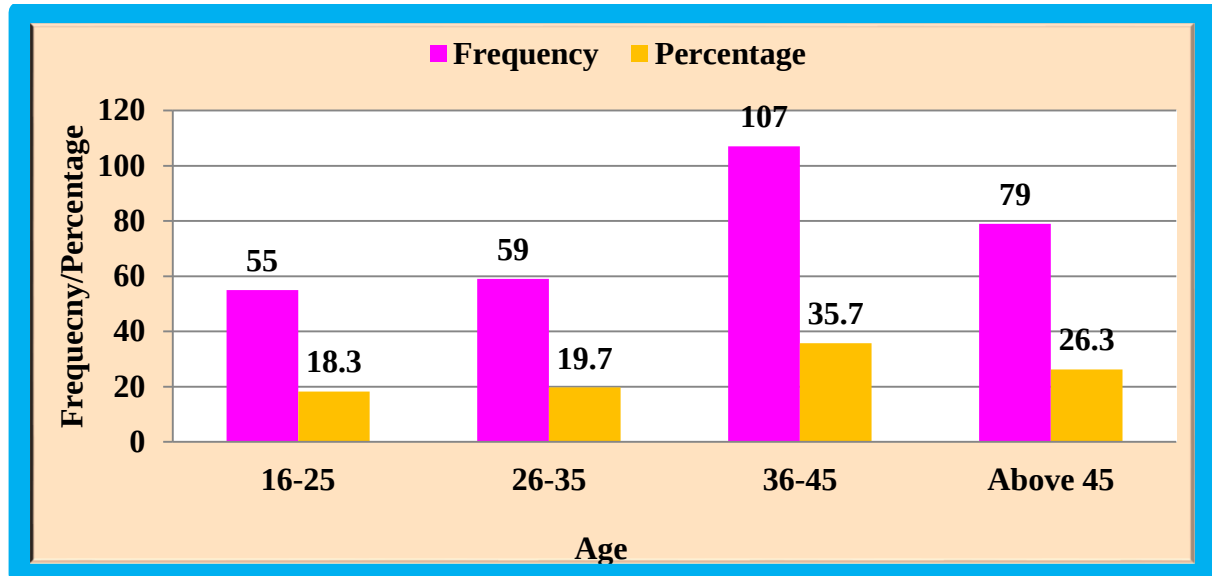
Section B: Assessment of oral cancer by using Lugo's Iodine Solution

Section C: Knowledge Questionnaire on Oral Cancer

Result**Section-I**

Table no 1: Frequency and percentage distribution of tobacco chewers according to their age

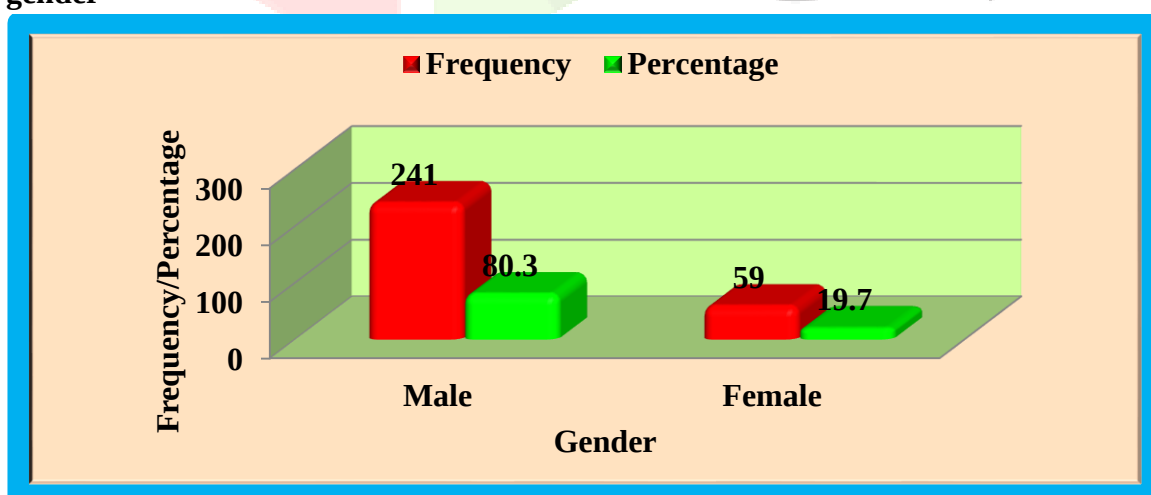
SI No	Age in years	Frequency (n)	Percentage (%)
1	16-25	55	18.3
2	26-35	59	19.7
3	36-45	107	35.7
4	Above 45	79	26.3
	Total	300	100.0

Graph no 1: Frequency and percentage distribution of tobacco chewers according to their age

The table no 1 shows that the highest proportion of tobacco chewers (35.7%) belonged to the age group of 36–45 years, followed by 26.3% in above 45 years. The least proportion (18.3%) was observed in the 16–25 years age group.

Table no 2: Frequency and percentage distribution of tobacco chewers according to their gender

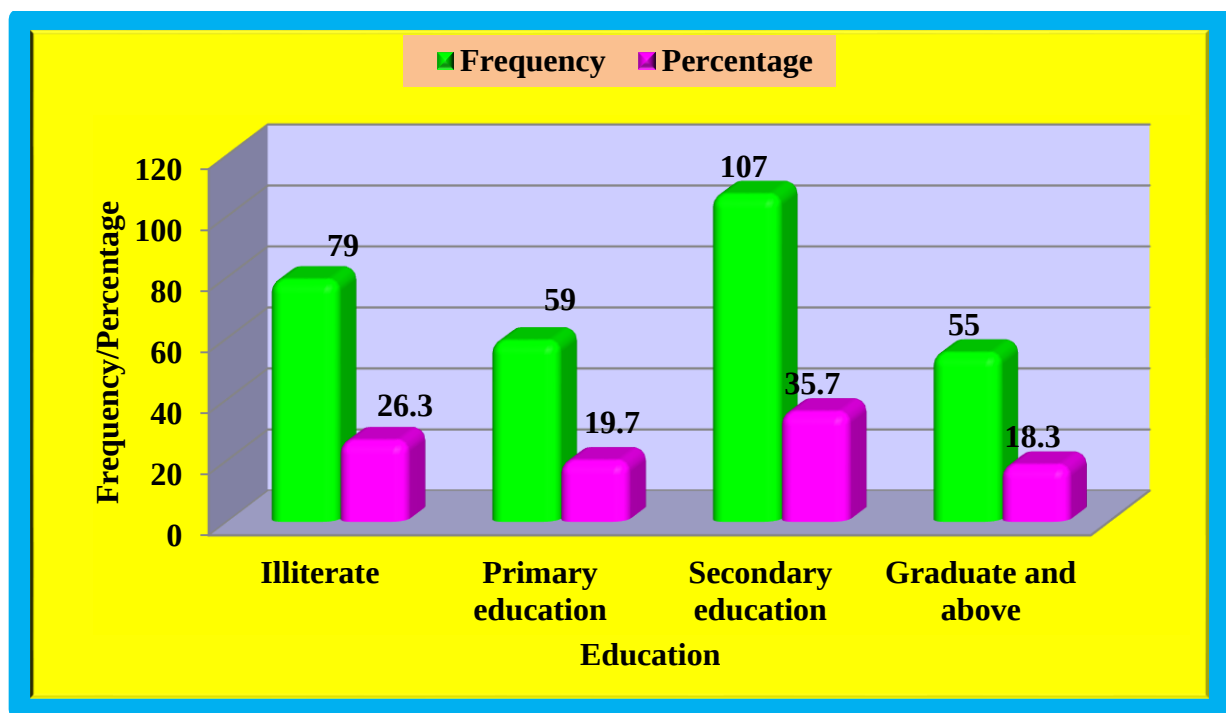
SI No	Gender	Frequency (n)	Percentage (%)
1	Male	241	80.3
2	Female	59	19.7
	Total	300	100.0

Graph no 2: Frequency and percentage distribution of tobacco chewers according to their gender

The table no 2 indicates that the majority of tobacco chewers were males (80.3%), while females constituted 19.7% of the study population, showing that tobacco chewing was more prevalent among males.

Table no 3: Frequency and percentage distribution of tobacco chewers according to their education status

SI No	Education status	Frequency (n)	Percentage (%)
1	Illiterate	79	26.3
2	Primary education	59	19.7
3	Secondary education	107	35.7
4	Graduate and above	55	18.3
	Total	300	100.0

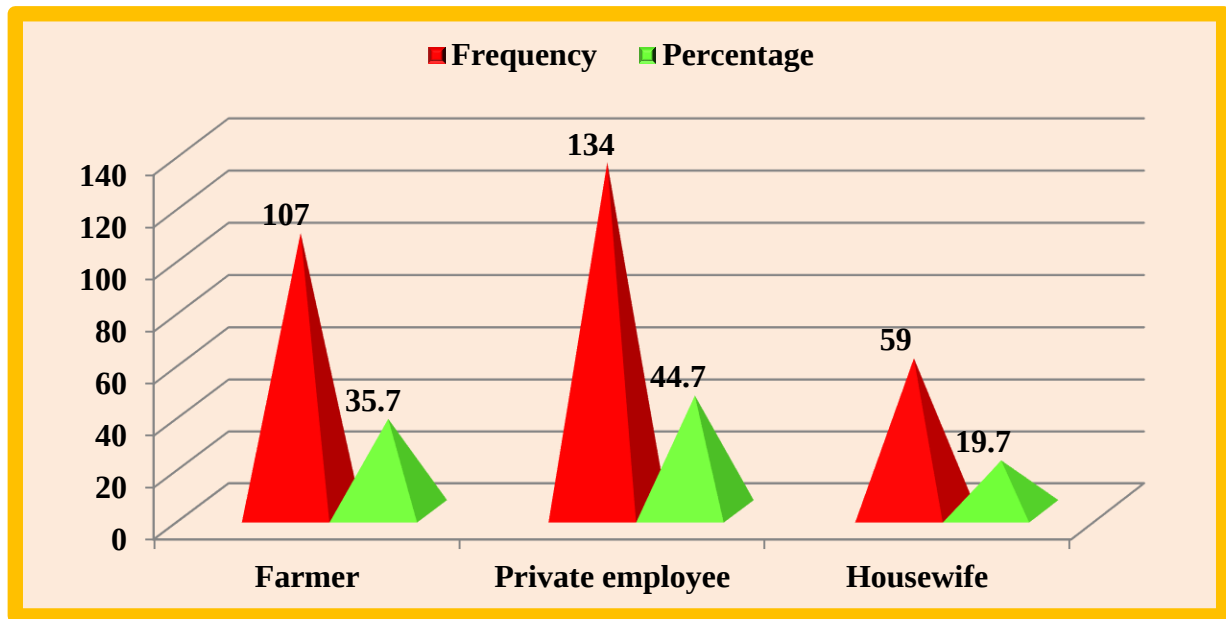
Graph no 3: Frequency and percentage distribution of tobacco chewers according to their education status

The table no 3 reveals that the highest proportion of tobacco chewers (35.7%) had secondary education, followed by 26.3% who were illiterate. About 19.7% had primary education, while the least proportion (18.3%) were graduates and above.

Table no 4: Frequency and percentage distribution of tobacco chewers according to their occupation status

SI No	Occupation status	Frequency (n)	Percentage (%)
1	Farmer	107	35.7
2	Private employee	134	44.7
3	Housewife	59	19.7
	Total	300	100.0

Graph no 4: Frequency and percentage distribution of tobacco chewers according to their occupation status

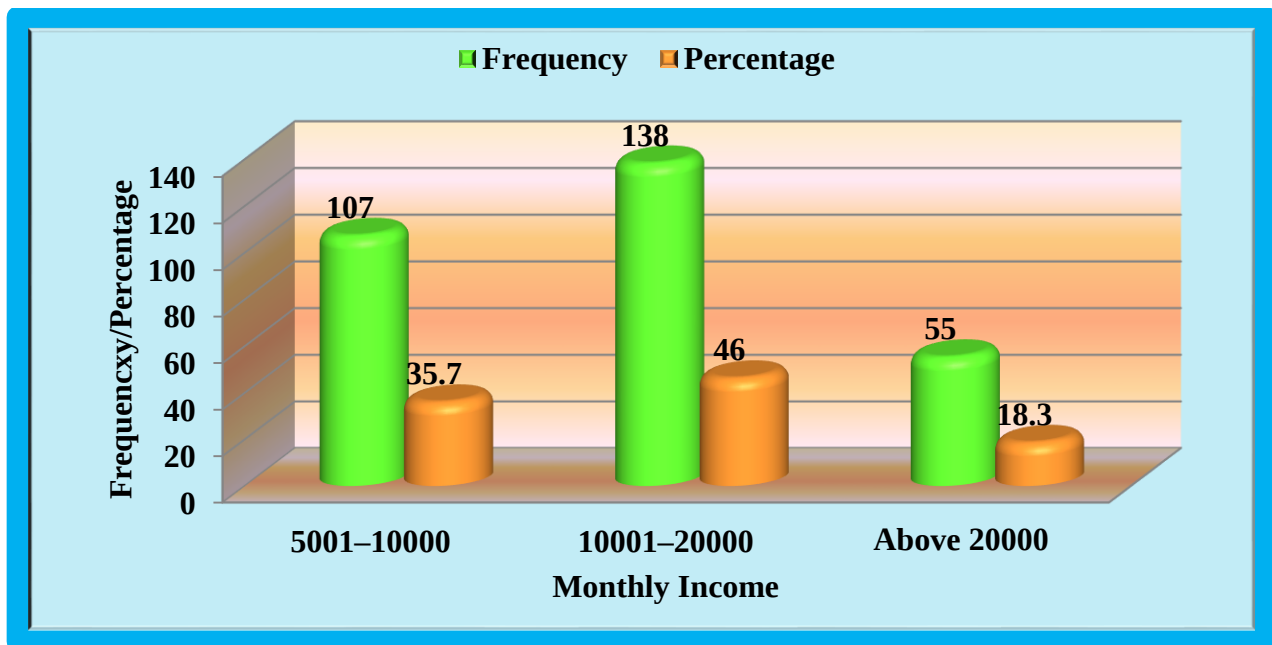


The table no 4 shows that the highest proportion of tobacco chewers (44.7%) were private employees, followed by farmers (35.7%). Housewives constituted 19.7% of the study population, representing the least proportion.

Table no 5: Frequency and percentage distribution of tobacco chewers according to their monthly income

SI No	monthly income	Frequency (n)	Percentage (%)
1	5001–10000	107	35.7
2	10001–20000	138	46.0
3	Above 20000	55	18.3
	Total	300	100.0

Graph no 5: Frequency and percentage distribution of tobacco chewers according to their monthly income

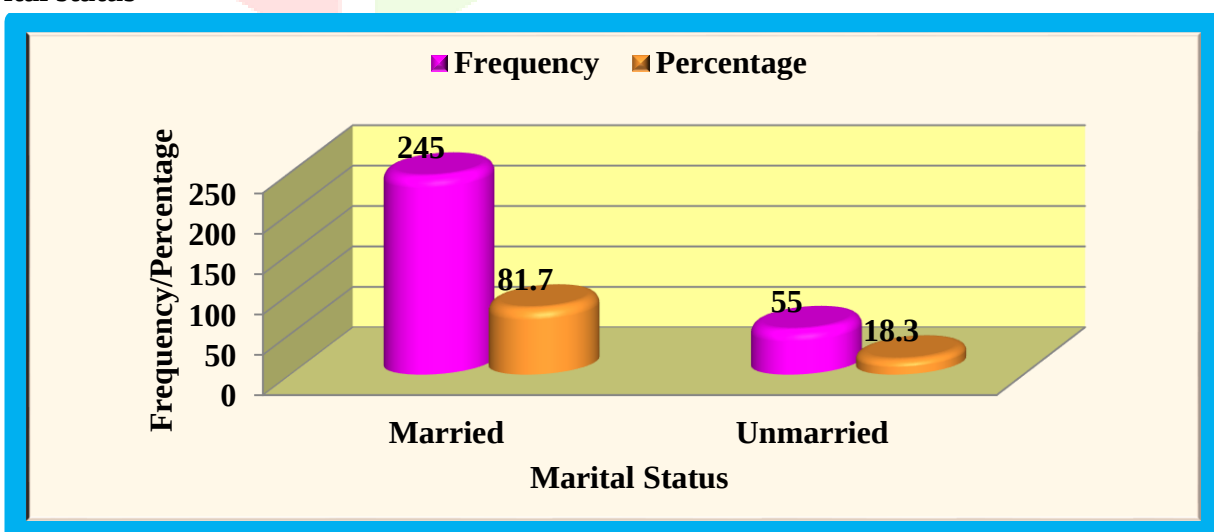


The table no 5 indicates that the majority of tobacco chewers (46.0%) had a monthly income between ₹10,001–20,000, followed by 35.7% earning ₹5,001–10,000. The least proportion (18.3%) belonged to those earning above ₹20,000.

Table no 6: Frequency and percentage distribution of tobacco chewers according to their marital status

SI No	marital status	Frequency (n)	Percentage (%)
1	Married	245	81.7
2	Unmarried	55	18.3
	Total	300	100.0

Graph no 6: Frequency and percentage distribution of tobacco chewers according to their marital status

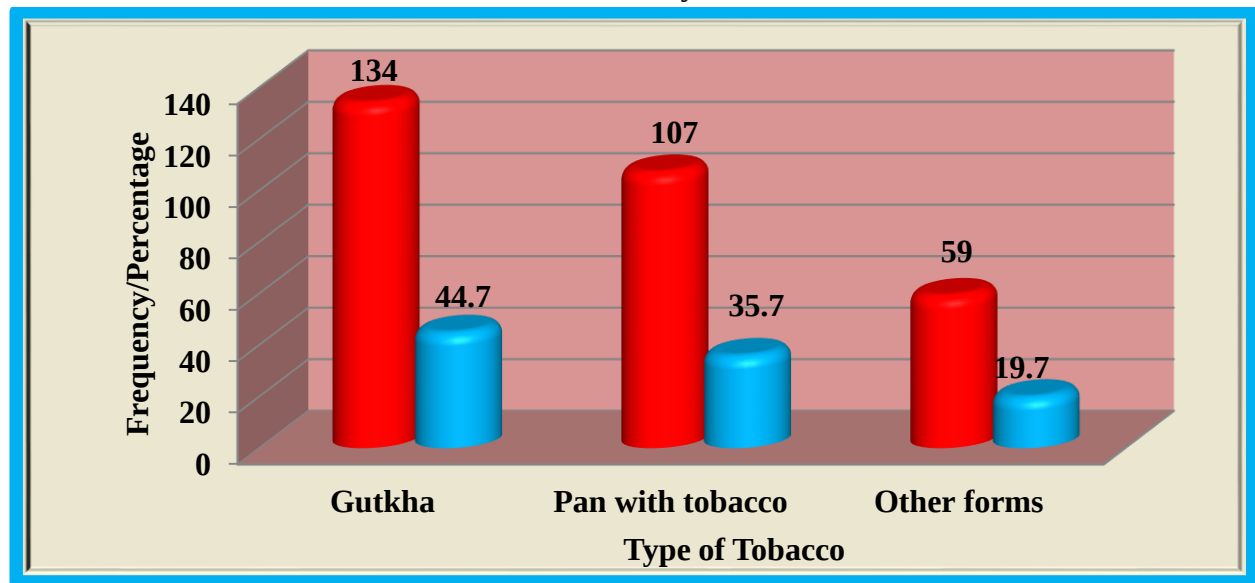


The table no 6 shows that the majority of tobacco chewers (81.7%) were married, while 18.3% were unmarried, indicating higher prevalence of tobacco chewing among married individuals.

Table no 7: Frequency and percentage distribution of tobacco chewers according to their type of tobacco they chew

SI No	type of tobacco	Frequency (n)	Percentage (%)
1	Gutkha	134	44.7
2	Pan with tobacco	107	35.7
3	Other forms	59	19.7
	Total	300	100.0

Graph no 7: Frequency and percentage distribution of tobacco chewers according to their type of tobacco they chew

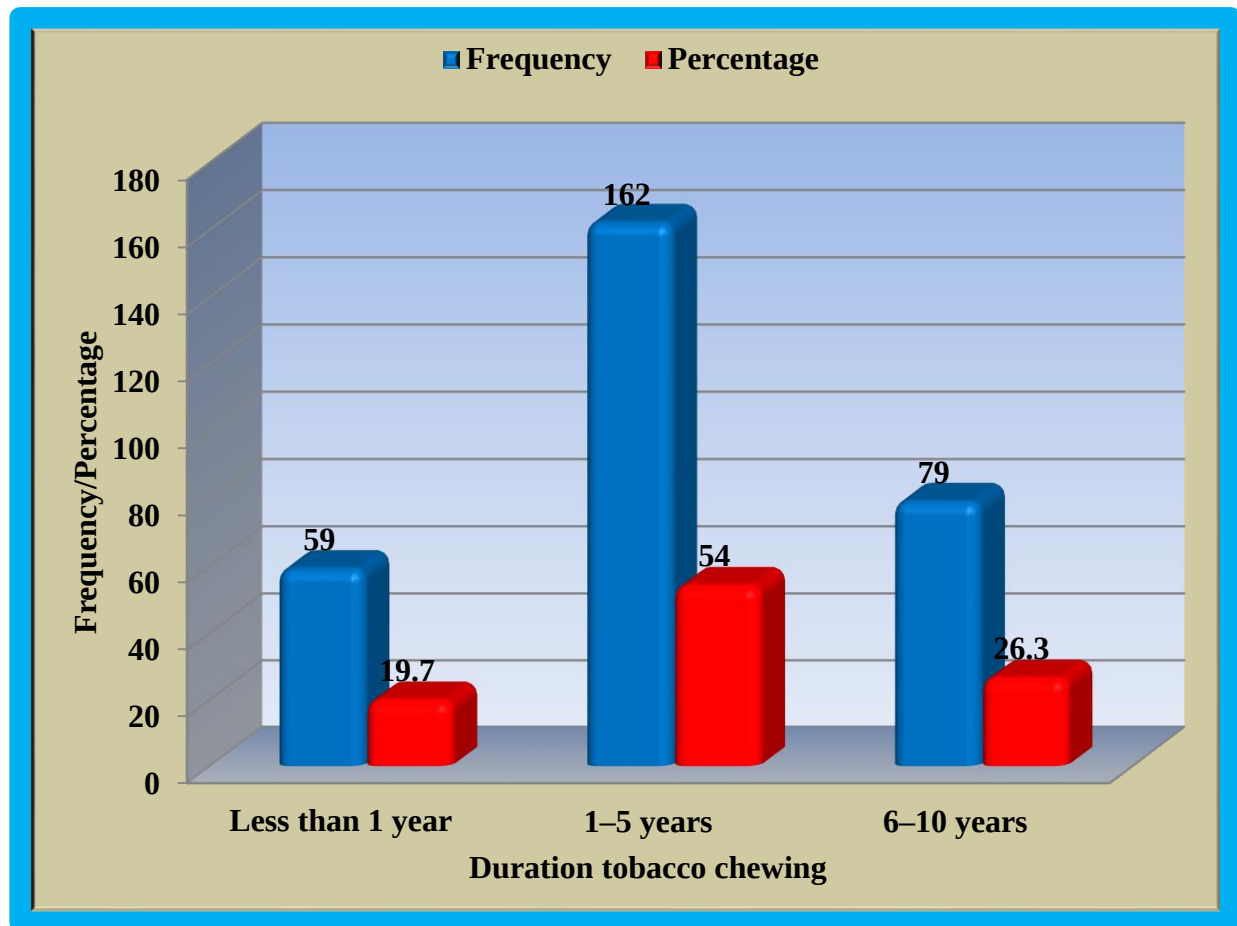


The table reveals that the majority of tobacco chewers (44.7%) consumed gutkha, followed by 35.7% who used pan with tobacco. The least proportion (19.7%) consumed other forms of tobacco

Table no 8: Frequency and percentage distribution of tobacco chewers according to their duration of tobacco chewing

SI No	Duration of tobacco chewing	Frequency (n)	Percentage (%)
1	Less than 1 year	59	19.7
2	1–5 years	162	54.0
3	6–10 years	79	26.3
	Total	300	100.0

Graph no 8: Frequency and percentage distribution of tobacco chewers according to their duration of tobacco chewing

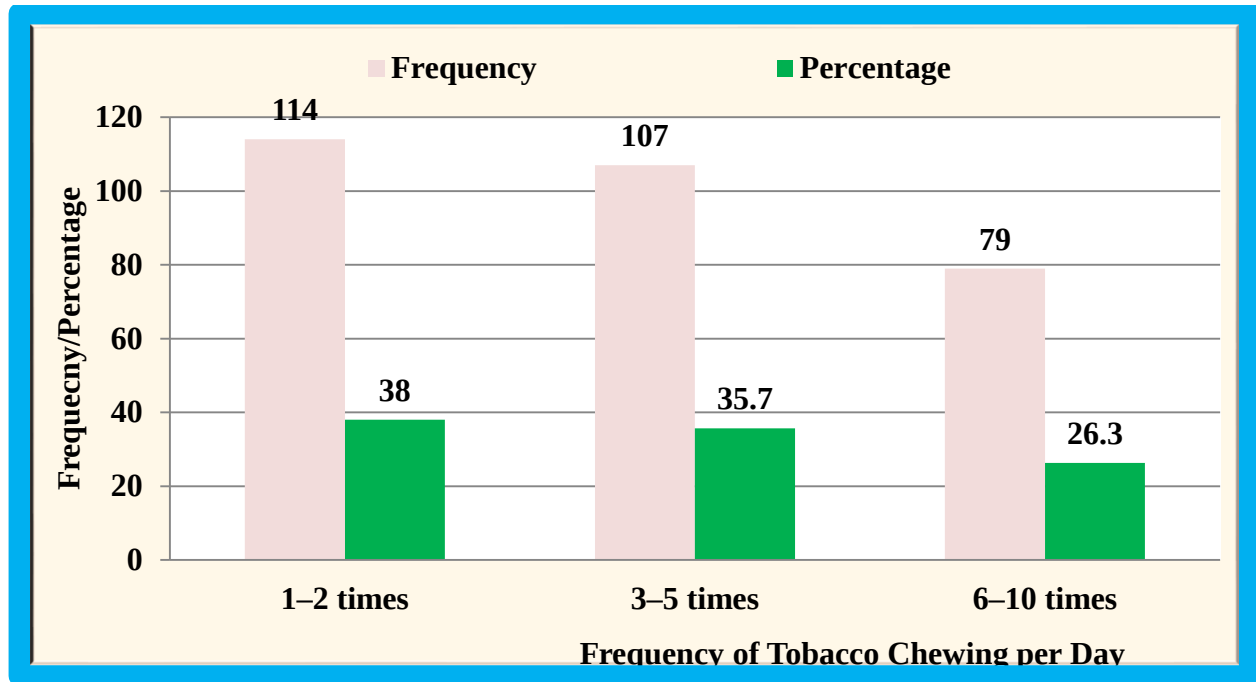


The table no 8, shows that the majority of tobacco chewers (54.0%) had been chewing tobacco for 1–5 years, followed by 26.3% for 6–10 years. The least proportion (19.7%) had duration of less than 1 year

Table No. 9: Frequency and Percentage Distribution of Tobacco Chewers According to Frequency of Tobacco Chewing per Day

SI No	Tobacco Chewing per Day	Frequency (n)	Percentage (%)
1	1–2 times	114	38.0
2	3–5 times	107	35.7
3	6–10 times	79	26.3
	Total	300	100.0

Graph no 9: Frequency and Percentage Distribution of Tobacco Chewers According to Frequency of Tobacco Chewing per Day

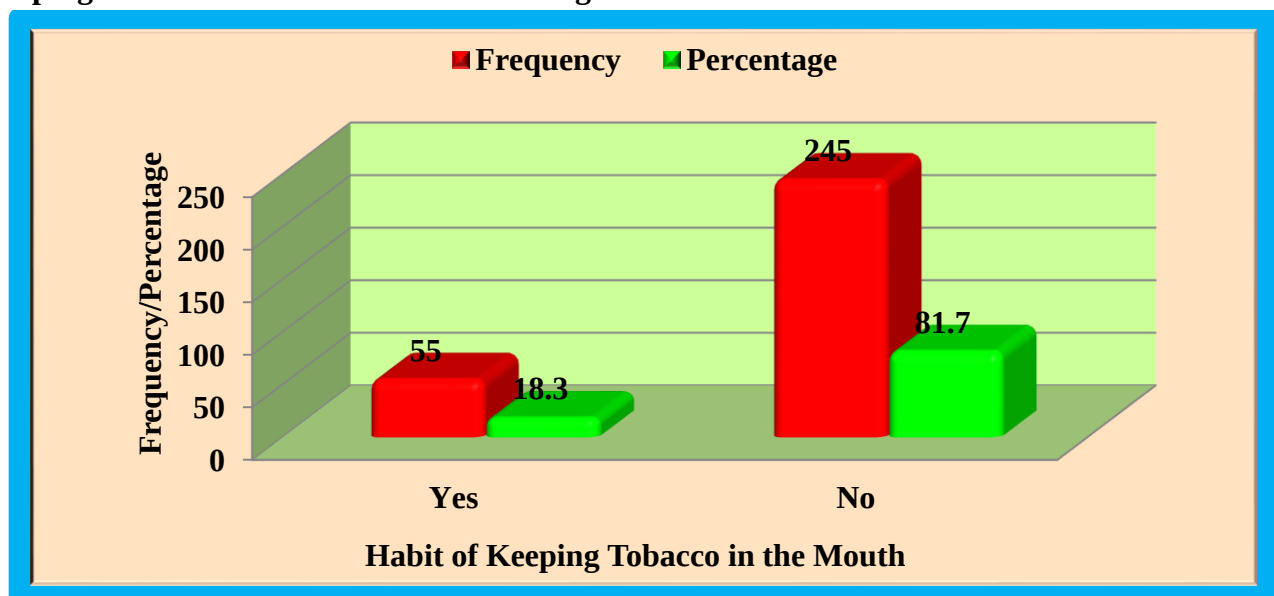


The table no 9 shows that the highest proportion of tobacco chewers (38.0%) consumed tobacco 1–2 times per day, followed by 35.7% who consumed it 3–5 times per day. About 26.3% of the participants reported chewing tobacco 6–10 times per day.

Table No. 10: Frequency and Percentage Distribution of Tobacco Chewers According to Habit of Keeping Tobacco in the Mouth for a Prolonged Duration

SI No	Tobacco in the Mouth	Frequency (n)	Percentage (%)
1	Yes	55	18.3
2	No	245	81.7
	Total	300	100.0

Graph no 10: Frequency and Percentage Distribution of Tobacco Chewers According to Habit of Keeping Tobacco in the Mouth for a Prolonged Duration

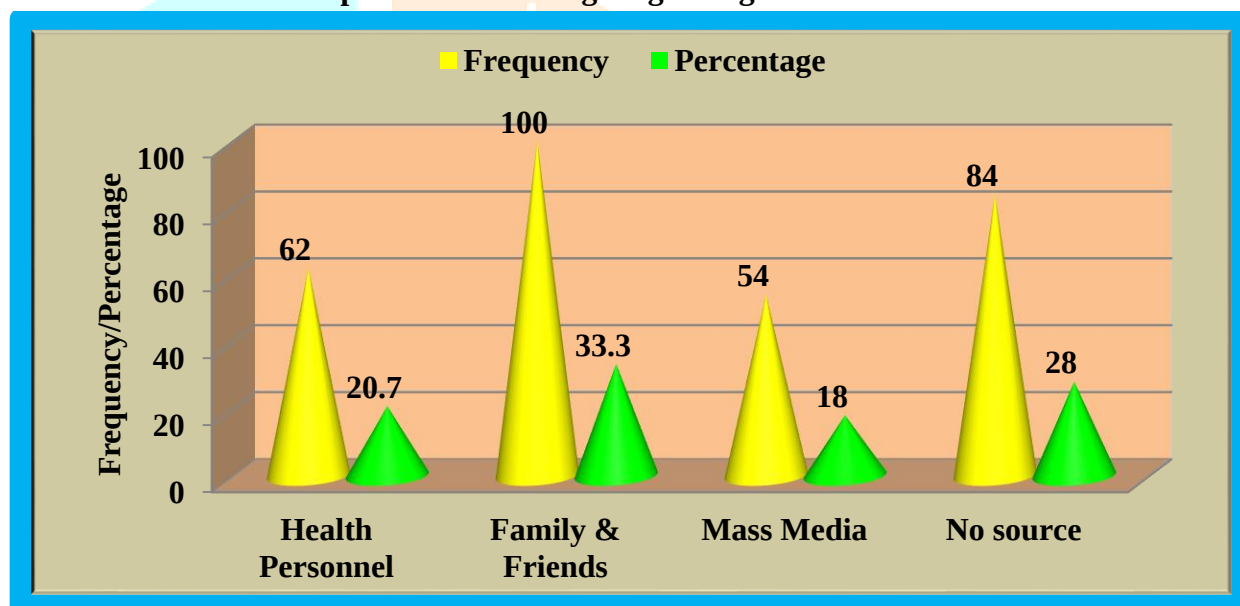


The table no 10 indicates that the majority of tobacco chewers (81.7%) did not keep tobacco in the mouth for a prolonged duration, while 18.3% reported having this habit.

Table No. 11: Frequency and Percentage Distribution of Tobacco Chewers According to their previous knowledge regarding oral cancer

SI No	Previous knowledge	Frequency (n)	Percentage (%)
1	Health Personnel	62	20.7
2	Family & Friends	100	33.3
3	Mass Media	54	18.0
4	No source	84	28.0
	Total	300	100.0

Graph no 11: Frequency and Percentage Distribution of Tobacco Chewers According to their previous knowledge regarding oral cancer

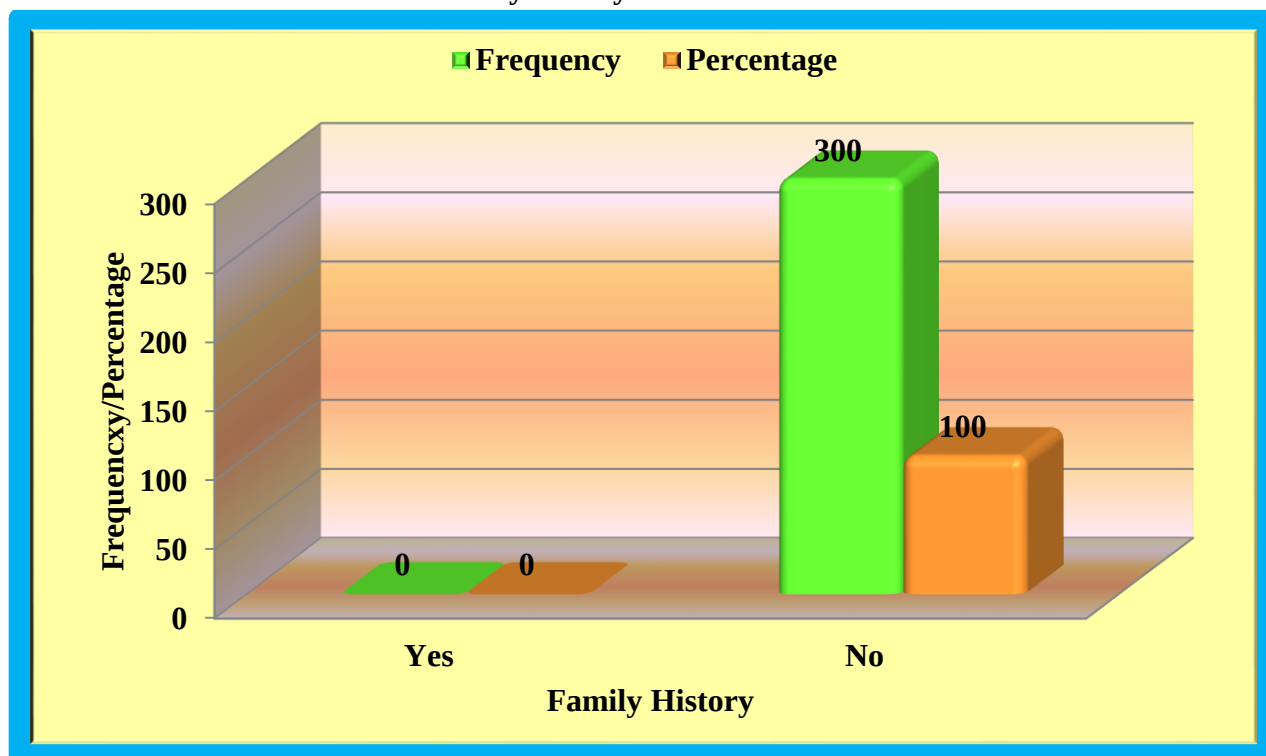


The table no 11 shows that the highest proportion of tobacco chewers (33.3%) obtained previous knowledge regarding oral cancer from family and friends, followed by 28.0% who had no source of information. About 20.7% received information from health personnel, while 18.0% gained knowledge through mass media.

Table No. 12: Frequency and Percentage Distribution of Tobacco Chewers According to their Family history of substance use

SI No	Family history of substance use	Frequency (n)	Percentage (%)
1	Yes	00	00
2	No	300	100.0
	Total	300	100.0

Graph no 12: Frequency and Percentage Distribution of Tobacco Chewers According to their Family history of substance use

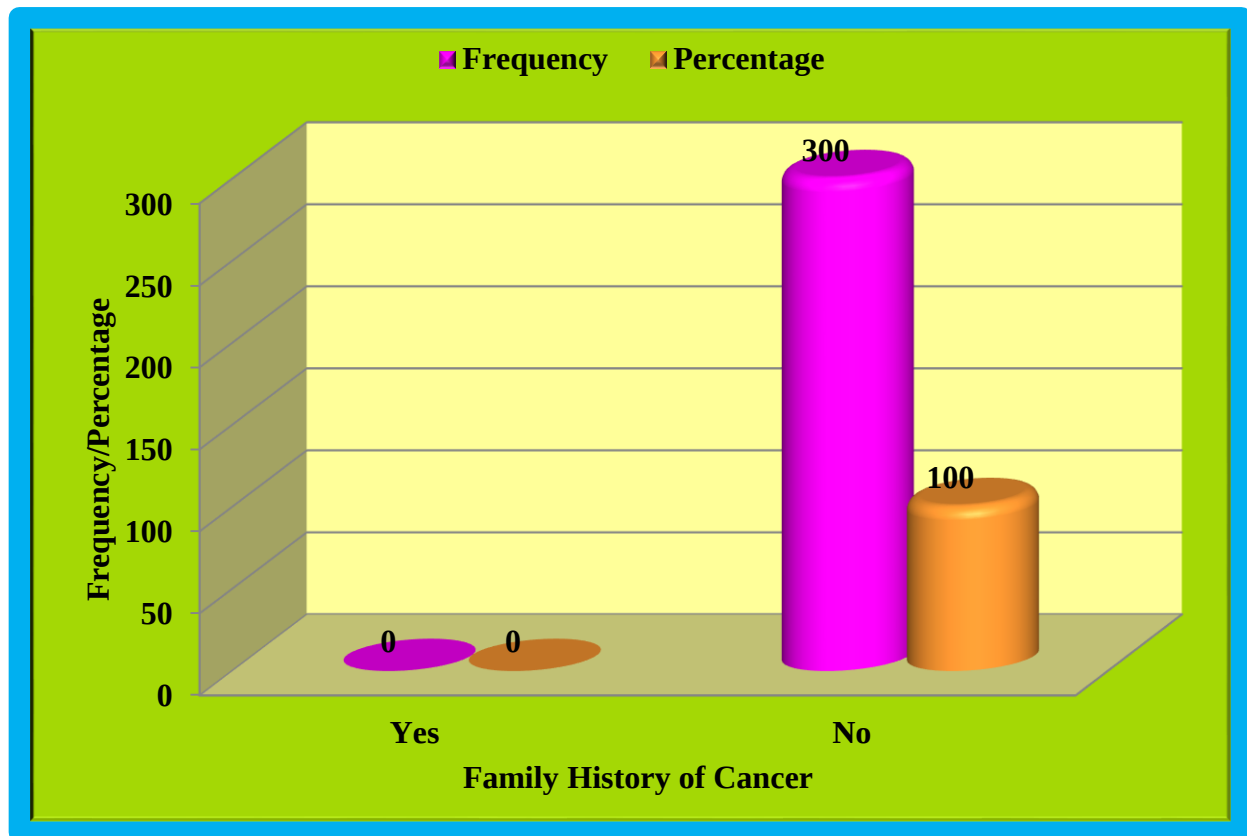


The table no 12 shows that none of the tobacco chewers (0.0%) reported a family history of substance use, whereas all participants (100.0%) reported no such history.

Table No. 13: Frequency and Percentage Distribution of Tobacco Chewers According to their family history of cancer

SI No	family history of cancer	Frequency (n)	Percentage (%)
1	Yes	00	00
2	No	300	100.0
	Total	300	100.0

Graph no 13: Frequency and Percentage Distribution of Tobacco Chewers According to their family history of cancer

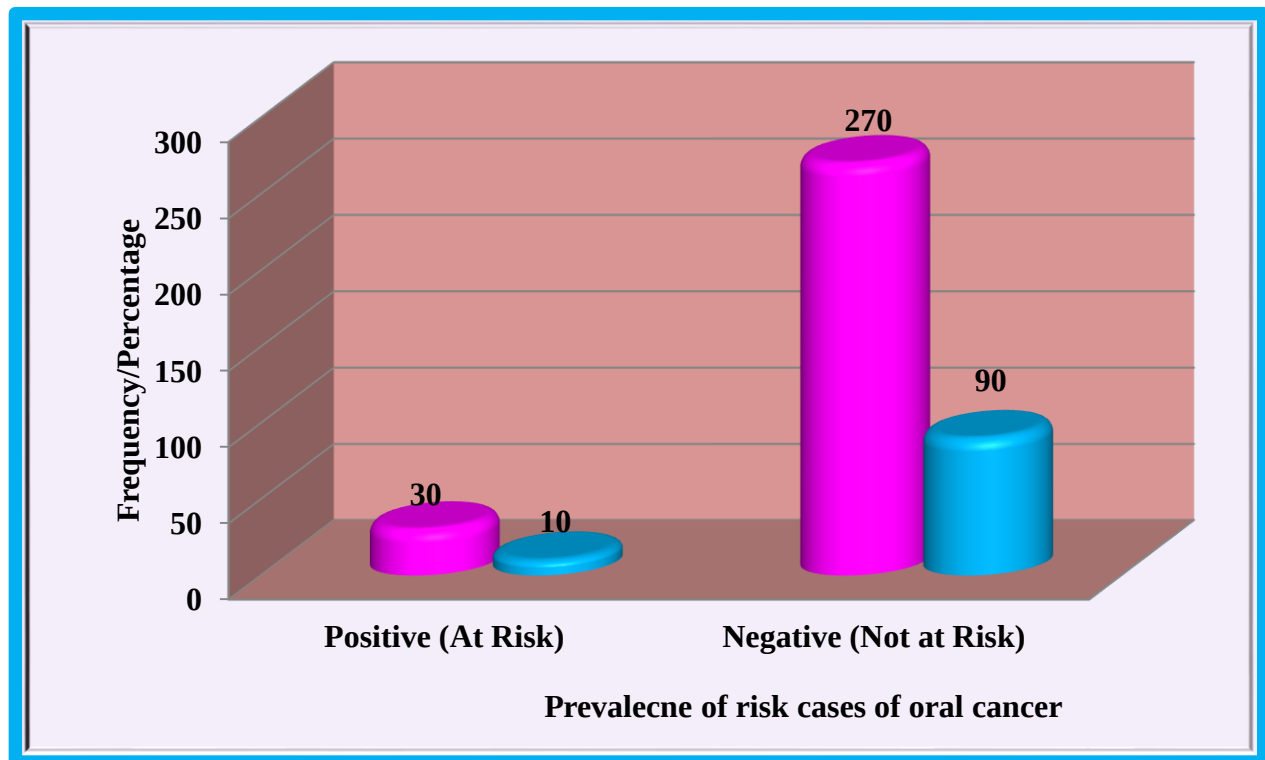


The table no 13 indicates that none of the tobacco chewers (0.0%) reported a family history of cancer, while all participants (100.0%) reported no such history.

Table no 14: Assessment of the prevalence risk cases of oral cancer by using Lugol's iodine among tobacco chewers in selected PHC at Vijayapur district

SI No	Risk Category (Lugol's Iodine Test)	Frequency (n)	Percentage (%)
1	Positive (At Risk)	30	10.0
2	Negative (Not at Risk)	270	90.0
	Total	300	100.0

Graph no 14: Assessment of the prevalence risk cases of oral cancer by using Lugol's iodine among tobacco chewers in selected PHC at Vijayapur district



The table no 14 reveals that 10.0% of tobacco chewers were identified as being at risk for oral cancer based on Lugol's iodine test, while the majority (90.0%) was not at risk. This indicates a notable proportion of individuals with potential risk requiring further screening and intervention

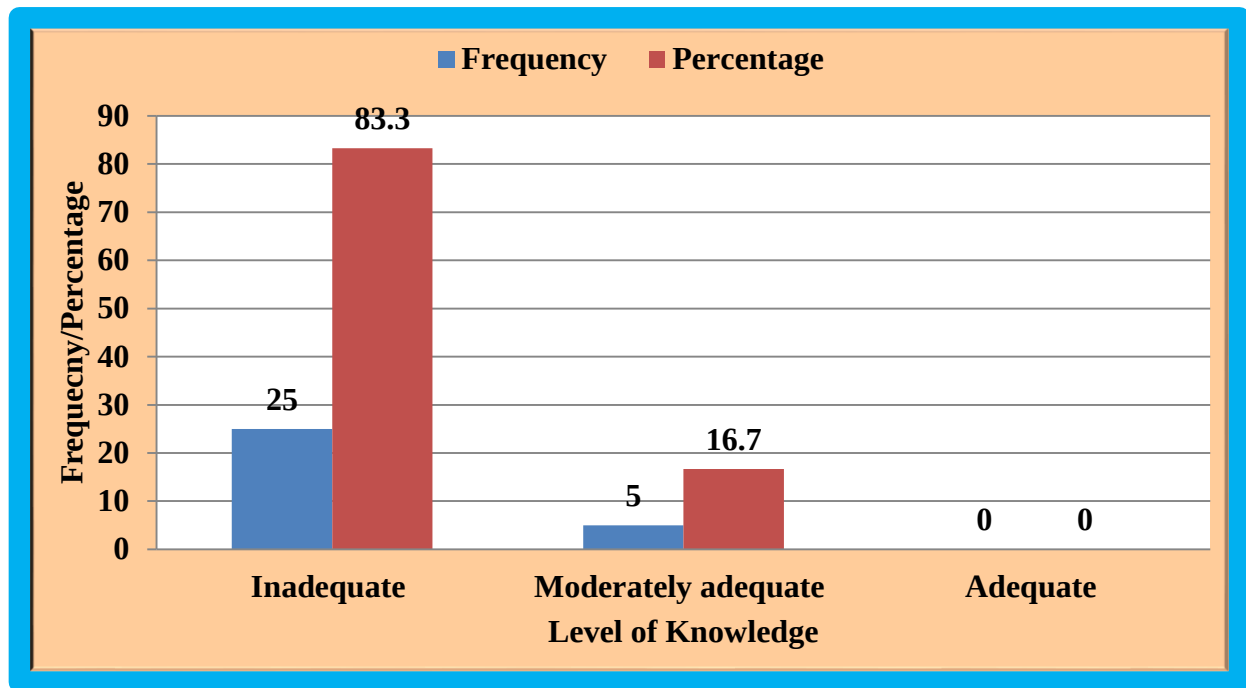
SECTION –II

Evaluating the effectiveness of small group teaching programme among diagnosed risk cases of oral cancer

Table no 15: Assessment of the pretest knowledge towards prevention of oral cancer among tobacco chewers

SI No	Knowledge level	Frequency (n)	Percentage (%)
1	Inadequate	25	83.3
2	Moderately adequate	05	16.7
3	Adequate	00	0.0
	Total	30	100.0

Graph no 15: Assessment of the pretest knowledge towards prevention of oral cancer among tobacco chewers

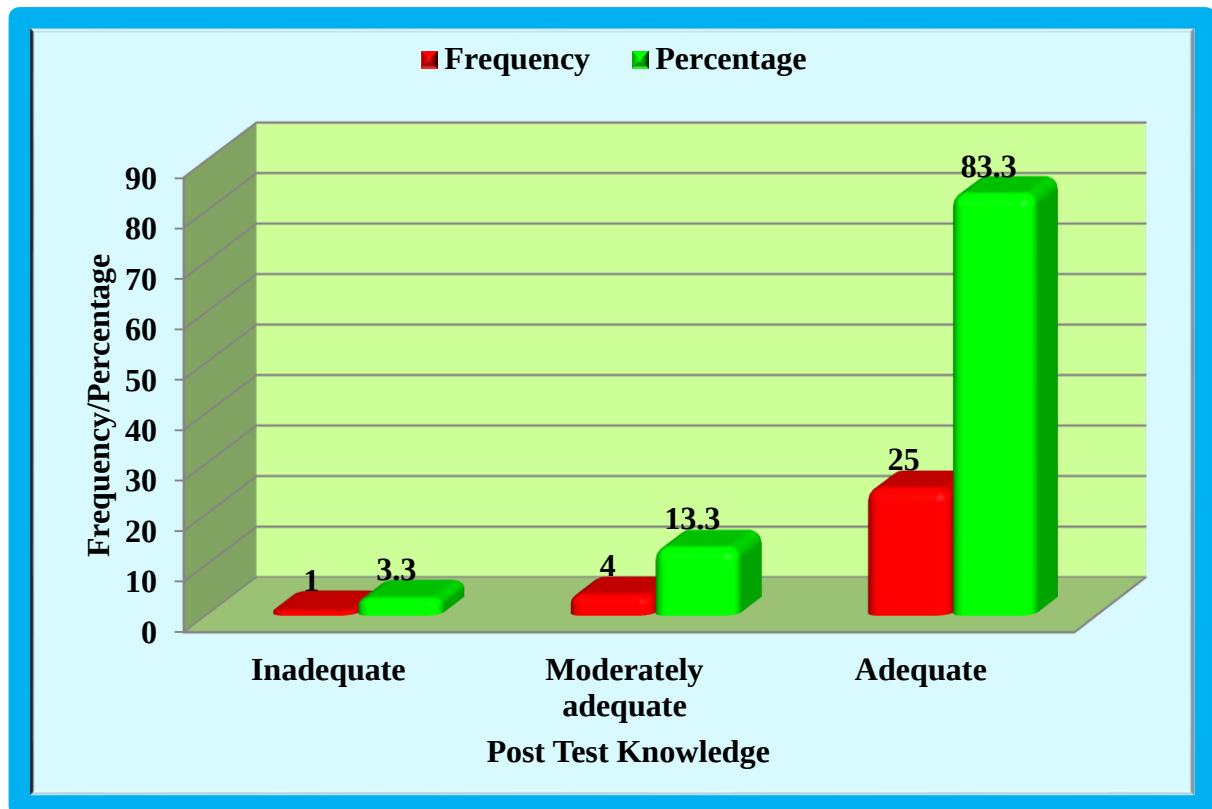


The table no 15 reveals that the majority of tobacco chewers (83.3%) had inadequate knowledge regarding the prevention of oral cancer. About 16.7% had moderately adequate knowledge, while none of the participants (0.0%) had adequate knowledge.

Table no 16: Assessment of the post-test knowledge towards prevention of oral cancer among tobacco chewers

SI No	Knowledge level	Frequency (n)	Percentage (%)
1	Inadequate	01	3.3
2	Moderately adequate	04	13.3
3	Adequate	25	83.3
	Total	30	100.0

Graph no 15: Assessment of the post-test knowledge towards prevention of oral cancer among tobacco chewers



The table no 15 indicates that the majority of tobacco chewers (83.3%) had adequate knowledge regarding the prevention of oral cancer in the post-test. About 13.3% had moderately adequate knowledge, while only 3.3% had inadequate knowledge, showing a marked improvement compared to the pre-test.

Conclusion:

The present study concluded that the small group teaching programme was highly effective in improving the knowledge regarding the prevention of oral cancer among tobacco chewers. The findings revealed that the majority of participants had inadequate knowledge in the pre-test, whereas a significant improvement was observed in the post-test, with most participants attaining adequate knowledge

Table no 17: Comparison of the pre-test post-test knowledge towards prevention of oral cancer among tobacco chewers

SI No	Knowledge level	Pre-test		Post-Test	
		Frequency (n)	Percentage (%)	Frequency (n)	Percentage (%)
1	Inadequate	25	83.3	01	3.3
2	Moderately adequate	05	16.7	04	13.3
3	Adequate	00	0.0	25	83.3
	Total	30	100.0	30	100.0

Graph no 17: Comparison of the pre-test post-test knowledge towards prevention of oral cancer among tobacco chewers

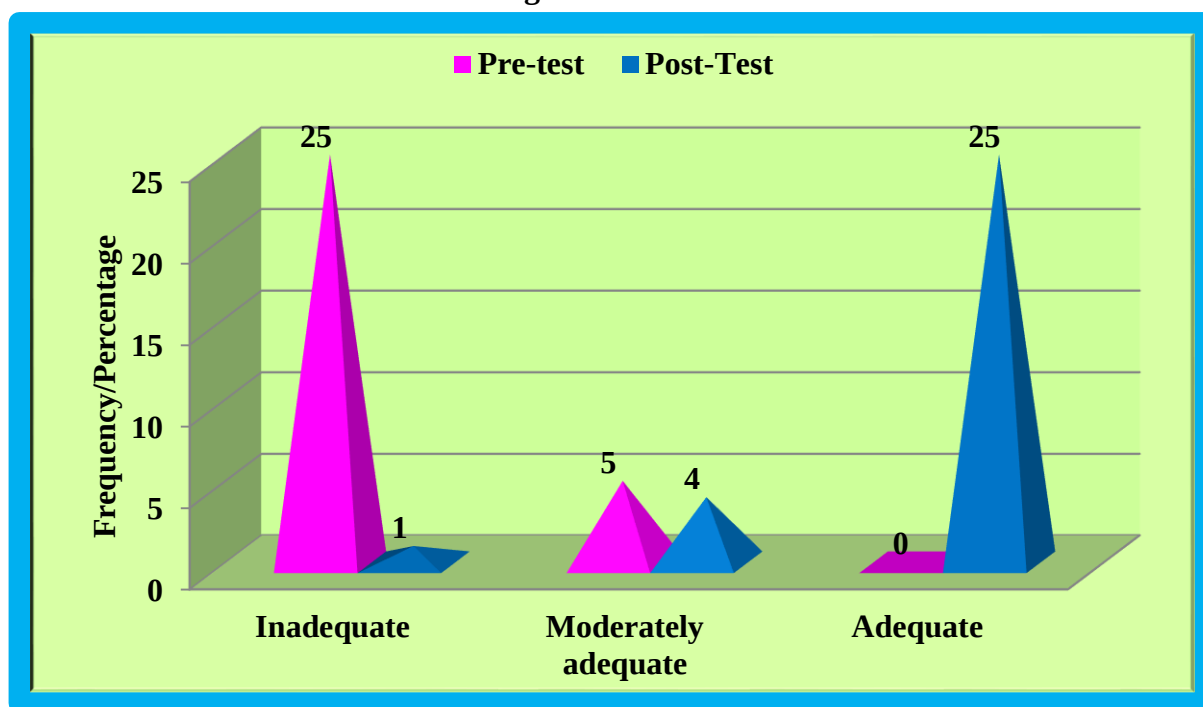


Table No. 17 presents the comparison of pre-test and post-test knowledge regarding the prevention of oral cancer among tobacco chewers who were identified as high-risk based on Lugol's iodine test.

In the pre-test, the majority of participants (83.3%) had inadequate knowledge, while 16.7% had moderately adequate knowledge, and none (0.0%) had adequate knowledge. However, after the implementation of the small group teaching programme, a remarkable improvement was observed in the post-test. The majority of participants (83.3%) attained adequate knowledge, 13.3% had moderately adequate knowledge, and only 3.3% remained with inadequate knowledge.

Conclusion:

This significant shift from inadequate to adequate knowledge clearly indicates that the small group teaching programme was highly effective in improving knowledge regarding the prevention of oral cancer among high-risk tobacco chewers identified through Lugol's iodine test.

Table no 18: Effectiveness of small group teaching programme among diagnosed risk cases of oral cancer.

Knowledge	Mean	SD	t-value	p-value
Pre-test	9.50	2.12	15.5	<0.0001(HS)
Post –test	19.96	3.21		

The table shows that the mean post-test knowledge score (19.96 ± 3.21) was significantly higher than the mean pre-test knowledge score (9.50 ± 2.12) among the high-risk tobacco chewers. The calculated t-value (15.5) with a p-value of <0.0001 indicates a highly significant difference at the 0.05 level of significance.

Conclusion:

This finding clearly demonstrates that the small group teaching programme was highly effective in improving knowledge regarding the prevention of oral cancer among diagnosed high-risk cases.

Table no 19: Association between pre-test knowledge regarding oral cancer prevention and selected demographic variables among.

Demographic Variable	Knowledge		Chi-square	df	p-value
	≤M	>M			
Age					
16-25	1	0	2.050 ^a	3	0.562(NS)
26-35	1	1			
36-45	1	1			
Above 45	20	5			
Gender					
Male	22	6	0.85	1	0.35(NS)
Female	1	1			
Education Status					
Illiterate	19	5	1.35	3	0.72(NS)
Primary education	1	1			
Secondary education	2	1			
Graduate and above	1	0			
Occupation					
Farmer	2	1	1.12	2	0.57(NS)
Private employee	20	5			
Housewife	1	1			
Monthly Income					
5001–10000	1	1	1.118	2	0.57(NS)
10001–20000	21	6			
Above 20000	1	0			
Marital status					

Married	22	7	0.31	1	0.57(NS)
Unmarried	1	0			
Tobacco Type					
Gutkha	19	5	0.88	2	0.64(NS)
Pan with tobacco	3	1			
Other forms	1	1			
Chewing Tobacco					
Less than 1 year	1	1	0.86	2	0.65(NS)
1–5 years	4	1			
6–10 years	18	5			
chewingPerday					
1–2 times	2	1	1.11	2	0.57(NS)
3–5 times	1	1			
6–10 times	20	5			
Keep in Mouth					
Yes	1	0	0.32	1	0.57(NS)
No	22	7			
Previous Knowledge					
Health Personnel	13	2	2.52	3	0.47(NS)
Family & Friends	1	1			
Mass Media	1	1			
No source	8	3			

The table no 19, shows the association between pre-test knowledge regarding oral cancer prevention and selected demographic variables among tobacco chewers. The findings reveal that there was no statistically significant association between pre-test knowledge and any of the selected demographic variables such as age, gender, educational status, occupation, monthly income, marital status, type of

tobacco, duration of chewing, frequency of chewing, habit of keeping tobacco in the mouth, and previous knowledge ($p > 0.05$).

Conclusion:

This indicates that the pre-test knowledge levels of participants were independent of their demographic characteristics.

The results suggest that while small group teaching programme activities are being carried out to some extent, there is a need to strengthen and ensure uniform delivery of all essential activities to tobacco chewers.

1. Contributions made towards increasing the state of knowledge in the subject.

Research is systemic attempt to obtain answers to meaningful questions about phenomena or events through the applications of scientific procedures on tobacco chewers.

2. Conclusions summarizing the achievements and indication of scope for future work:

The result can be generalized that many tobacco chewers have less Knowledge about preventive measures of oral cancer. At the end of the research work the researcher comes to conclusion that the study has to conduct with more samples then results can be generalized. Many tobacco chewers have high Knowledge about preventive measures of oral cancer. In future more studies have to conduct on tobacco chewers regarding. Prevalence of oral cancer among tobacco chewers.

