



## To Assess the Knowledge and Awareness on Heart Attack Increasingly Common in Young Adults

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### ABSTRACT

**Background:** Every year, about 12 million people throughout the world die of a heart attack. These diseases affect the poor as well as the rich. The World Health Organization (WHO) reported that about 17.9 million individuals passed away due to CVDs in 2016, which accounted for 31% of all deaths in the world.

**Materials and Methods:** A cross sectional study was conducted in Karnataka among lay public. Data were collected, analyzed, interpreted using descriptive statistics.

**Results:** Our study reported that participants(N=318) in young adults to create an awareness and action to wards heart attack. Majority of them were female 66.5% and 22.3% aged 23years old. Most of participants were 50-59kg body weight 41.6%, 90% were having normal sleep, 83.3% are physically active, 17.3% were having family history of heart attack, 2.9% of them were having a habit of smoking, among them 0.3% are occasional smokers. 43.3% are secondary smoker's 4.9% were having a habit of alcohol intake. 63.1% were mixed type of diet and 56.1% were eating junk food weekly. 47.5% were responded chest pain is the most common symptoms which results in heart attack. 80.9% responded heart attack is the most common death.

**Conclusion:** The current pilot study shows that the developed questionnaire is a reliable and valid measure of all aspects of participants' awareness and action toward heart attack in young ad. It can be also useful in studying the relationship between respondents' sociodemographic and their awareness and action heart attack.

**Key words:** Heart attack, adults, Awareness, Symptoms

### Introduction:-

Every year, about 12 million people throughout the world die of a heart attack. These diseases affect the poor as well as the rich. Most people think that they are diseases of middle-aged men. The truth is that both men and women suffer from heart attacks. Women are much more at risk after menopause.<sup>6</sup> cardiovascular diseases (CVDs) have been documented as the leading cause of mortality worldwide. The World Health Organization (WHO) reported that about 17.9 million individuals passed away due to CVDs in 2016, which accounted for 31% of all deaths in the world. Out of this number, 85% (15.2 million) were attributed to heart attack. Thus, it is imperative to improve public awareness regarding stroke and its risk factors such as hypertension, diabetes, smoking, stress and physical inactivity.<sup>2</sup>

In fact, there are several modifiable risk factors that lead to CHD, such as unhealthy foods/drinks (e.g., fast foods, trans fats, fizzy drinks), obesity, lack of physical activity, smoking, alcohol consumption, hypertension, diabetes, and high cholesterol. On the other hand, awareness towards CVDs, i.e., heart attack and its controllable risk factors is imperative, as it might lead to improvement in individual's lifestyle and motivation to seek medical assistance at emergency department, which if done at early stage can lead to remarkable reduction of morbidity and mortality. This highlights the importance of exploring individual's knowledge regarding CVD however, few studies assessed CVD risk factors knowledge among general public.<sup>2</sup>

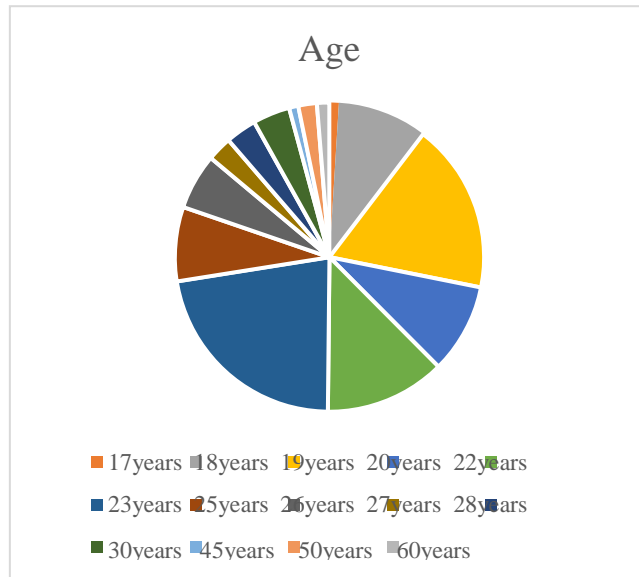
The main objective of this study is to develop a questionnaire to assess the awareness and action towards heart attack is increasing commonly in young adults among the lay public in this pilot study.

### Results:-

A total 318 were included in the final analysis. Majority of them were females (n=206, 66.5%). 3 participants (0.3%) aged 17 years old, 9.4% (n=29) aged 18 years old, 7.8% (n=55) aged 19 years old, 9.4% (n=29) aged 20 years old, 12.6% (n=39) aged 22 years old, 22.3% (n=69) aged 23 years old, 7.7% (n=24) aged 25 years old, 5.8% (n=18) aged 26 years old, 2.5% (n=8) aged 27 years old, 3.2% (n=10) aged 28 years old, 3.8% (n=12) aged 30 years old, 0.9% (n=3) aged 45 years old, 1.9% (n=6) aged 50 years and 1.2% (n=4) aged 60 years. Most of participants were 50-59 kg body weight 41.6% (n=128). Most of them were single 94.2% (n=292), 3.9% (n=12) were married, 0.3% (n=1) were divorced and 1% (n=3) were widow. Where 56% (n=169) are unemployed and most of them are working around 7-8 hrs 29.6% (n=57), 90% (n=278) were having normal sleep, most of them 51.3% (n=157) will sleep about 7-8 hrs, 27.4% (n=34) were feel stressed among them 1% (n=3) due to exams/ studies and 1% (n=3) due to work. 83.3% (n=254) are physically active most of them 34% (n=104) were gym, 17.3% (n=53) were having family history of heart attack. 1% (n=3) were experienced heart attack, 0.7% (n=2) are taking medications for heart attack. 1.3% (n=4) were using contraceptive pills, 2.9% (n=9) of them were having an habit of smoking, among them 0.3% (n=1) were use 1 pack/day and 0.3% (n=1) are occasional smokers. 43.3% (n=133) are secondary smoker's majority of them 66.1% (n=88) were from public/street. 4.9% (n=15) were having a habit of alcohol intake among them 46.6% (n=7) were drinking 1 glass and 33.3% (n=5) are drinking occasionally. 63.1% (n=195) were mixed type of diet and 56.1% (n=174) were eating junk food weekly. 41% (n=127) were drinking soft/cool drinks occasionally. 51.3% (n=157) were having habit of coffee intake among them 72.6% (n=114) having 2 cups/day. 90.2% (n=275) were heard about heart attack. 50.7% (n=155) were not regularly monitoring heart rate, ECG, Blood pressure and Blood sugar. 31.2% (n=94) were keep their mobile phones close to the head while sleeping. 47.5% (n=143) were responded chest pain is the most common symptoms which results in heart attack. 80.9% (n=242) responded heart attack is the most common death.

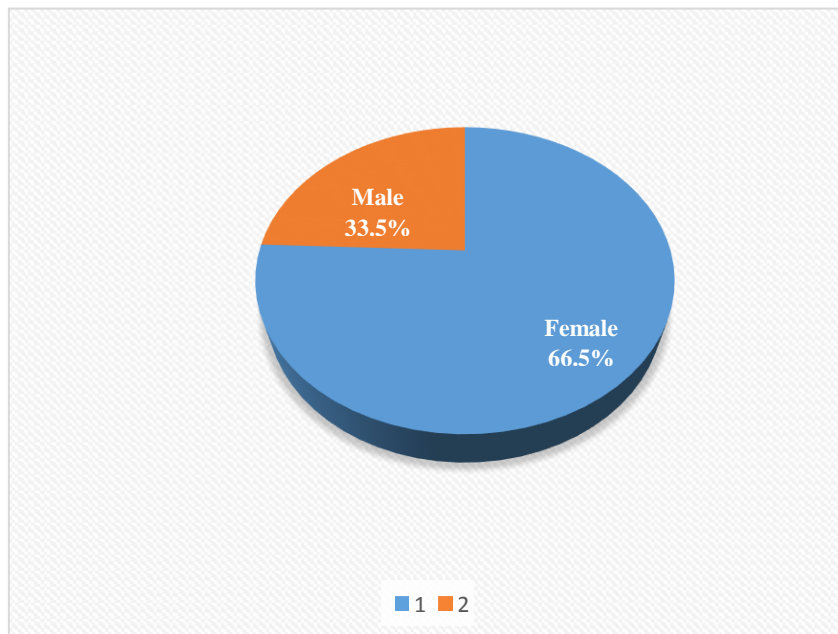
“Table 1 : Age”

Age (n=309)	N	%
17years	3	0.3
18years	29	9.4
19years	55	7.8
20years	29	9.4
22years	39	12.6
23years	69	22.3
25years	24	7.7
26years	18	5.8
27years	8	2.5
28years	10	3.2
30years	12	3.8
45years	3	0.9
50years	6	1.9
60years	4	1.2



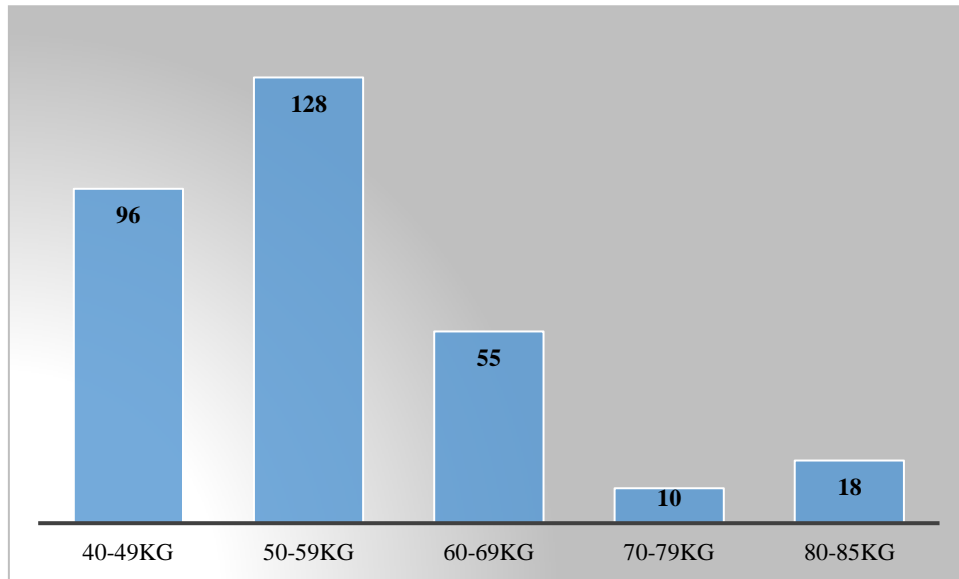
“Table : 2 Gender”

Gender(n=310)	N	%
Male	104	33.5
Female	206	66.5

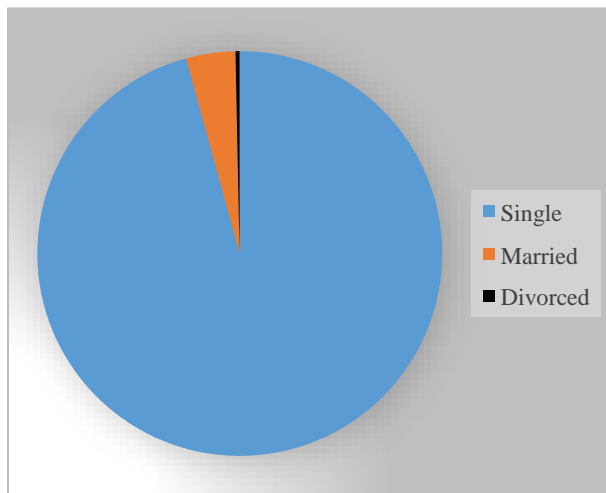


“Table 3 : Body weight ”

Body weight(n=307)	N	%
40-49kg	96	31.2
50-59kg	128	41.6
60-69kg	55	17.9
70-79kg	10	3.2
80-85kg	18	5.8



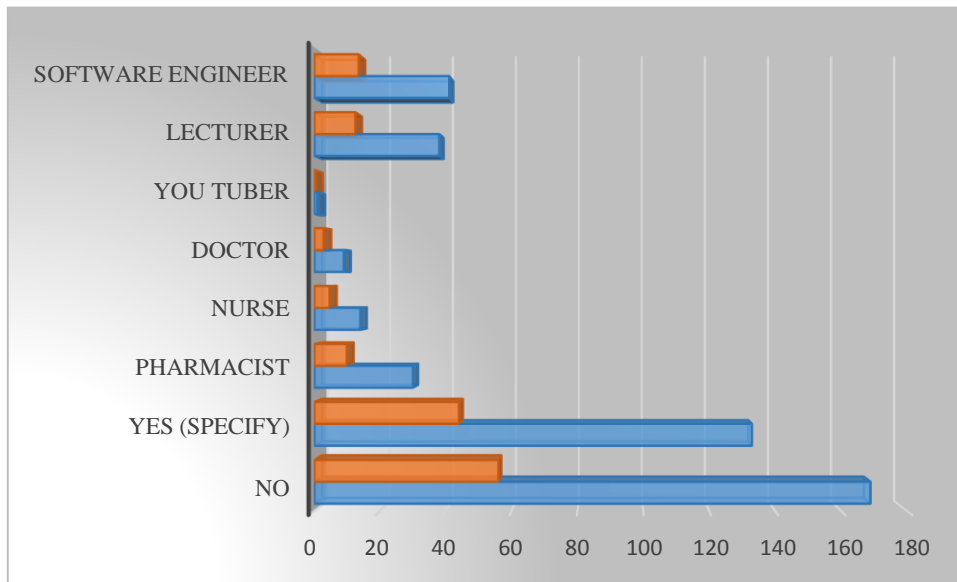
Marital status(n=310)	N	%
Single	292	94.2
Married	12	3.9
Divorced	1	0.3
widow	3	1



“Table 4 : Marital status”

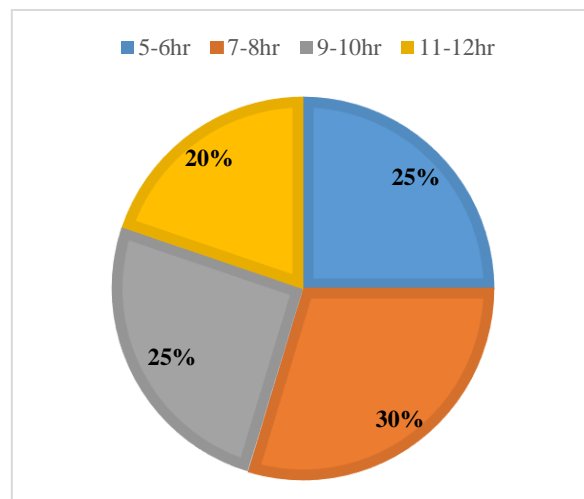
“Table 5 : Occupation”

Occupation(n=302)	N	%
No	169	56
Yes (specify)	133	44
Pharmacist	30	9.9
Nurse	14	4.6
Doctor	9	2.9
You tuber	1	0.3
Lecturer	38	12.5
Software engineer	41	13.5



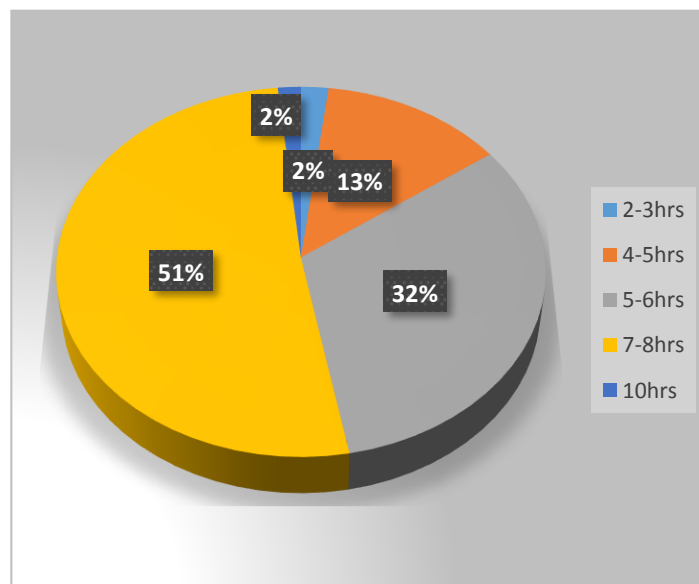
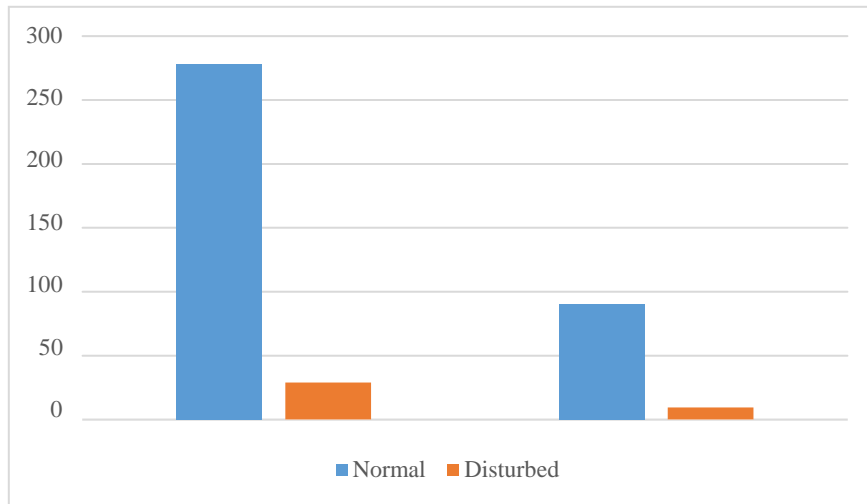
“Table 6 : Working hours”

Working hour(n=192)	N	%
5-6hr	48	25
7-8hr	57	29.6
9-10hr	49	25.5
11-12hr	38	19.7



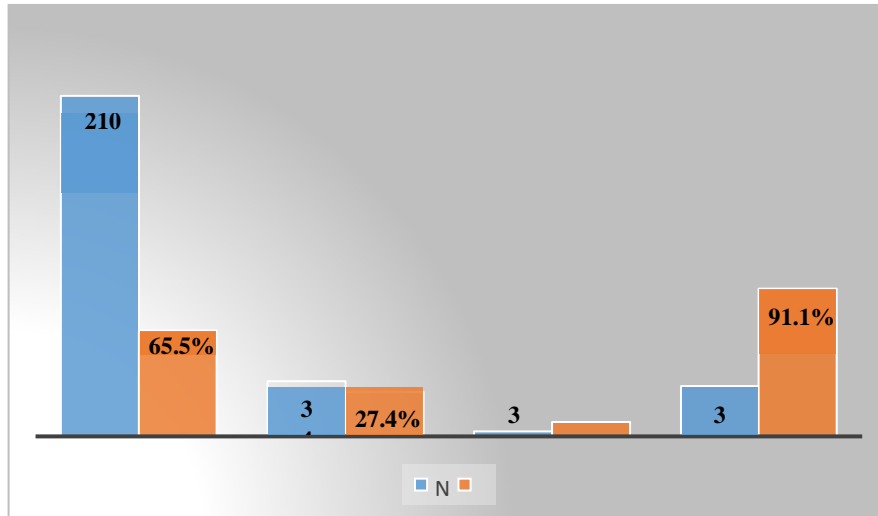
“Table 7 : Sleep pattern”

Sleep pattern(n=307)	N	%
Normal	278	90.5
Disturbed	29	9.4



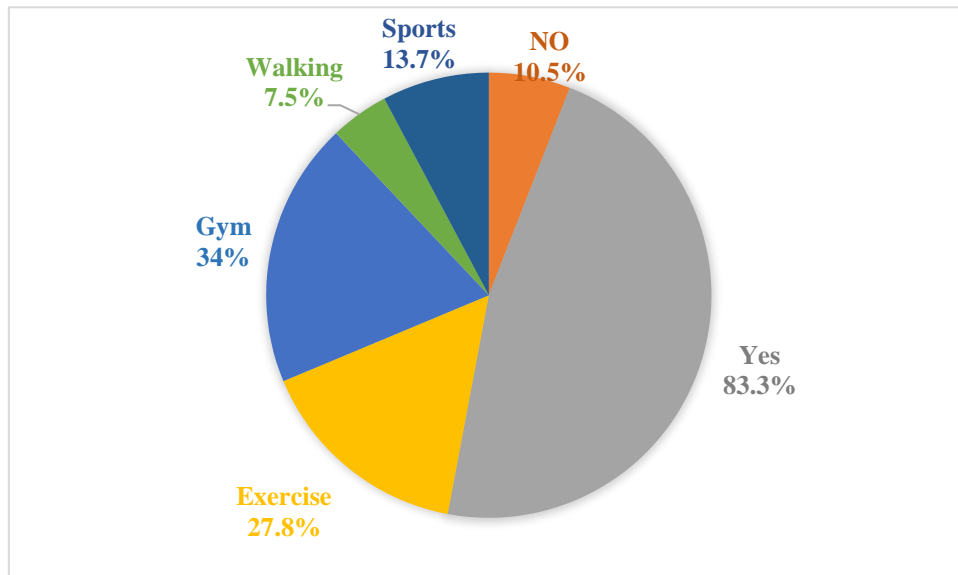
“Table 9 : stress”

Do you feel stress? (n=307)	N	%
No	210	65.5
Yes (specify)	34	27.4
Work	3	8.8
Exam/studies	31	91.1



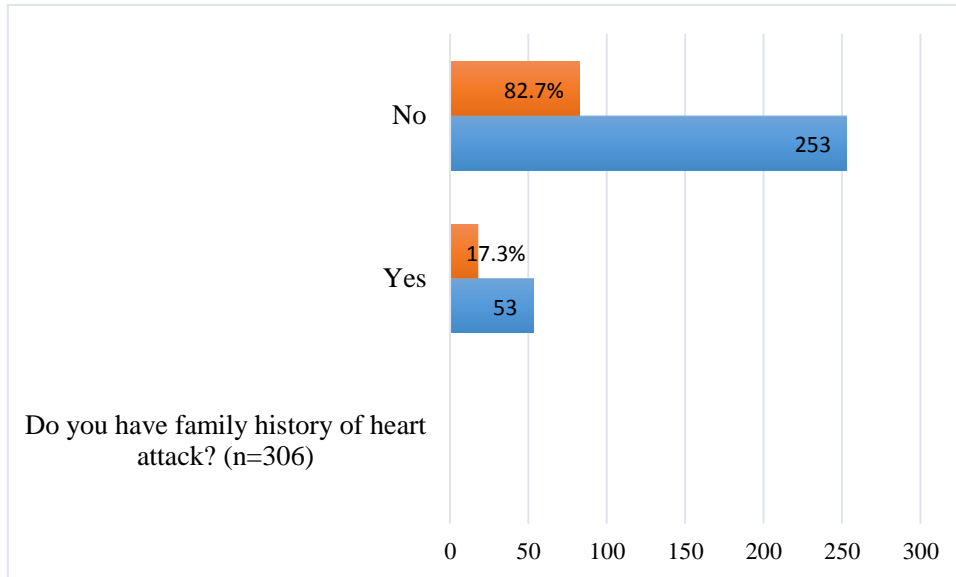
“Table 10 : Physically active”

Are you physically active? (n=305)	N	%
No	32	10.5
Yes (specify)	254	83.3
Exercise	85	27.8
Gym	104	34
Walking	23	7.5
Sports	42	13.7



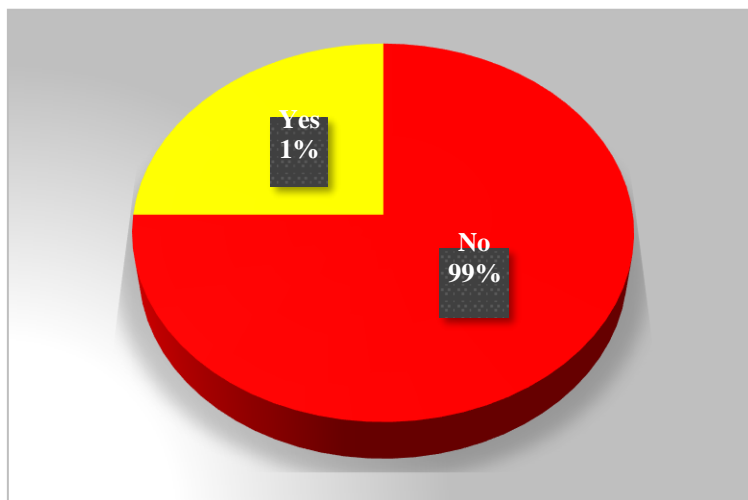
“Table 11 : Family history of heart attack”

Do you have family history of heart attack?(n=306)	N	%
Yes	53	17.3
No	253	82.7



“Table 12 : Experience of heart attack”

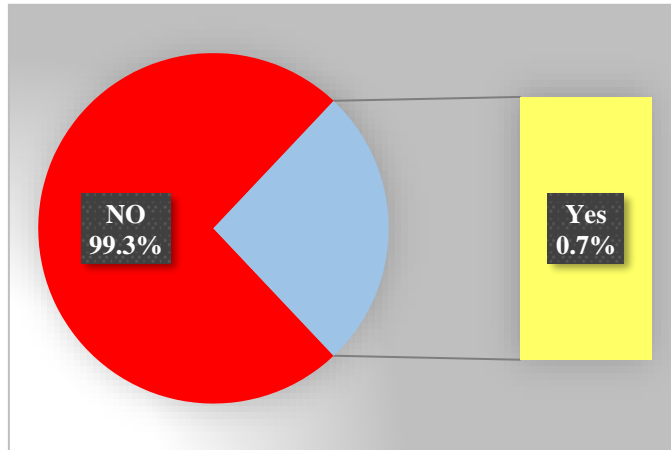
Have you experience heart attack?(n=305)	N	%
Yes	3	1
No	305	99



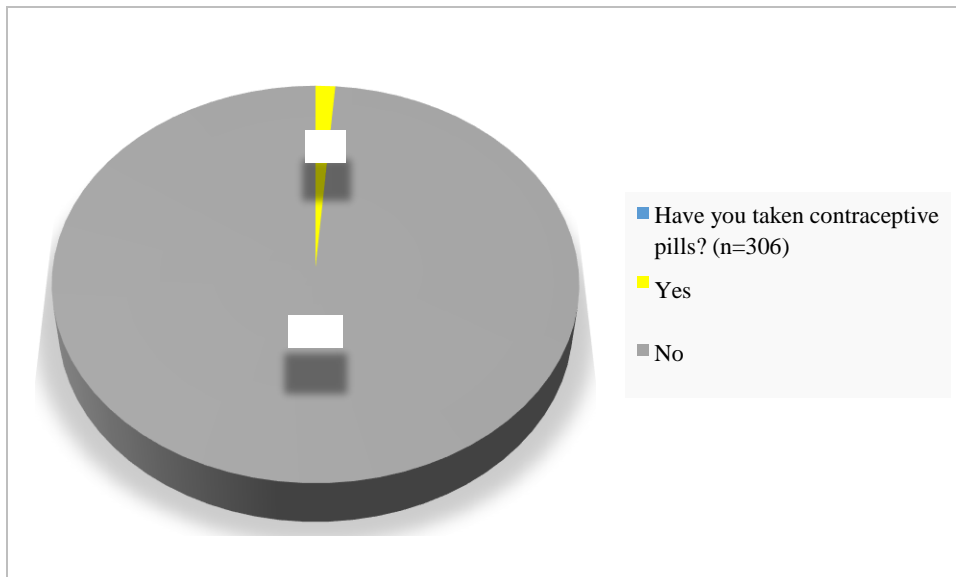


“Table 13 : Medications for heart attack”

Have you taken any medication for heartattack?(n=303)	N	%
Yes	2	0.7
No	301	99.3



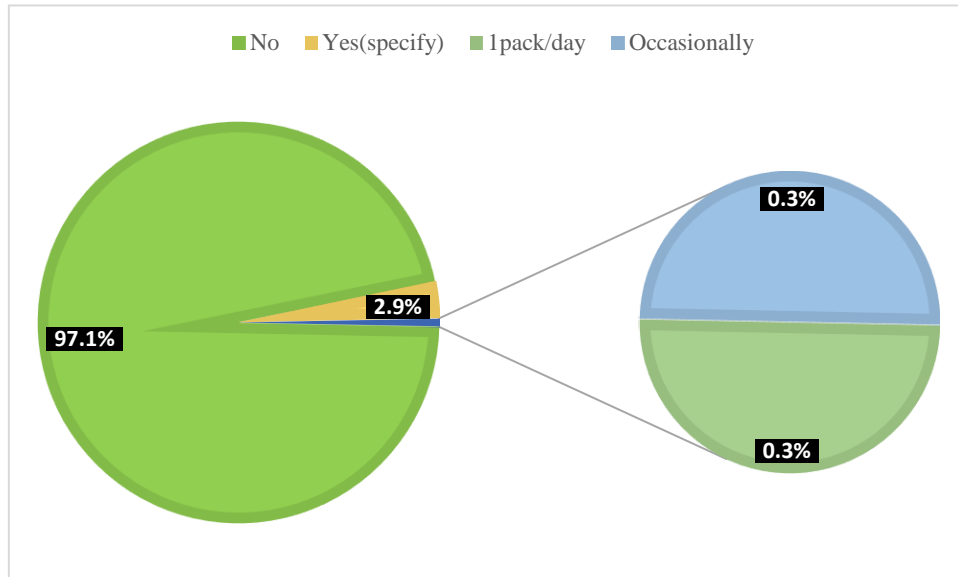
Have you taken contraceptive pills?(n=306)	N	%
Yes	4	1.3
No	302	98.7



“Table 14 : Contraceptive pills”

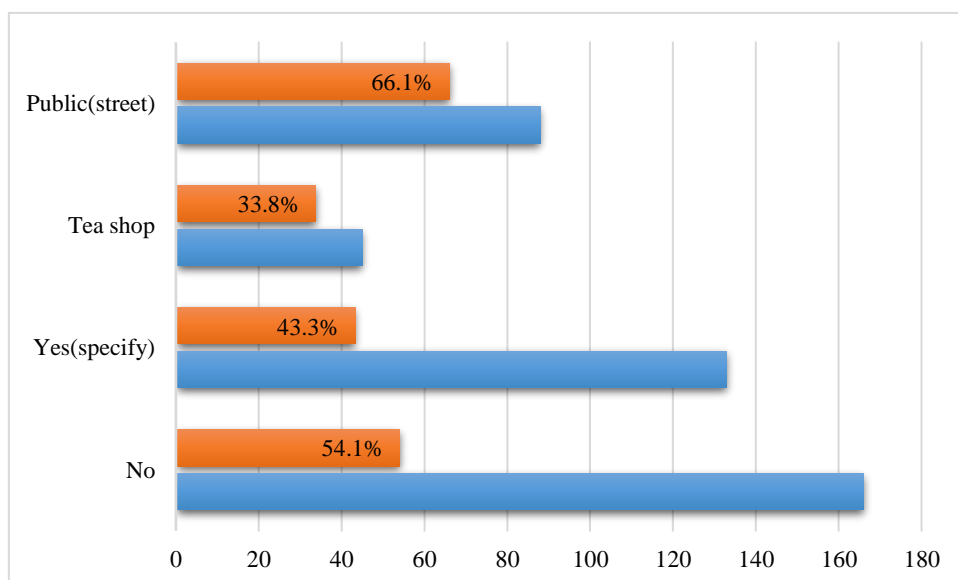
“Table 15 : Habit of smoking”

Do you have habit of smoking? (n=309)	N	%
No	300	97.1
Yes(specify)	9	2.9
1pack/day	1	0.3
Occasionally	1	0.3



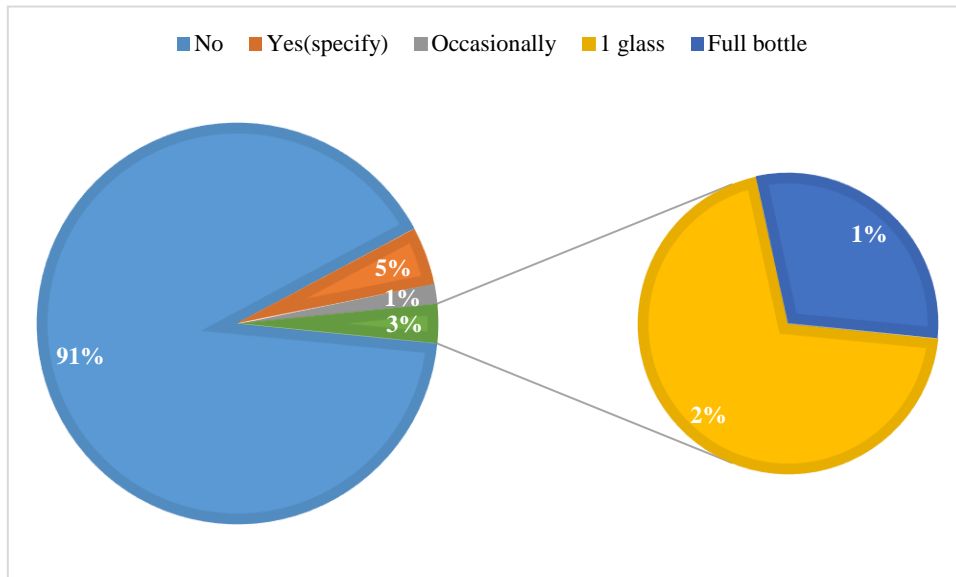
“Table 16 : Inhalation of cigarette smoke from another smoker”

Did you ever inhaled the cigarette smoke from another smoker?(n=307)	N	%
No	166	54.1
Yes(specify)	133	43.3
Tea shop	45	33.8
Public(street)	88	66.1



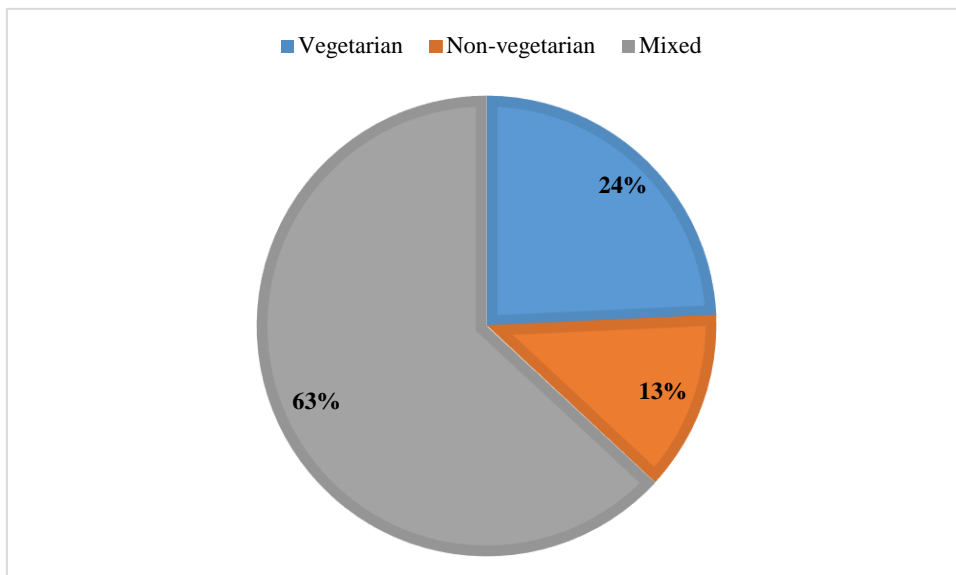
“Table 17 : Habit of alcohol intake”

Do you have habit of alcohol intake?(n=309)	N	%
No	289	93.5
Yes(specify)	15	4.9
Occasionally	5	33.3
1 glass	7	46.6
Full bottle	3	20



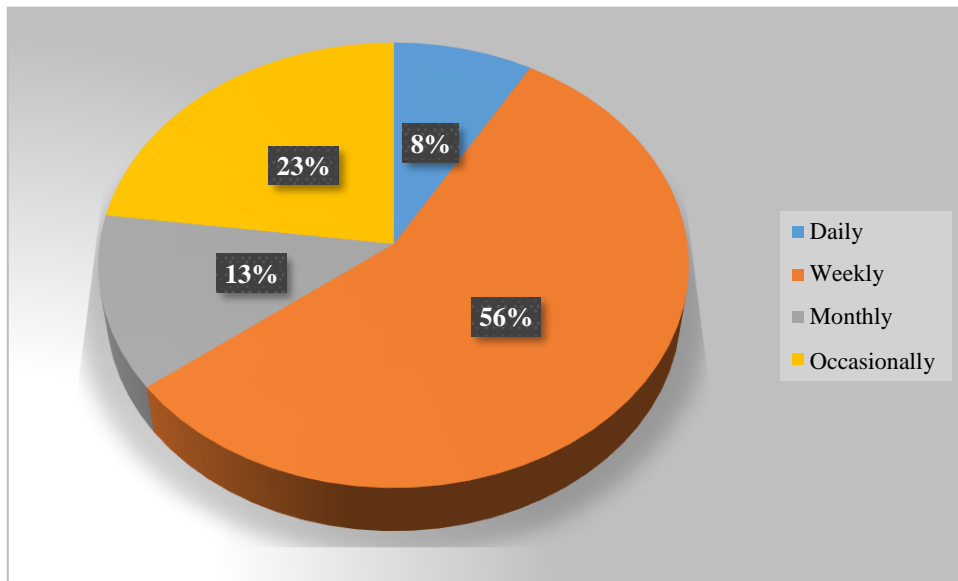
“Table 18 : Diet”

Diet (n=309)	N	%
Vegetarian	75	24.3
Non-vegetarian	39	12.3
Mixed	195	63.1



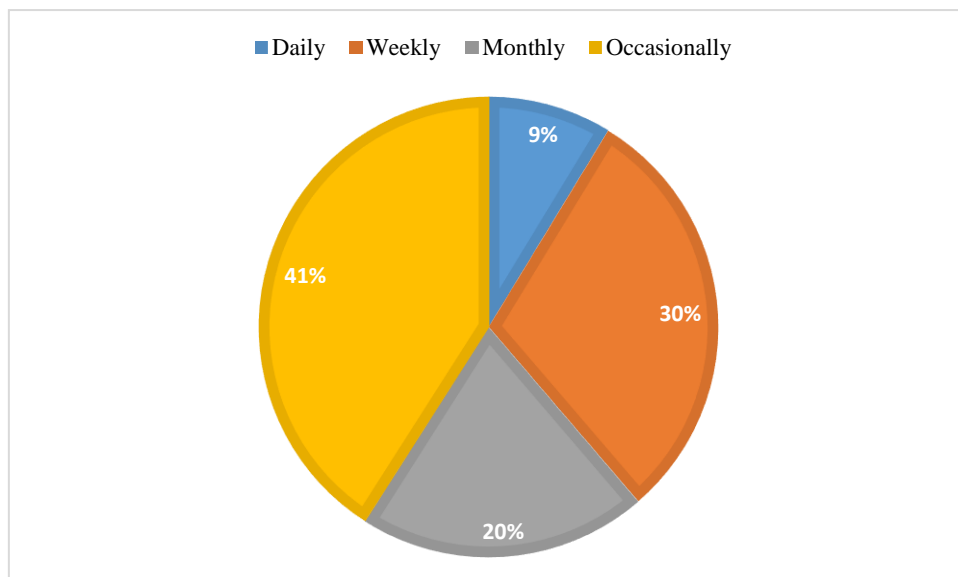
“Table 19 : Junk food”

How often you will eat junk food?(n=310)	N	%
Daily	26	8.4
Weekly	174	56.1
Monthly	39	12.6
Occasionally	71	22.9



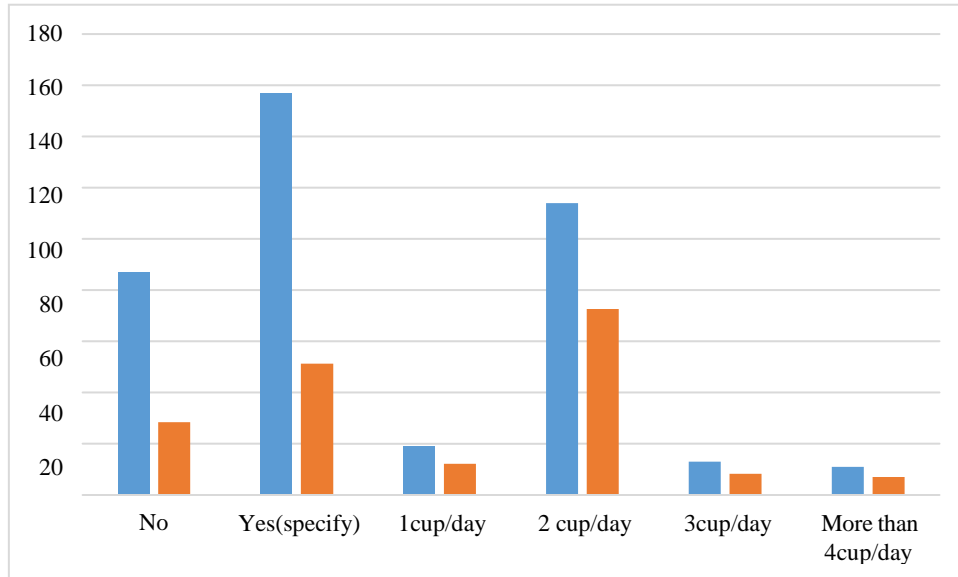
“Table 20 : Cool drinks / soft drinks”

How often you will drink cool/softdrinks? (n=310)	N	%
Daily	27	8.7
Weekly	93	30
Monthly	63	20.3
Occasionally	127	41



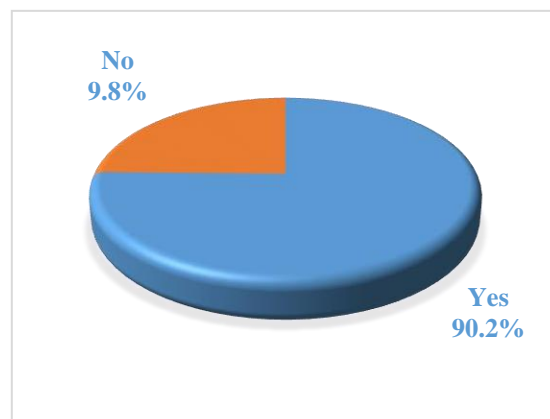
“Table 21 : Habit of coffee or tea”

Do you have habit of coffee or tea? (n=306)	N	%
No	87	28.4
Yes(specify)	157	51.3
1cup/day	19	12.1
2 cup/day	114	72.6
3cup/day	13	8.2
More than 4cup/day	11	7



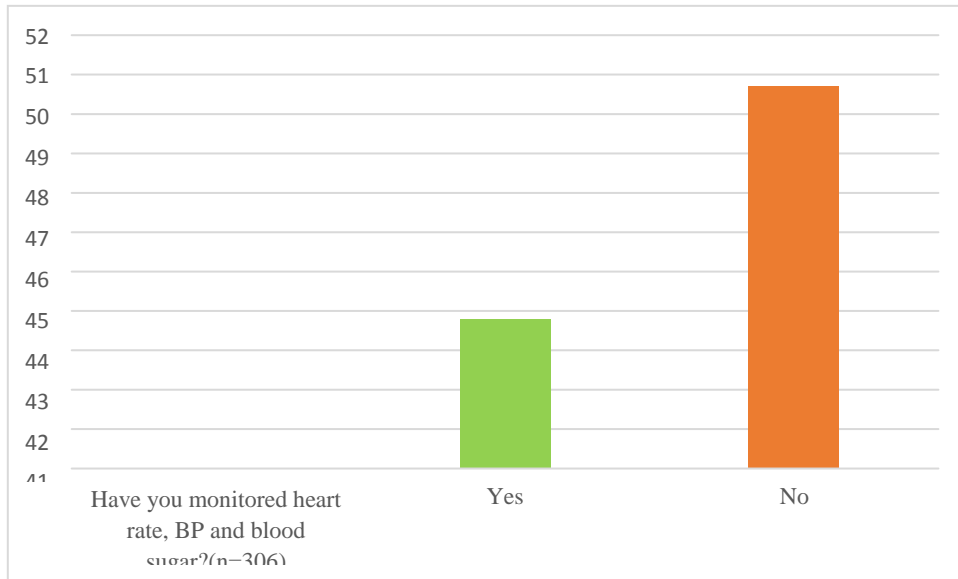
“Table 22 : Heard about heat attack”

Have you ever heard about heart attack? (n=305)	N	%
Yes	275	90.2
No	30	9.8



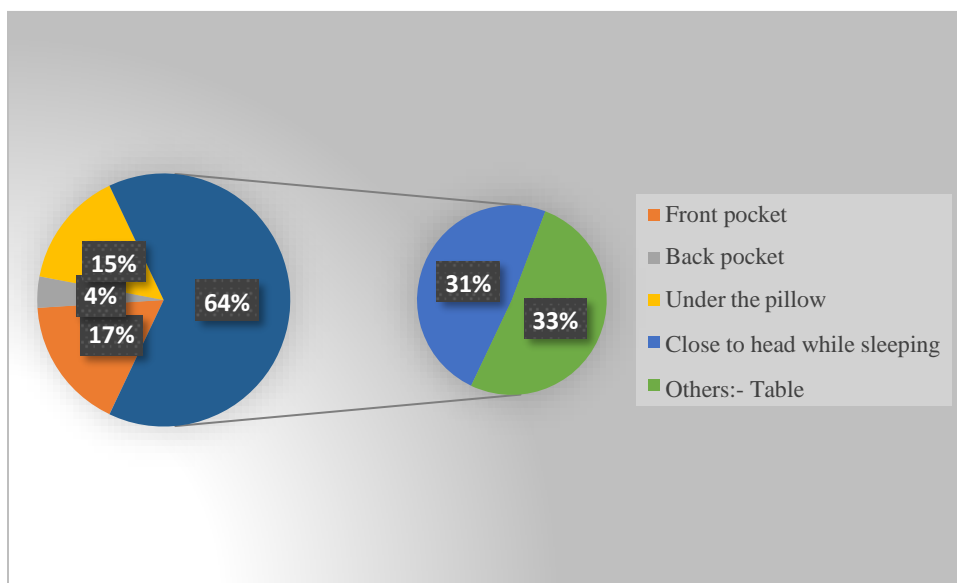
“Table 23 : Monitoring of blood pressure, heart rate and blood sugar”

Have you monitored heart rate, BP and blood sugar?(n=306)	N	%
Yes	137	44.8
No	155	50.7



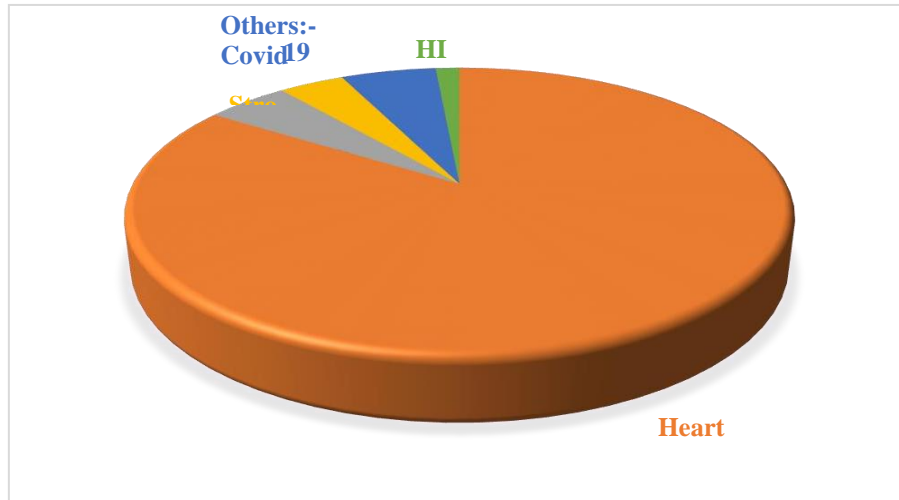
“Table 24 : Phone”

Where you will keep your phone?(n=301)	N	%
Front pocket	51	16.9
Back pocket	12	4
Under the pillow	45	15
Close to head while sleeping	94	31.2
Others:- Table	99	32.8



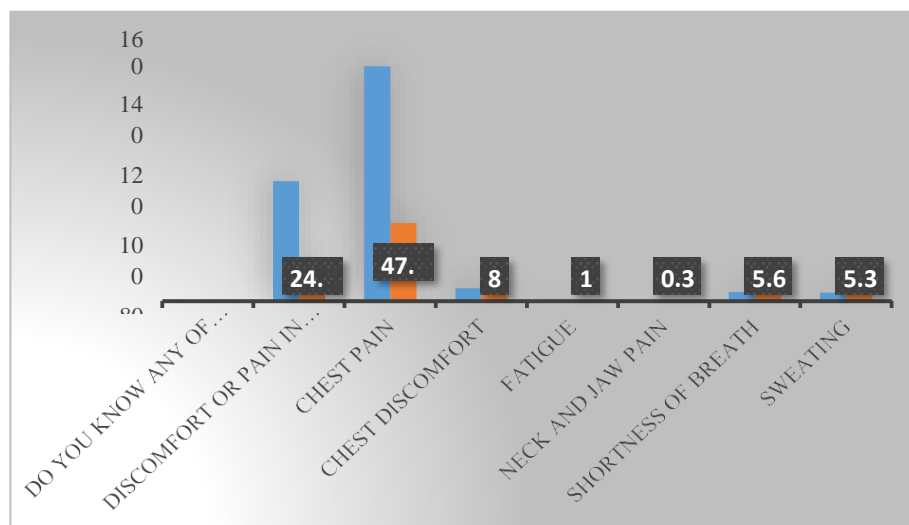
“Table 25 : Most common cause of death”

What are the most common cause of death?(n=299)	N	%
Heart attack	242	80.9
Cancer	14	4.7
Stroke	11	3.7
Others:- Covid 19	16	5.3
HIV	4	1.3



“Table 26 : Symptoms of heart attack”

Do you know any of the following symptoms which results in heart attack? (n=301)	N	%
Discomfort or pain in arm or shoulder	73	24.3
Chest pain	143	47.5
Chest discomfort	8	8
Fatigue	1	1
Neck and jaw pain	0.3	0.3
Shortness of breath	5.6	5.6
Sweating	5.3	5.3



Variables	N	%
Age (n=309)		
17years 18years	3	0.3
19years 20years	29	9.4
22years 23years	55	7.8
25years 26years	29	9.4
30years 45years	39	12.6
50years 60years	69	22.3
	24	7.7
	18	5.8
	8	2.5
	10	3.2
	12	3.8
	3	0.9
	6	1.9
	4	1.2
Gender(n=310)		
Male Female	104	33.5
	206	66.5
Body weight(n=307)		
40-49kg	96	31.2
50-59kg	128	41.6
60-69kg	55	17.9
70-79kg	10	3.2
80-85kg	18	5.8



Marital status(n=310)		
Single	292	94.2
Married	12	3.9
Divorced	1	0.3
widow	3	1
Occupation(n=302)		
No	169	56
Yes (specify)	133	44
Pharmacist	30	9.9
Nurse Doctor	14	4.6
You tuber	9	2.9
Lecturer	1	0.3
Software engineer	38	12.5
	41	13.5
Working hour(n=192)		
5-6hr 7-	48	25
8hr 9-	57	29.6
10hr	49	25.5
11-12hr	38	19.7
Sleep pattern(n=307)		
Normal	278	90.5
Disturbed	29	9.4

<p>Sleep hours(n=306)</p> <p>2-3hrs 4- 5hrs 5- 6hrs 7- 8hrs 10hrs</p>	<p>6 40 98 157 5</p>	<p>1.9 13 32 51.3 1.6</p>
<p>Do you feel stress? (n=307)No</p> <p>Yes (specify)</p> <p>Work Exam/studies</p>	<p>210 34 3 31</p>	<p>65.5 27.4 8.8 91.1</p>
<p>Are you physically active? (n=305)</p> <p>No</p> <p>Yes (specify)</p> <p>Exercise Gym Walking Sports</p>	<p>32 254 85 104 23 42</p>	<p>10.5 83.3 27.8 34 7.5 13.7</p>

<p>Do you have family history of heart attack? (n=306)</p> <p>Yes</p> <p>No</p>	<p>53</p> <p>253</p>	<p>17.3</p> <p>82.7</p>
<p>Have you experience heart attack?(n=305)</p> <p>Yes</p> <p>No</p>	<p>3</p> <p>305</p>	<p>1</p> <p>99</p>
<p>Have you taken any medication for heart attack?(n=303)</p> <p>Yes</p> <p>No</p>	<p>2</p> <p>301</p>	<p>0.7</p> <p>99.3</p>
<p>Have you taken contraceptive pills? (n=306)Yes</p> <p>No</p>	<p>4</p> <p>302</p>	<p>1.3</p> <p>98.7</p>
<p>Do you have habit of smoking? (n=309)No</p> <p>Yes(specify)</p> <p>1pack/day</p> <p>Occasionally</p>	<p>300</p> <p>9</p> <p>1</p> <p>1</p>	<p>97.1</p> <p>2.9</p> <p>0.3</p> <p>0.3</p>

<p>Did you ever inhaled the cigarette smoke from another smoker?(n=307)</p> <p>No Yes(specify)</p> <p>Tea shop</p> <p>Public(street)</p>	<p>166</p> <p>133</p> <p>45</p> <p>88</p>	<p>54.1</p> <p>43.3</p> <p>33.8</p> <p>66.1</p>
<p>Do you have habit of alcohol intake?(n=309)</p> <p>No Yes(specify)</p> <p>Occasionally1 glass</p> <p>Full bottle</p>	<p>289</p> <p>15</p> <p>5</p> <p>7</p> <p>3</p>	<p>93.5</p> <p>4.9</p> <p>33.3</p> <p>46.6</p> <p>20</p>
<p>Diet (n=309)</p> <p>Vegetarian Non- vegetarianMixed</p>	<p>75</p> <p>39</p> <p>195</p>	<p>24.3</p> <p>12.3</p> <p>63.1</p>
<p>How often you will eat junk food? (n=310)</p> <p>Daily Weekly</p> <p>Monthly</p> <p>Occasionally</p>	<p>26</p> <p>174</p> <p>39</p> <p>71</p>	<p>8.4</p> <p>56.1</p> <p>12.6</p> <p>22.9</p>

How often you will drink cool/soft drinks? (n=310)		
Daily Weekly		
Monthly	27	8.7
Occasionally	93	30
	63	20.3
	127	41
Do you have habit of coffee or tea? (n=306)		
No Yes(specify)	87	28.4
1cup/day 2	157	51.3
cup/day		
3cup/day	19	12.1
More than 4cup/day	114	72.6
	13	8.2
	11	7
Have you ever heard about heart attack? (n=305)		
Yes	275	90.2
No	30	9.8
Have you monitored heart rate, BP and blood sugar?(n=306)		
Yes	137	44.8
No	155	50.7
Where you will keep your phone?(n=301)		
Front pocket Back	51	16.9
pocket Under the	12	4
pillow	45	15

Close to head while sleeping	94	31.2
Others:- Table	99	32.8
What are the most common cause of death? (n=299)		
Heart attack	242	80.9
Cancer Stroke	14	4.7
Others:- Covid 19	11	3.7
HIV	16	5.3
Do you know any of the following symptoms which results in heartattack? (n=301)		
Discomfort or pain in arm or shoulder	4	1.3
	73	24.3
Chest pain		
	143	47.5
Chest discomfort		
	24	8
Fatigue		
	3	1
Neck and jaw pain		
	1	0.3
Shortness of breath		
	17	5.6
Sweating		
	16	5.3

#### Discussion:-

To the best of our knowledge, this study is the first study to develop and validate BM questionnaire to assess the awareness and action towards heart attack in young adults in lay public. It can be considered a reliable instrument for future research to gauge lay public of the awareness and action towards heart attack.

Current study reported that participants (N=96) who aged 35 to 64 had better awareness of HA symptoms; however, this difference was not significant, which probably due to the fact that older participants had more experience in life and more educated than younger participants; consistent with other studies in Korea and the US. Moreover, there was a significant association between awareness of all five-heart attack and appropriate action with employment status. Students and retired showed more awareness of all five heart attack symptoms and appropriate action than housewives, employed/unemployed individuals that was similar with a study in Singapore. Additionally, the findings of the current study reported no significant differences with gender, age, and race.<sup>2</sup>

Our study reported that participants (N=318) in young adults to create an awareness and action towards heart attack. Majority of them were female

66.5% and 22.3% aged 23years old. Most of participants were 50-59kg body weight 41.6% . Most of them were single 94.2% . Where 56% are unemployed and most of them are working around 7-8hrs 29.6%, 90% were having normal sleep, 27.4% were feel stressed among them 1% due to exams/ studies and 1% due to work. 83.3% are physically active, 17.3% were having family history of heart attack. 1% were experienced heart attack, 0.7% are taking medications for heart attack. 1.3% were using contraceptive pills, 2.9% of them were having an habit of smoking, among them 0.3% are occasional smokers. 43.3% are secondary smoker's.

4.9% were having a habit of alcohol intake. 63.1% were mixed type of diet and 56.1% were eating junk food weekly. 41% were drinking soft/cool drinks occasionally. 51.3% were having habit of coffee intake. 90.2% were heard about heart attack. 50.7% were not regularly monitoring heart rate, ECG, Blood pressure and Blood sugar. 31.2% were keep their mobile phones close to the head while sleeping. 47.5% were responded chest pain is the most common symptoms which results in heart attack. 80.9% responded heart attack is the most common death.

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### Conclusion:-

The current pilot study shows that the developed questionnaire is a reliable and valid measure of all aspects of participants' awareness and action toward heart attack in young ad. It can be also useful in studying the relationship between respondents' sociodemographic and their awareness and action heart attack.

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