RESULTS AND OBSERVATION

Chapter- 07

RESULTS AND OBSERVATIONS

Table 1: Distribution of Participants according to region:

Region I	Region II	Region III	Region IV	Total
60	65	60	65	250

Graph 1: Distribution of Participants according to region:

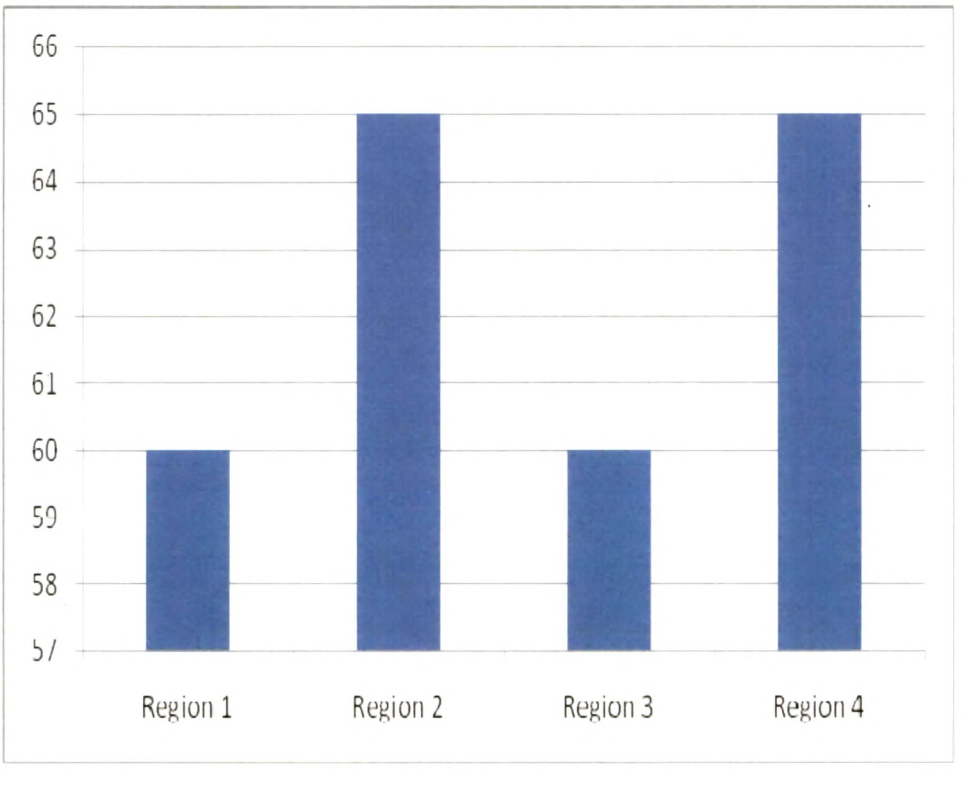


Table 1 & Graph 1 shows Distribution of Participants according to region.

Out of 250 (100%) participants, 60(24%) participants were from Region I, 65(26%) participants were from Region II, 60(24%) participants were from Region III & 65 (26%) participants were from Region IV.

From Table 1 & Graph 1, it is observed that maximum numbers of participants were from Region II & IV.

Table 2: Gender wise distribution of participants:

Gender	Region I	Region II	Region III	Region IV
Male	35	30	39	29
Female	25	35	21	36

Graph 2: Gender wise distribution of participants:

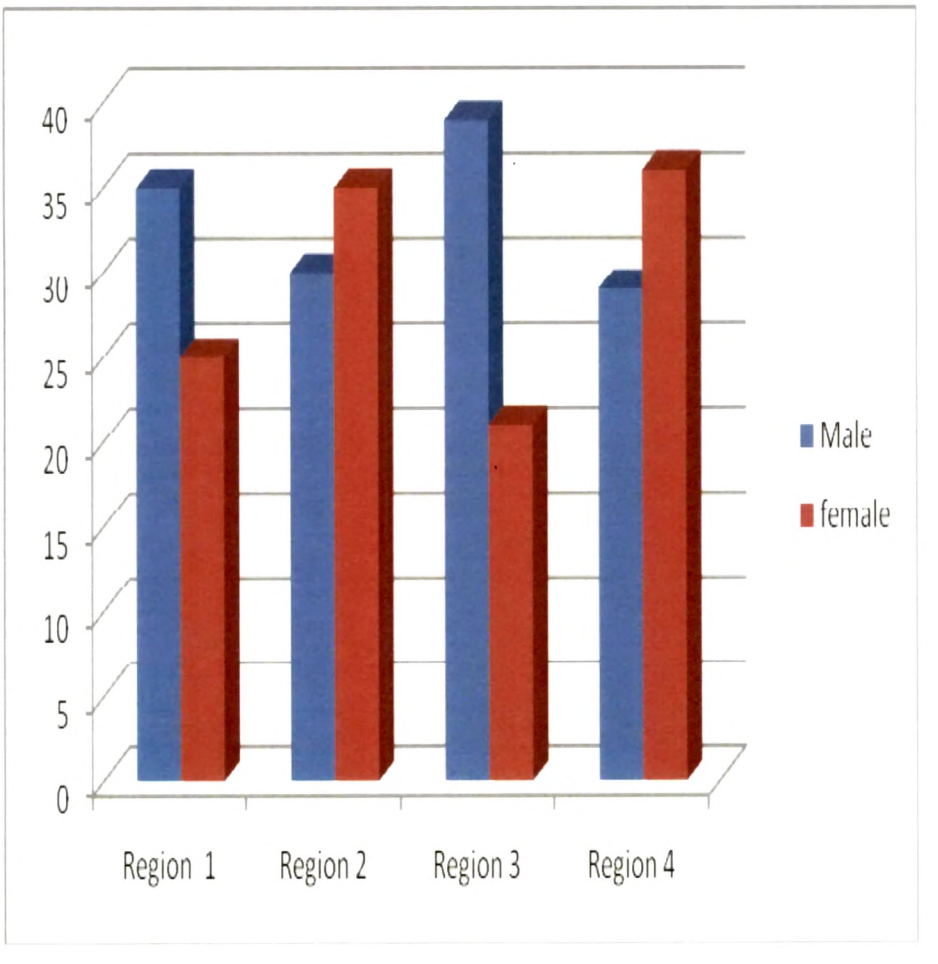


Table 2 & Graph 2 shows Gender wise distribution of Participants.

Out of total 250 (100%) participants, 35(14%) male participants and 25(10%) female participants were from Region I, 30(12%) male participants and 35(14%) female participants were from Region II, 39(15.6%) male Participants and 21(8.4%) female participants were from Region III & 29(11.6%) male participants and 36(14.4%) female participants were from Region IV.

From Table 2 & Graph 2, it is observed that Male participants were more as compared to Female participants.

Table 3: Age wise distribution of participants:

Age group	Region I		Region II		Region III		Region IV	
	male	female	male	female	male	female	male	female
10-14	02	00	01	01	00	01	01	00
15-19	04	02	05	03	05	00	04	02
20-24	08	05	05	05	09	02	04	05
25-29	06	03	04	03	07	02	05	03
30-34	05	04	06	04	06	03	02	05
35-39	03	02	02	03	04	05	03	02
40-44	02	01	00	02	01	01	02	02
45-49	01	02	02	02	02	02	01	04
50-54	02	03	01	02	00	03	02	05
55-59	02	02	00	08	01	01	02	03
60-64	00	01	01	01	00	01	01	04
65-69	00	00	02	01	02	00	02	00
70-74	00	00	01	00	01	00	00	01
75-79	00	00	00	00	01	00	00	00

Graph 3: Age wise distribution of Participants:

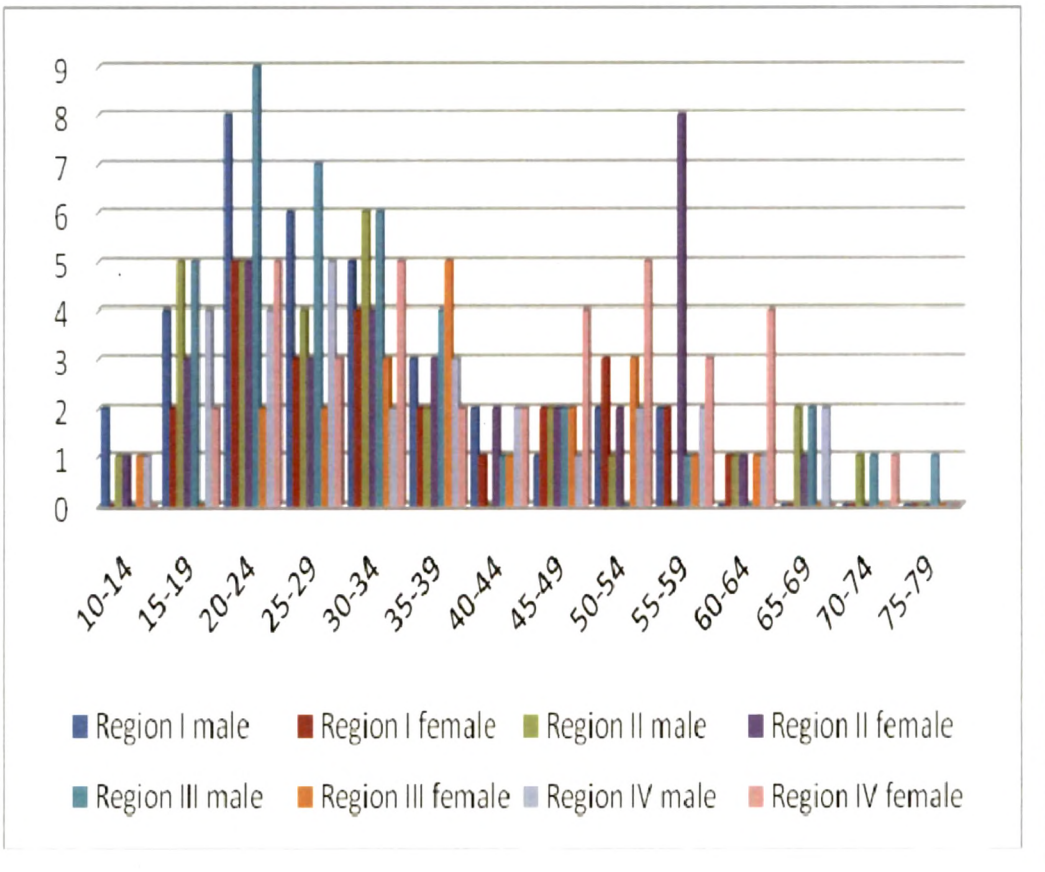


Table 3 & Graph 3 shows Age wise distribution of Participants. Out of total 250(100%) participants:

06 (2.4%) participants were from the age group of 10-14 years. Out of them, 02 were from region I (male 02 & female 00), 02 were from region II (male 01 & female 01), 01 were from region III (male 00 & female 01) & 01 were from region IV (male 01 & female 00).

25 (10%) participants were from the age group of 15-19 years. Out of them, 06 were from region I (male 04 & female 02), 08 were from region II (male 05 & female 03), 05 were from region III (male 05 & female 00) & 06 were from region IV (male 04 & female 02).

43 (17.2%) participants were from the age group of 20-24 years. Out of them, 13 were from region I (male 08 & female 05), 10 were from region II (male 05 & female 05), 11 were from region III (male 09 & female 02) & 09 were from region IV (male 04 & female 05).

33 (13.2%) participants were from the age group of 25-29 years. Out of them, 09 were from region I (male 06 & female 03), 07 were from region II (male 04 & female 03), 09 were from region III (male 07 & female 02) & 08 were from region IV (male 05 & female 03).

35 (14%) participants were from the age group of 30-34 years. Out of them, 09 were from region I (male 05 & female 04), 10 were from region II (male 06 & female 04), 09 were from region III (male 06 & female 03) & 07 were from region IV (male 02 & female 05).

24 (9.6%) participants were from the age group of 35-39 years. Out of them, 05 were from region I (male 03 & female 02), 05 were from region II (male 02 & female 03), 09 were from region III (male 04 & female 05) & 05 were from region IV (male 03 & female 02).

11 (4.4%) participants were from the age group of 40-44 years. Out of them, 03 from region I (male 02 & female 01), 02 were from region II (male 00 & female 02), 02 were from region III (male 01 & female 01) & 04 were from region IV (male 02 & female 02).

16 (6.4%) participants were from the age group of 45-49 years. Out of them, 03 were from region I (male 01 & female 02), 04 were from region II (male 02 & female 02), 04 were from region III (male 02 & female 02) & 05 were from region IV (male 01 & female 04).

18 (7.2%) participants were from the age group of 50-54 years. Out of them, 05 were from region I (male 02 & female 03), 03 were from region II (male 01 & female 02), 03 were from region III (male 00 & female 03) & 07 were from region IV (male 02 & female 05).

19 (7.6%) participants were from the age group of 55-59 years. Out of them, 04 were from region II (male 02 & female 02), 08 were from region II (male 00 & female 08), 02 were from region III (male 01 & female 01) & 05 were from region IV (male 02 & female 03).

09 (3.6%) participants were from the age group of 60-64 years. Out of them, 01 were from region I (male 00 & female 01), 02 were from

region II (male 01 & female 01), 01 was from region III (male 00 & female 01) & 05 were from region IV (male 1 & female 4).

07 (2.8%) participants were from the age group of 65-69 years. Out of them, there were no participants in region I (male 00 & female 00), 03 were from region II (male 02 & female 01), 02 were from region III (male 02 & female 00) & 02 from region IV (male 02 & female 00).

03 (1.2%) participants were from the age group of 70-74 years. Out of them, there were no participants in region I (male 00 & female 00), 01 from region II (male 1 & female 0), 01 from region III (male 01 & female 00) & 01 from region IV (male 00 & female 01).

01 (0.4%) participants were from the age group of 75-79 years. Out of them, there were no participants in region I, II and IV (male 00 & female 00), and whereas 01participant was present in region III (male 01 & female 00).

From Table 3 & Graph 3, it is distinctly observed that maximum number of the participants were in the Age group of 20-24 years.

Table 4: Distribution of Participants according to with or without Habit:

Subjects	Region I		Region II		Region III		Region IV	
	M	F	M	F	M	F	M	F
With habit	19	08	12	14	21	07	17	16
Without habit	16	17	18	21	18	14	12	20

Graph 4: Distribution of Participants according to with or without Habit:

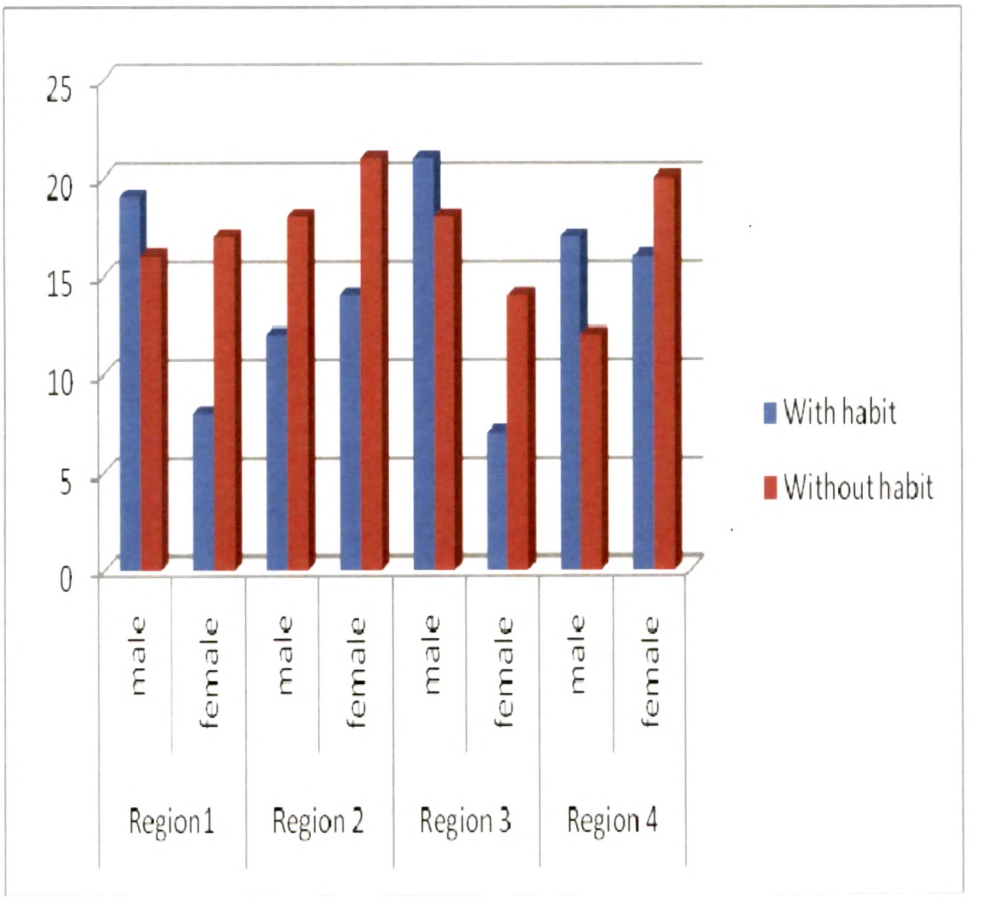


Table 4 & Graph 4 shows distribution of participants according to with or without Habit. Out of total 250 (100%) participants--

In region I - 27 (10.8%) participants (19 males & 8 females) were having harmful oral habits associated with Tobacco & Arecanut use (Habitual) and 33 (13.2%) participants (16 males & 17 females) were having No habits (non-habitual).

In region II - 26 (10.4%) participants (12 males & 14 females) were having harmful oral habits associated with Tobacco & Arecanut use (Habitual) and 39 (15.6%) participants (18 males & 21 females) were having No habits (non-habitual).

In region III - 28 (11.2%) participants (21 males & 07 females) were having harmful oral habits associated with Tobacco & Arecanut use (Habitual) and 32 (12.8%) participants (18 males & 14 females) were having No habits (non-habitual).

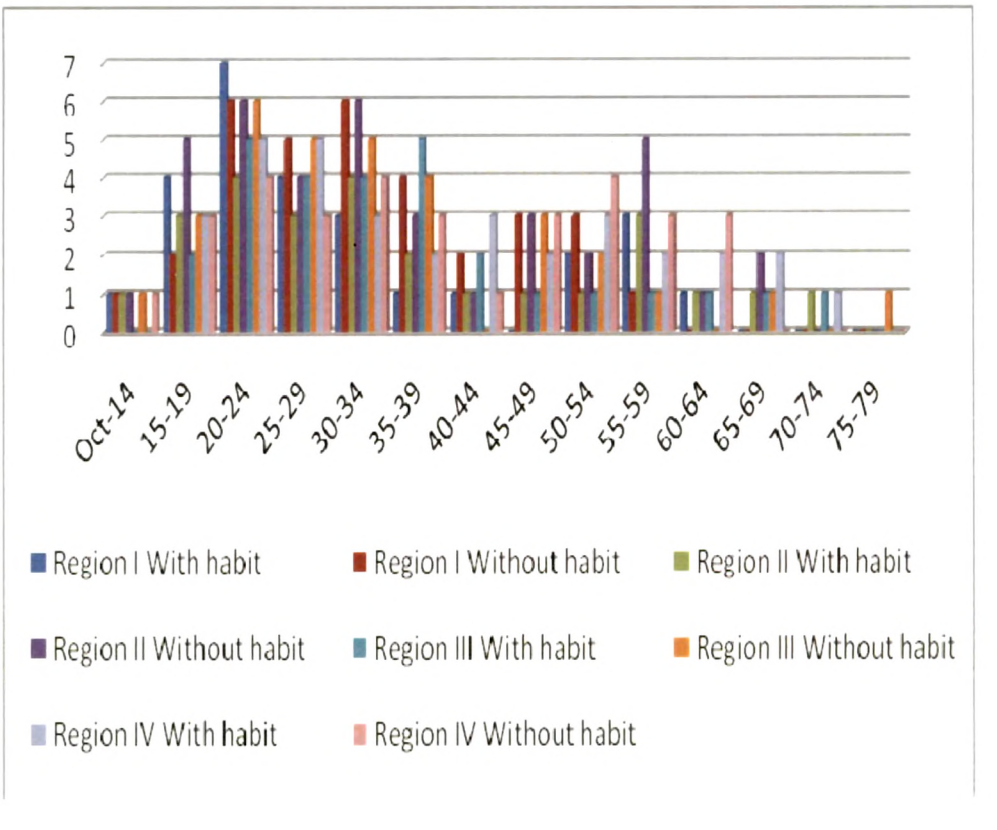
In region IV - 33 (13.2%) participants (17 males & 16 females) were having harmful oral habits associated with Tobacco & Arecanut use (Habitual) and 32 (12.8%) participants (12 males & 20 females) were having No habits (non-habitual).

From Table 4 & Graph 4, it was observed that maximum number of the participants had No harmful oral habits. This observation was statistically significant.

Table 5: Correlation of Age with or without Harmful oral Habit:

Age group (yrs.)	Region I		Region II		Region III		Region IV	
	With habit	With out habit	With habit	With out habit	With habit	With out habit	With habit	With out habit
10-14	01	01	01	01	00	01	00	01
15-19	04	02	03	05	02	03	03	03
20-24	07	06	04	06	05	06	05	04
25-29	04	05	03	04	04	05	05	03
30-34	03	06	04	06	04	05	03	04
35-39	01	04	02	03	05	04	02	03
40-44	01	02	01	01	02	00	03	01
45-49	00	03	01	03	01	03	02	03
50-54	02	03	01	02	01	02	03	04
55-59	03	01	03	05	01	01	02	03
60-64	01	00	01	01	01	00	02	03
65-69	00	00	01	02	01	01	02	00
70-74	00	00	01	00	01	00	01	00
75-79	00	00	00	00	00	01	00	00

Graph 5: Correlation of Age with or without Harmful oral Habit:



Tables 5 & Graph 5 shows Correlation of Age with or without Harmful oral Habit.

•Out of total 06 (2.4%) participants in the age group of 10-14 years:

In region I - 01 participant had harmful oral habit associated with Tobacco & Arecanut use and 01 participant had No habits.

In region II - 01 participants had harmful oral habit associated with Tobacco & Arecanut use and 01 participant had No habits.

In region III - Participant having harmful oral habits associated with Tobacco & Arecanut use was not present but 01 participant had No habits.

In region IV- Participant having harmful oral habits associated with Tobacco & Arecanut use was not present but 01 participant had No habits.

•Out of total 25 (10%) participants in the age group of 15-19 years:

In region I - 04 participants were having harmful oral habits associated with Tobacco & Arecanut use and 02 participants had No habits.

In region II - 03 participants were having harmful oral habits associated with Tobacco & Arecanut use and 05 participants had No habits.

In region III - 02 participants were having harmful oral habits associated with Tobacco & Arecanut use and 03 participants had No habits.

In region IV - 03 participants were having harmful oral habits associated with Tobacco & Arecanut use and 03 Participants had No habits.

•Out of total 43(17.2%) participants in the age group of 20-24 yrs.:

In region I - 07 participants were having harmful oral habits associated with Tobacco & Arecanut use and 06 participants had No habits.

In region II - 04 participants were having harmful oral habits associated with Tobacco & Arecanut use and 06 participants had No habits.

In region III - 05 participants were having harmful oral habits associated with Tobacco & Arecanut use and 06 participants had No habits.

In region IV - 05 participants were having harmful oral habits associated with Tobacco & Arecanut use and 04 participants had No habits.

- Out of total 33 (13.2%) participants in the age group of 25-29 yrs.:

In region I - 04 participants were having harmful oral habits associated with Tobacco & Arecanut use and 05 participants had No habits.

In region II - 03 participants were having harmful oral habits associated with Tobacco & Arecanut use and 04 participants had No habits.

In region III - 04 participants were having harmful oral habits associated with Tobacco & Arecanut use and 05 participants had No habits.

In region IV - 05 participants were having harmful oral habits associated with Tobacco & Arecanut use and 03 participants had No habits.

- Out of total 35 (14%) participants in the age group of 30-34 years:

In region I - 03 participants were having harmful oral habits associated with Tobacco & Arecanut use and 06 participants had No habits.

In region II - 04 participants were having harmful oral habits associated with Tobacco & Arecanut use and 06 participants had No habits.

In region III - 04 participants were having harmful oral habits associated with Tobacco & Arecanut use and 05 participants had No habits.

In region IV - 03 participants were having harmful oral habits associated with Tobacco & Arecanut use and 04 participants had No habits.

•Out of total 24 (9.6%) participants in the age group of 35-39 years:

In region I - 01 participant was having harmful oral habit associated with Tobacco & Arecanut use and 04 participants had No habits.

In region II - 02 participants were having harmful oral habits associated with Tobacco & Arecanut use and 03 participants had No habits.

In region III - 05 participants were having harmful oral habits associated with Tobacco & Arecanut use and 04 participants had No habits.

In region IV- 02 participants were having harmful oral habits associated with Tobacco & Arecanut use and 03 participants had No habits.

- Out of total 11(4.4%) participants in the age group of 40-44 years:

In region I - 01 participant had harmful oral habit associated with Tobacco & Arecanut use and 02 participants had No habits.

In region II - 01 participant had harmful oral habit associated with Tobacco & Arecanut use and 01 participant had No habits.

In region III- 02 participants were having harmful oral habits associated with Tobacco & Arecanut use and No participant had habits.

In region IV- 03 participants were having harmful oral habits associated with Tobacco & Arecanut use and 01 participant had No habits.

- Out of total 16 (6.4%) participants in the age group of 45-49 years:

In region I - No participants had harmful oral habits associated with Tobacco & Arecanut use and 03 participants had No habits.

In region II- 01 participant had harmful oral habits associated with Tobacco & Arecanut use and 03 participants had No habits.

In region III- 01 participant had harmful oral habits associated with Tobacco & Arecanut use and 03 participants had No habits.

In region IV- 02 participants were having harmful oral habits associated with Tobacco & Arecanut use and 03 participants had No habits.

•Out of total 18 (7.2%) participants in the age group of 50-54 years:

In region I - 02 participants were having harmful oral habits associated with Tobacco & Arecanut use and 03 participants had No habits.

In region II- 01 participant had harmful oral habit associated with Tobacco & Arecanut use and 02 participants had No habits.

In region III- 01 participant had harmful oral habit associated with Tobacco & Arecanut use and 02 participants had No habits.

In region IV- 03 participants were having harmful oral habits associated with Tobacco & Arecanut use and 04 participants had No habits.

•Out of total 19(7.6%) participants in the age group of 55-59 years:

In region I- 03 participants were having harmful oral habits associated with Tobacco & Arecanut use and 01 participant had No habits.

In region II- 03 participants were having harmful oral habits associated with Tobacco & Arecanut use and 05 participants had No habits.

In region III- 01 participant had harmful oral habit associated with Tobacco & Arecanut use and 01 participant had No habits.

In region IV- 02 participants were having harmful oral habits associated with Tobacco & Arecanut use and 03 participants had No habits.

•Out of total 09 (3.6%) participants in the age group of 60-64 years:

In region I- 01 participant had harmful oral habit associated with Tobacco & Arecanut use and No participant had any habits.

In region II- 01 participant had harmful oral habit associated with Tobacco & Arecanut use and 01 participant had No habits.

In region III- 01 participant had harmful oral habit associated with Tobacco & Arecanut use and there were No participants having habits.

In region IV- 02 participants were having harmful oral habits associated with Tobacco & Arecanut use and 03 participants had No habits.

•Out of total 07(2.8%) participants in the age group of 65-69 years:

In region I- There were No participants having harmful oral habits nor participants having No habits, associated with Tobacco & Arecanut use.

In region II- 01 participant had harmful oral habits associated with Tobacco & Arecanut use and 02 participants had No habits.

In region III- 01 participant had harmful oral habit associated with Tobacco & Arecanut use and 01 participant had No habits.

In region IV- 02 participants were having harmful oral habits associated with Tobacco & Arecanut use and No participants having No habits.

- Out of total 03(1.2%) participants in the age group of 70-74 years:

In region I- There were No participants having harmful oral habits nor participants having No habits, associated with Tobacco & Arecanut use.

In region II- 01 participant had harmful oral habits associated with Tobacco & Arecanut use and No participants having No habits.

In region III- 01 participant had harmful oral habits associated with Tobacco & Arecanut use and No participants having No habits.

In region IV- 01 participant had harmful oral habits associated with Tobacco & Arecanut use and No participants having No habits.

- Out of total 01(0.4%) participants in the age group of 75-79 years:

In region I- There were No participants having harmful oral habits nor participants having No habits, associated with Tobacco & Arecanut use.

In region II- There were No participants having harmful oral habits nor participants having No habits, associated with Tobacco & Arecanut use.

In region III- There were No participants having harmful oral habits associated with Tobacco & Arecanut use but 01 participant had No habits.

In region IV- There were No participants having harmful oral habits nor participants having No habits, associated with Tobacco & Arecanut use.

Table 6: Co-relation of Gender according to Habit:

Habit	Region I		Region II		Region III		Region IV	
	M	F	M	F	M	F	M	F
Tobacco habit	09	02	05	04	11	02	07	06
Arecanut habit	10	06	07	10	10	05	10	10

Graph 6: Co-relation of Gender according to Habit:

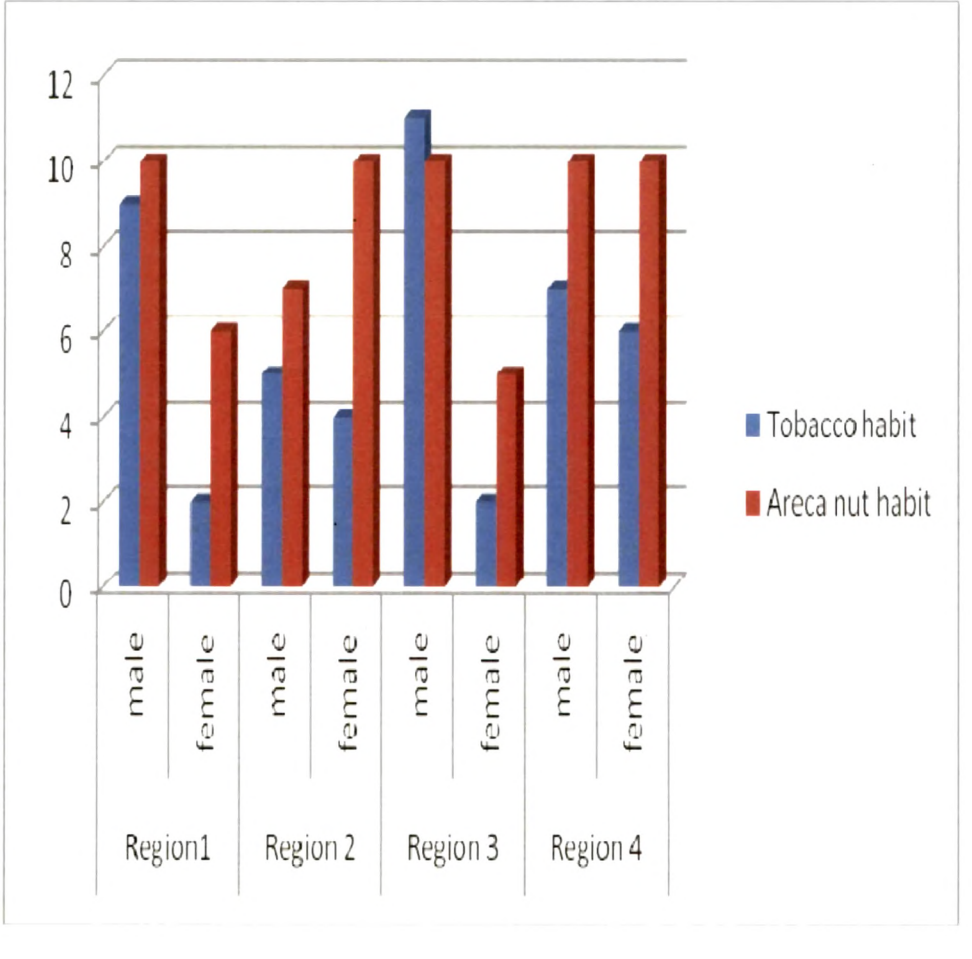


Table 6 & Graph 6 shows Co-relation of Gender according to Habit. Out of total 114 (100%) habitual participants, 46(40.35%) participants had habit of using tobacco in various forms & 68(59.65%) participants had habit of chewing arecanut in various forms:

In region I, 11 (9.64%) participants (09 males & 02 females) had habit of using tobacco in various forms and 16 (14.03%) participants (10 males & 06 females) had habit of chewing arecanut in various forms.

In region II, 09 (7.89%) participants (05 males & 04 females) had habit of using tobacco in various forms and 17 (14.91%) participants (07 males &10 females) had habit of chewing arecanut in various forms.

In region III, 13 (11.4%) participants (11 males & 02 females) had habit of using tobacco in various forms and 15 (13.15%) participants (10 males & 05 females) had habit of chewing arecanut in various forms.

In region IV, 13 (11.4%) participants (07 males & 06 females) had habit of using tobacco in various forms and 20 (17.54%) participants (10 males & 10 females) had habit of chewing arecanut in various forms.

From Table 6 & Graph 6, it was observed that maximum number of male participants were involved in the chewing of arecanut and its related commercial products. These observations were statistically significant.

Table 7: Distribution of Participants according to different types of tobacco Habit:

Tobacco	Type	Region I		Region II		Region III		Region IV	
		M	F	M	F	M	F	M	F
Smoking	Bidi	04	01	03	00	04	01	02	01
	Cigarette	02	00	01	00	03	00	03	00
Smokeless	Mishri	00	00	00	01	00	00	00	02
	Tobacco quid	03	00	01	01	04	00	02	02
	Tobacco paste	00	01	00	02	00	01	00	01

Table 7 shows Distribution of participants according to tobacco habit.

- Out of Total 46 (100%) participants having habit of tobacco use in different forms, 25 (54.34%) participants had habit of smoking tobacco and 21 (45.66%) participants had a habit of smokeless tobacco.

- Out of total 25 (100%) participants who had habit of smoking tobacco, 16 (64%) participants had habit of Bidi smoking. Amongst them, 05 participants were from region I (04 males & 01 female), 03 participants were from region II (03 males & No females), 05 participants were from region III (04 males & 01 female) & 03 participants were from region IV (02 males & 01 female).

Total 09 (36%) participants had habit of Cigarette smoking. Amongst them, 02 participants were from region I (02 males & No females), 01 participants was from region II (01 male & No females),03 participants were from region III (03 males & No females) & 03 participants were from region IV (03 males & No females).

- Out of total 21 (100%) participants having habit of smokeless tobacco in various forms, 13 (61.9%) participants had habit of Tobacco Quid. Amongst them, 03 participants were from region I (03 males & No females), 02 participants were from region II (01 male &01 female), 04 participants were from region III (04 males & No females) & 04 participants were from region IV (02 males & 02 females).

Total 03 (14.28%) participants had habit of Mishri application. Amongst them, there were No participants in region I, 01 participant was from region II (00 male 0 & 01 female), there were No participants in region III & 02 participants were in region IV (00 male & 02 females)

Total 05 (23.8%) participants had habit of Tobacco paste application. Amongst them, 01 participant was from region I (00 male & 01 female), 02 participants were from region II (00 male & 02 females), 01 participant was from region III (00 male & 01 female) & 01 participant was from region IV (00 male & 01 female)

In nutshell, bidi smoking was seen in 16 participants (34.78%), cigarette smoking in 09 participants (19.57%), mashiri application in 03 participants (6.52%), tobacco quid in 13 participants (28.26%) and tobacco paste application in 05 participants(10.87%).

From Table 7, it is distinctly observed that maximum number of participants had Bidi smoking and Tobacco quid habit, altogether in each region.

Table 8: Distribution of Participants according to different types of Arecanut Habit:

Arecanut habit	Region I		Region II		Region III		Region IV	
	M	F	M	F	M	F	M	F
Gutkha	07	02	04	02	05	02	06	04
Sweet supari	00	04	00	06	00	01	00	05
Mawa	02	00	02	00	04	00	03	00
Pan masala	01	00	01	02	01	02	01	01

Graph 8: Distribution of Participants according to different types of Arecanut Habit:

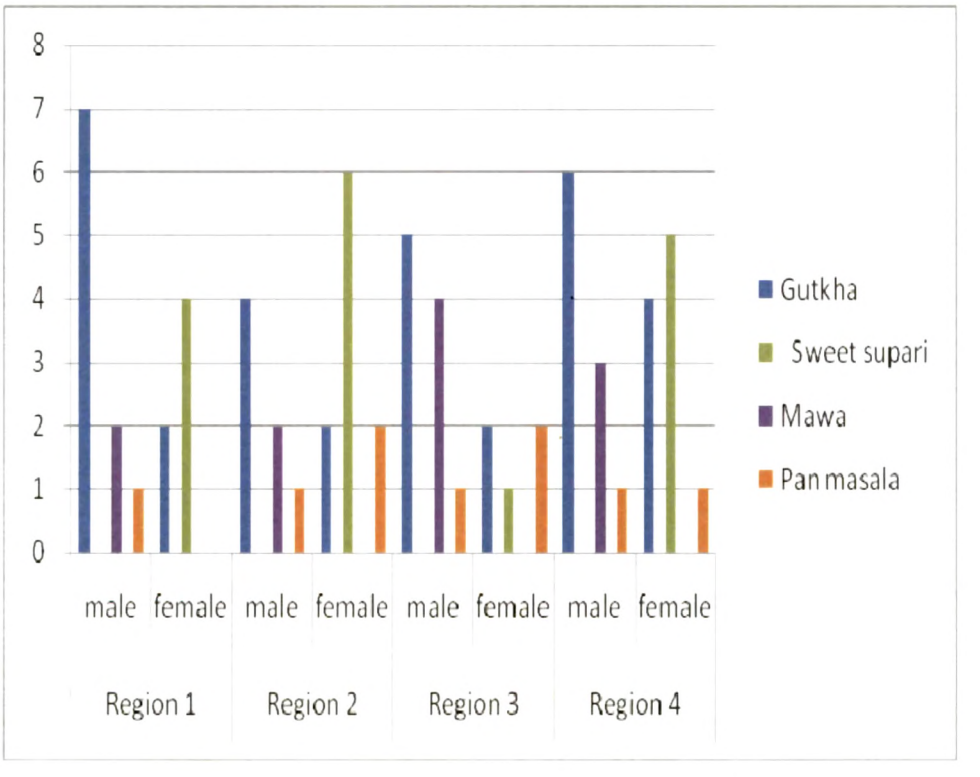


Table 8 & Graph 8 shows distribution of participants according to Arecanut habits. Out of Total 68 (100%) participants having habit of arecanut chewing in various forms:

- Total 32 participants (47.05%) had habit of chewing Gutkha. Amongst them, 09 participants were from region I (07 males & 02 females), 06 participants were from region II (04 males &02 females), 07 participants were from region III (05 males & 02 females) & 10 participants were from region IV (06 males & 04 female).

- Total 16 (23.52%) participants had habit of chewing Sweet supari. Amongst them, 04 participants were from region I (00 male & female 04), 06 participants were from region II (00 male & 06 female), 01 participants were from region III (00 male & 01 female) & 05 from region IV (00 male & 05 female).

- Total 11 (16.17%) participants had habit of chewing Mawa. Amongst them, 02 participants were from region I (02 males & 00 female), 02 participants were from region II (02 males & 00 female), 04 participants were from region III (04 males & 00 female) & 03 participants were from region IV(03 males & 00 female).

- **Total 09 (13.23%) participants had habit of chewing Pan Masala. Amongst them, 01 participant was from region I (01 male & 00 female), 03 participants were from region II (01 male & 02 females), 03 participants were from region III (01 male & 02 females) & 02 participants were from region IV (01 male & 01 female).**

In nutshell, Ghutka chewing was seen in 32 participants (47.05%), chewing of sweet supari in 16 participants (23.52%), mawa in 11 participants (16.17%) and pan masala chewing in 09 participants (13.23%),

From table 8 & Graph 8, it was distinctly observed that maximum number of participants had harmful oral habit of chewing Ghutka equally in all the region. These observations were statistically significant.

Table 9: Distribution of Participants according to Age of First Use (Initiation) of Habit:

Age group (yrs.)	No. of participants
10-14	13
15-19	29
20-24	31
25-29	28
30-34	06
35-39	03
40-44	02
45-49	01
50-54	01

Graph 9: Distribution of Participants according to Age of First Use (Initiation) of Habit:

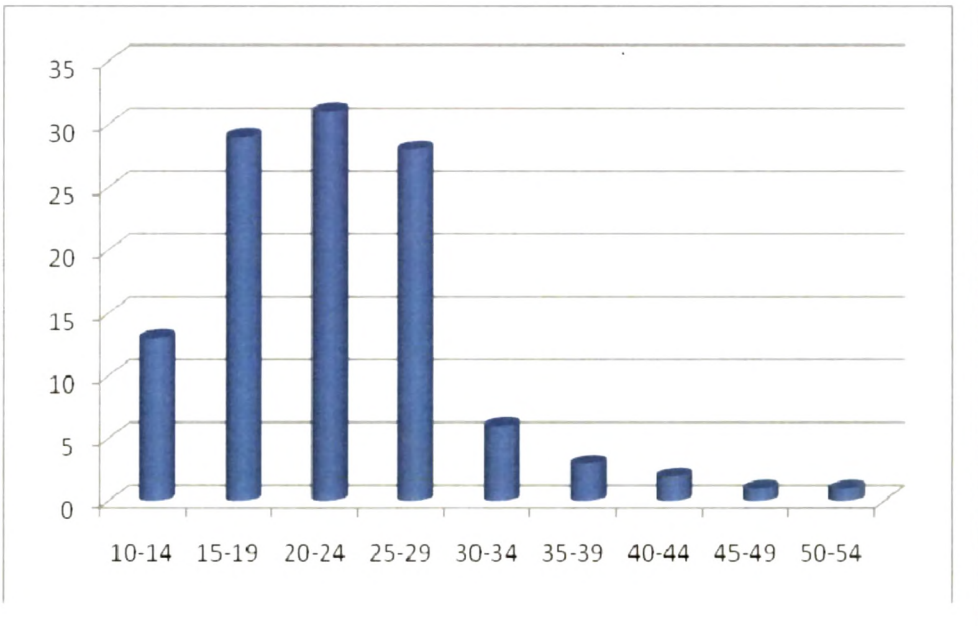


Table 9 & Graph 9 shows Distribution of Participants according to the Age of first use (Initiation) of habit. The Age groups were grouped with the difference of five. The total numbers of participants with harmful oral habits were 114 (100%). Out of them:

- Total 13 (11.4%) participants had initiated the harmful oral habit in between the age of 10-14 years.
- Total 29 (25.43%) participants had initiated the harmful oral habit in between the age of 15-19 years.
- Total 31 (27.19%) participants had initiated the harmful oral habit in between the age of 20-24 years.
- Total 28 (24.56%) participants had initiated the harmful oral habit in between the age of 25-29 years.
- Total 06 (5.26%) participants had initiated the harmful oral habit in between the age of 30-34 years.
- Total 03 (2.63%) participants had initiated the harmful oral habit in between the age of 35-39 years.
- Total 02 (1.75%) participants had initiated the harmful oral habit in between the age of 40-44 years.
- Total 01 (0.87%) participants had initiated the harmful oral habit in between the age of 45-49 years.

- **Total 01 (0.87%) participants had initiated the harmful oral habit in between the age of 50-54 years.**

From table 9 & Graph 9, it was observed that maximum number of Participants had initiated the harmful oral habit in the age group of 20-24 years followed by the age group of 15-19 and 25-29 years. Thus, according to the present study, the critical age group for initiation of harmful habits is 15-29 years. These observations were statistically significant.

Table 10: Distribution of participants according to Factors influencing initiation of tobacco and arecanut use

S.No.	Factors	No. of participants
1.	Friends	18
2.	Social Status	18
3.	Culture	19
4.	Family History	04
5.	Stress	24
6.	Pleasure	04
7.	Occupation	03
8.	Work load	11
9.	Hobby	03
10.	Advertisement	03
11.	Imitation	01
12.	Sign of Manliness	02
13.	Non specific	04

Graph 10: Distribution of participants according to Factors influencing initiation of tobacco and arecanut use

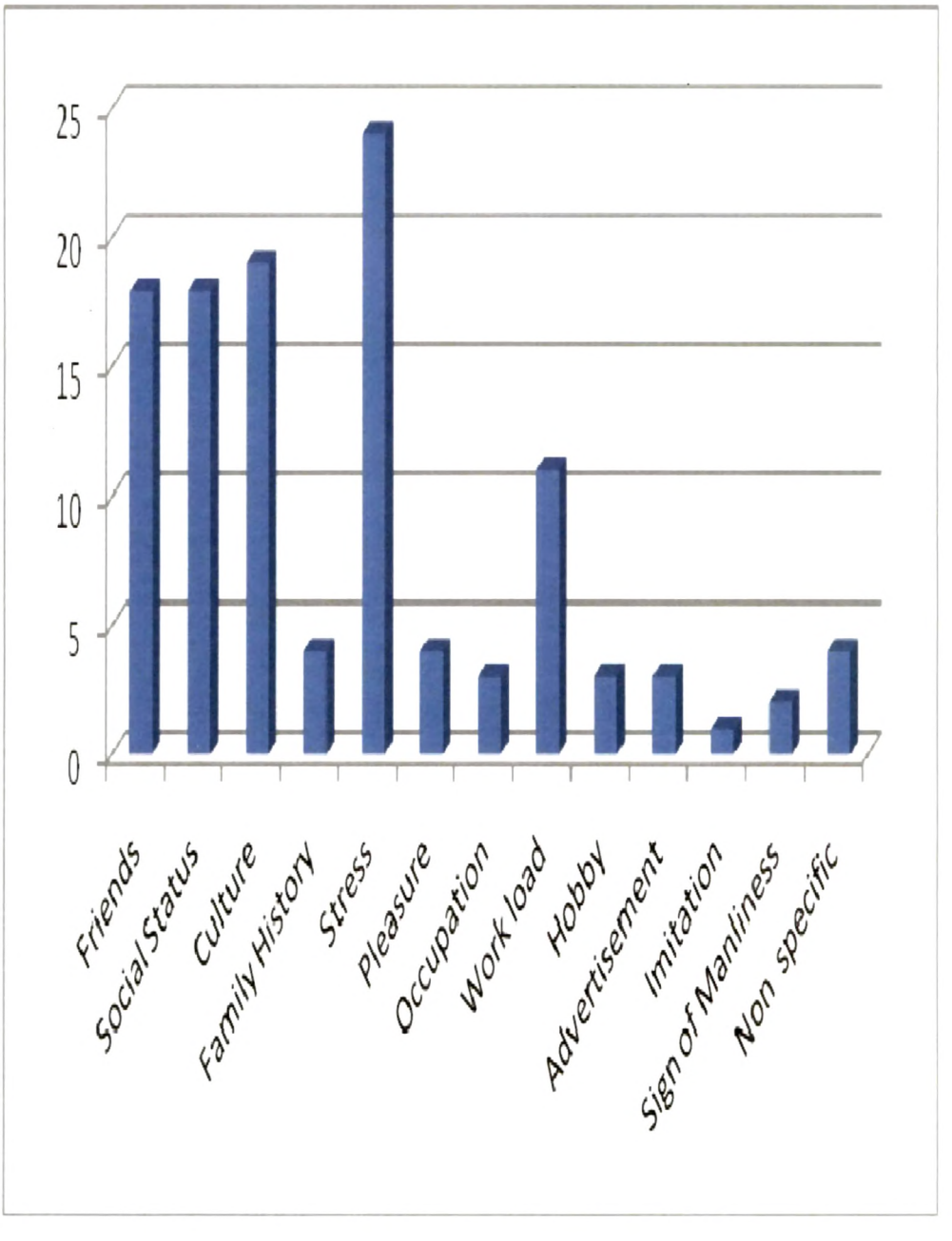


Table 10 & Graph 10 shows Distribution of Participants according to Factors or Reasons responsible in initiating the habit. Out of total 114 (100%) participants having various harmful oral habits:

- Total 18 (15.78%) participants had initiated the harmful oral habit due to influence from friends.
- Total 18 (15.78%) participants had started the harmful oral habit due to social status.
- Total 19 (16.66%) participants had initiated the harmful oral habit due to culture.
- Total 04 (3.5%) participants had family history as reason to initiate the harmful oral habit.
- Total 24 (21.05%) participants had initiated the habit due to stress factor.
- Total 04 (3.5%) participants had started the harmful oral habit for pleasure.
- Total 03 (2.63%) participants had started the harmful oral habit due to occupation.
- Total 11 (9.64%) participants had to initiate the habit due to workload.
- Total 03 (2.63%) participants initiated the harmful oral habit as a hobby.

- Total 03 (2.63%) participants were influenced by the advertisement in initiating the habits.
- Total 01 (0.87%) participant initiated the harmful oral habit by means of Imitation.
- Total 02 (1.75%) participants had started the habit as Sign of Manliness.
- Total 04 (3.5%) participants had initiated the harmful oral habit without any specific reasons.

From table 10 & Graph 10, it was evident that the most common factor responsible for initiating the habit was Stress followed by Culture, Friends and Social status. These observations were statistically significant.