RISK FACTORS OF HEART ATTACK AND STROKE

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ISSUE ABOUT RISK FACTORS OF CARDIAC ATTACKS AND STROKE

Research about health information of population to measurement of knowledge and percentage of each risk factor of patient attending health centers of Manama region by group's works of doctors Dr. Somaya Al Jowder consultant family physician and doctor in charge of Naim health center, Dr. Ali Mustafa family physician specialist Naim Health Center, Dr. Fatima, Gumah consultant family physician and doctor in charge of Bilad Al Qadeem health center, Dr. Basma Al Tager family physician specialist in Ibn-Senna Health center, Dr. Amal Al Thawadi family physician specialist in Al Hoora Health center and Mirvat Al Alawi family physician specialist in Al Shakh Sabah health center.

Cardio vascular disease most common cause of death in words about 17 million people die from CVD every year worldwide. This number of death is higher than that of HIV/AIDS and all types of cancer combined. CVD does not just kill, it disables, debilities and causes a greater loss is healthy years of life than any other medical condition. WHO recently estimated that more than half of all deaths and disability from CVD could be avoid if people took sample measurement to reduce major risk factors. Recent conference in the region (in Cairo) highlighted to issue of cardiovascular risk management. Professor Richard Hobbs, Professor and Head of primary care and General practice at the University of Birmingham UK, said: "There is a clear gap in knowledge between what physicians know and public awareness. There needs to be a government campaign. It's not just about management, three needs to be prevention with education in schools and better use of the media"[1] heart attack and stroke are vascular disease do to progress

of atherosclerosis which cause by many factors. CVD in gulf region consider most common cause of death. The prevention of disease depends upon prevention of risk factors by health education of population and every person has two or more risk factors check with his family physician.

The risk factors of heart attack and stroke two categories (changed or modified and unchanged or none modified) risk factors[2]. The Doctors must be health education for every person about all risk factors and every person must know him.

The none modified risk factors:- like (Age) which most important cause of stroke and incidence of stroke increase with age in both sex after age 55 years (Heredity) increase incidence of stroke and attack (Gender) after many menopause incidence of coronary atherosclerosis increase then before menopause (race) black person incidence more than other.

The modified risk factors:- These factors can be changed and avoid CVD and stroke (smoking) and also passive smoker the death rate from heart attack more incidence in people who smoke or exposure to smoke, heavy smoker two or more packets per day have death rate from CAD two to three times those of none smokers and also earlier smokers more danger and risk for future health, quit of smoking greatest gift for person himself (high blood pressure) major risk factor of heart attack hypertension increase the work load of heart lead to enlarge and weakness overtime to the heart, hypertension effect 1:4 American adult it's the most powerful modifiable risk factor for heart attack and ischemia and spontaneous hemorrhage stroke and increase blood pressure make organs danger

lake kidney and reduce of blood pressure can reduce risk factor (high blood cholesterol) which lead to narrow of blood vessels and passage way lead to atherosclerosis although hyper cholesterolemia is same time family trait but also common do to environmental factors the total cholesterol normal level <200ml /DL, border line high risk level 200—239 ml/ DL , high risk level >=240 ml/ DL reduce cholesterol level reduce risk factor (Physical in activity) lack of Exercise and sports lead to obesity, regular exercise increase cardio-respiratory function capacity and may decrease weight and increase muscle tone and stimulate circulation and help control lipid of blood and blood pressure and also regulation of blood sugar, physical exercise must be increase gradually to any person have exercise program(diabetics) person with diabetics mellitus mainly have cholesterol and over weight. Risk of heart attack and stroke double than none diabetics in man but triple time in women (Obesity) consider major risk factor for CAD cause angina and sudden deaths due to increase blood pressure, hyper cholesterol and enhance diabetes, over weight have three times risk factor of Heart Attack of man than normal weight when decrease in weight decrease blood pressure and sugar control (Excess Stress) can also consider risk factor. Risk factors specify to stroke:- Transient ischemic attack TiAs. It is significant incidence of stroke one of every four can occur stroke it is assign of atherosclerotic diseases also heart disease it is self one of risk factor of stroke due to fragmentation of emboli.

AIMS

Measurement of knowledge about each risk factors of CVD and stroke of Bahraini patients attending health centers at Manama region, measurement of the Percentage of each risk factors in the study group, and the Percentage of modifiable risk factors between male and female.

Ways and Materials

Cross section research In Manama Region five health centers (Naim, Bilad –al-Qadeem, Al Hoora, Sh. Shaba and Ibn – senna health centers to Bahraini people male and female attending health centres adult patients about 529 cases by used Questioner after taking agreement of patients to involve in study from October 2005 until January 2006 after that data collection and Statistics by using SPSS Programs.

RESULT:

Research for Bahraini peoples attending HC for capital governorate about 529 cases in 5 health centers. The No. of patient and percentage also name of 5 health included in research and sex of patient all show in table1 A, B, number of patient work and not work show in table2 according to age male >45> table> 55 years also menopause, remove ovaries show in table3 A,B,C non chargeable risk factors like history of attack and stroke according to male and female and relation between sex show in table4 changeable risk factors smoking percentage show in table5 ;(smoking, type tobacco quantity show in table 6A,B. according to exposure to passive smoker show in tab7,8 i.e . but percentage of table cholesterol, Low HDL high blood pressure, overweight , WC high blood sugar and % of yes and no show in table 9 and comparison between male, female show in table10 but chi-square test show in table11, % of yes from total yes no for cholesterol, low HDL, high blood pressure, overweight WC, high blood sugar show in table12 comparison between male, female risk factors show in table13 but who told that high blood pressure used medicine show in table14, exercise made and time show in table 15,16 and used sugar medicine show in table 17. risk factors more than two risks show in table18 and lastly who has of coronary disease, heart attack and stroke show in table20.

HC

	Frequency	Percent
Al Naim	124	23.4
Belad Alqadeem	93	17.6
Al-shiekh Asobah	63	11.9
Ebin seena'	82	15.5
Al horah	167	31.6
Total	529	100.0

Table – 1A Show the Health Centers Patients Percentage

Sex

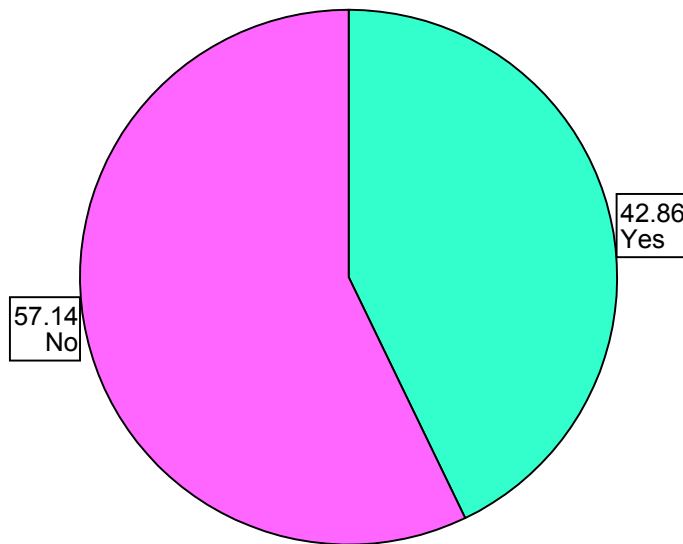|	Frequency	Percent
Male	211	39.9
Female	318	60.1
Total	529	100.0

Table- 1 B Show Sex Males 40%, Female 60%
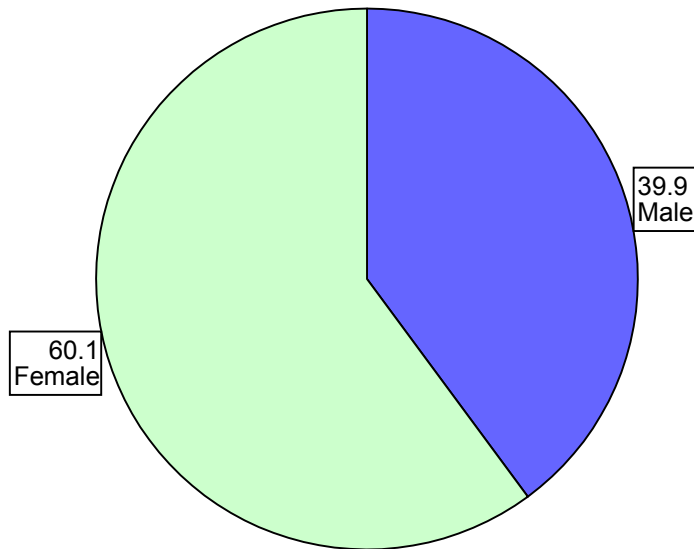
Graph1 Show Sex Males 40%, Female 60%

Work

	Frequency	Percent
Yes	219	42.9
No	292	57.1
Total	511	100.0

Table 2 Show % of Work Patients about 43% and Not work 57%

Graph 2 Show % of Work Patients about 43% and Not work 57%

		old_age			
		Yes		No	
		N	%	N	%
Sex	Male(> 45)	116	55.0	95	45.0
	Female(> 55)	93	29.3	224	70.7
	Total	209	39.6	319	60.4

Table 3 A Show Male > 45 years 55% and Female > 55 Years 29.3%

Menopause

	Frequency	Percent
Yes	137	43.1
No	181	56.9
Total	318	100.0

Table 3 B Show Menopauses Female 43.1% from Total Female

Ovaries

	Frequency	Percent
Yes	6	1.9
No	309	98.1
Total	315	100.0

Table 3 C Show Female remove Ovaries 2% from Total Female

|			Sex		
			Male	Female	Total
Father_brother	Yes	N	28	30	58
		%	13.3	9.6	11.1
	No	N	174	264	438
		%	82.9	84.3	83.7
	DN	N	8	19	27
		%	3.8	6.1	5.2
Mother_sister	Yes	N	16	27	43
		%	7.6	8.6	8.2
	No	N	189	269	458
		%	90.0	85.7	87.4
	DN	N	5	18	23
		%	2.4	5.7	4.4
Relative_stroke	Yes	N	25	36	61
		%	11.8	11.5	11.6
	No	N	180	261	441
		%	85.3	83.4	84.2
	DN	N	6	16	22
		%	2.8	5.1	4.2

Pearson Chi-Square Tests

		Father_brother	Mother_sister	Relative_stroke
Sex	Chi-square	2.870	3.638	1.613
	df	2	2	2
	Sig.	.238	.162	.446

Table 4 Show History of Cardio attack for Father- Brother 11% but DN about 5.2% & Mother- Sister 8.2% but DN About 4.4% & Relative Stroke about 11.6% but DN 4.2%

Smoke

	Frequency	Percent
Yes	90	17.1
No	437	82.9
Total	527	100.0

Table 5 Show Smoking about 17%

17.1
Yes

82.9
No
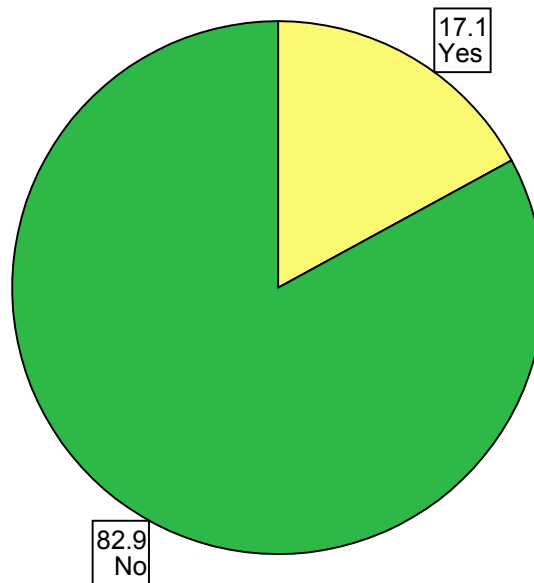
Graph 3 Shows Smoking about 17%

SM_Type

	Frequency	Valid Percent
Cigarette	46	65.7
Shisha	20	28.6
Both	4	5.7
Total	70	100.0

Table 6.A Show Type of Smoking Cigarette 67%, Shisha 29% but Both 6%

Tobaco_quant

	Frequency	Percent	Cumulative Percent
1	14	20.3	20.3
2	4	5.8	26.1
3	5	7.2	33.3
4	1	1.4	34.8
5	3	4.3	39.1
6	1	1.4	40.6
7	1	1.4	42.0
8	2	2.9	44.9
10	8	11.6	56.5
14	1	1.4	58.0
15	3	4.3	62.3
20	13	18.8	81.2
25	1	1.4	82.6
30	3	4.3	87.0
35	2	2.9	89.9
40	4	5.8	95.7
60	3	4.3	100.0
Total	69	100.0	

Table 6 .B Show Tobacco Quantity 1 Pkt. 19% 2 Pkts 6% , 3 Pkts 4.3%

Live or work with smokers

	Frequency	Percent
Yes	209	40.9
No	302	59.1
Total	511	100.0

Table 7 Show who live or work with smokers 41%
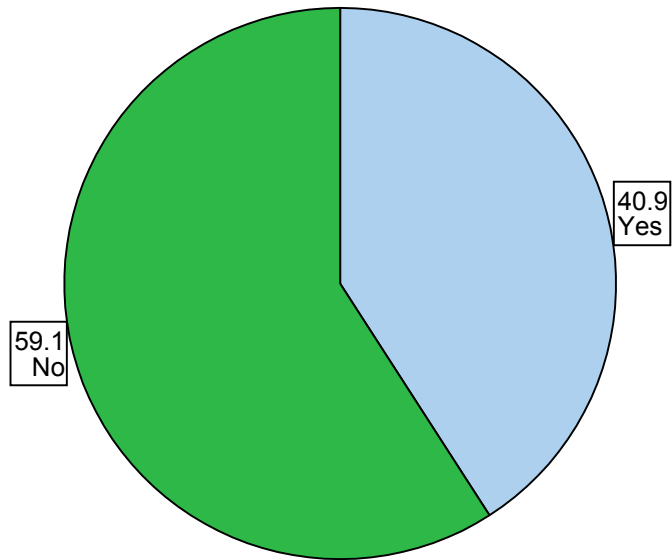
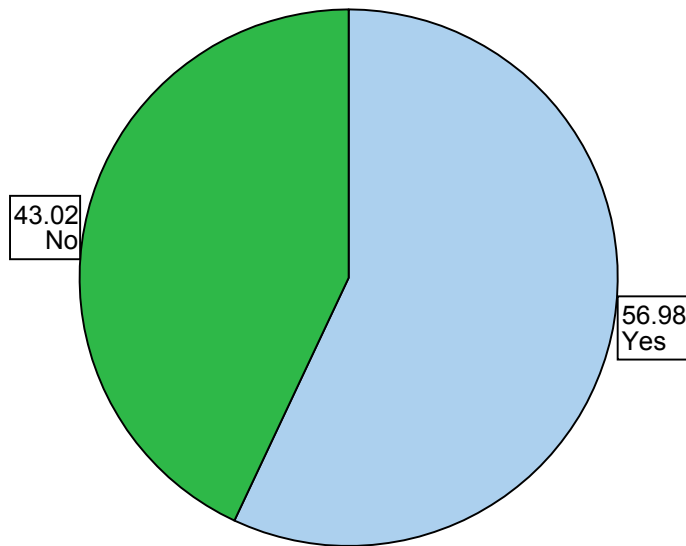**Graph 4 Show who live or work with smokers 41%**

Exposure to passive smoke

	Frequency	Percent
Yes	119	57.0
No	90	43.0
Total	209	100.0

**Table 8 Show Who Exposure to Passive Smoker 57%, from who work or live with smokers 41%**

Graph 5 Show Who Exposure to Passive Smoker

	Yes		No		DN		Total	
	N	%	N	%	N	%	N	%
Cholesterol	95	18.0%	259	49.1%	174	33.0%	528	100.0%
HDL	26	5.0%	218	41.7%	279	53.3%	523	100.0%
Blood_pressure	105	19.9%	367	69.6%	55	10.4%	527	100.0%
Overweight	202	39.5%	220	43.0%	90	17.6%	512	100.0%
WC	167	32.1%	182	34.9%	172	33.0%	521	100.0%
Blood_sugar	142	27.2%	321	61.5%	59	11.3%	522	100.0%

	Yes		No		Yes and NO		DN		Total	
	N	%	N	%	N	%	N	%	N	%
Cholesterol	95	18.00%	259	49.10%	354	67.10%	174	33.00%	528	100.00%
HDL	26	5.00%	218	41.70%	244	46.70%	279	53.30%	523	100.00%
Blood_pressure	105	19.90%	367	69.60%	472	89.50%	55	10.40%	527	100.00%
Overweight	202	39.50%	220	43.00%	422	82.50%	90	17.60%	512	100.00%
WC	167	32.10%	182	34.90%	349	67.00%	172	33.00%	521	100.00%
Blood_sugar	142	27.20%	321	61.50%	463	88.70%	59	11.30%	522	100.00%

Table 9 Show Know information about High Total Cholesterol 67% but DN 33%, Know
Low HDL47% but DN 53%, Know Information about High B.P. 90% but DN 10%, Know
information about over weight 82% but DN about 18% , Know Information about WC
67% but DN 33% and Know Information about High Blood Sugar 89% but DN 11%
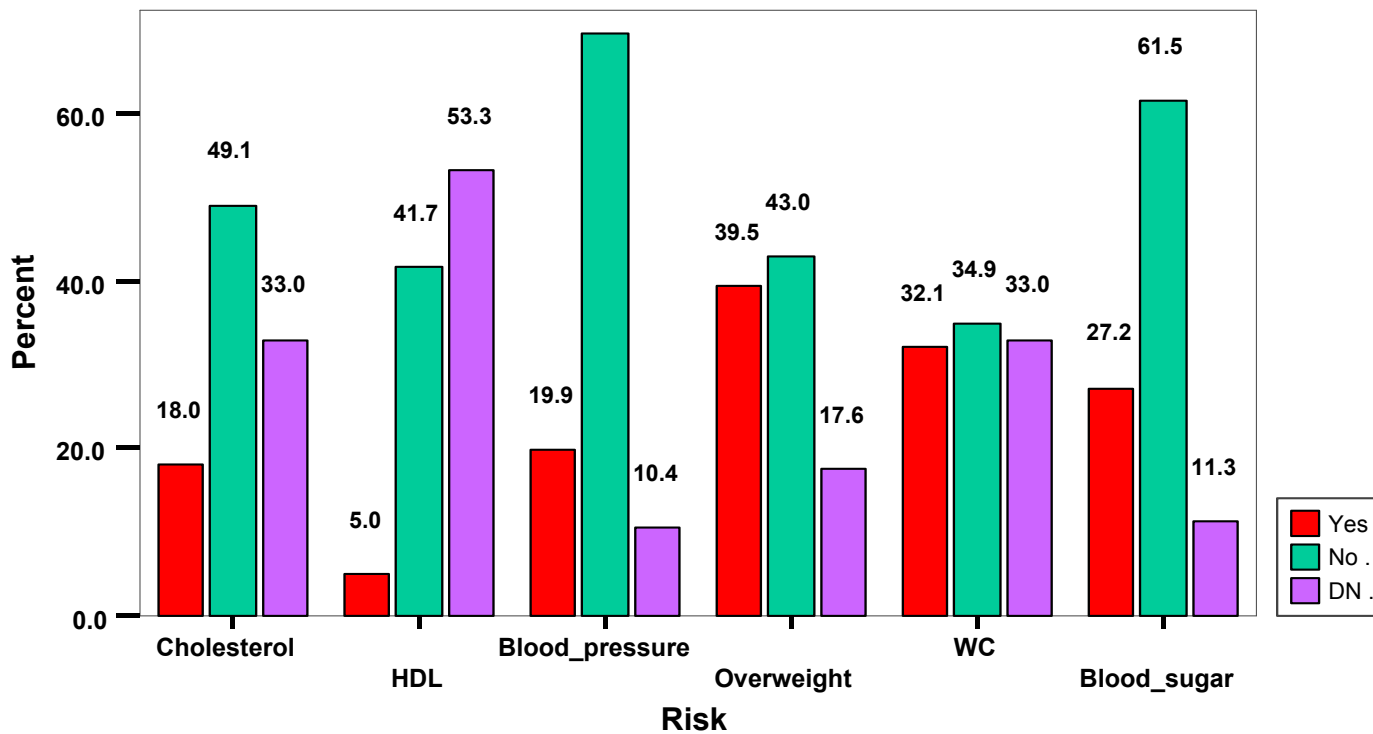
Graph 6 Show Know information about High Total Cholesterol 67% but DN 33%, Know Low
HDL47% but DN 53%, Know Information about High B.P. 90% but DN 10%, Know
information about over weight 82% but DN about 18% , Know Information about WC 67%
but DN 33% and Know Information about High Blood Sugar 89% but DN 11%

			Sex		
			Male	Female	Total
Cholesterol	Yes	N	29	66	95
		%	13.7	20.8	18.0
	No	N	97	162	259
		%	46.0	51.1	49.1
	DN	N	85	89	174
		%	40.3	28.1	33.0
HDL	Yes	N	7	19	26
		%	3.3	6.1	5.0
	No	N	70	148	218
		%	33.5	47.1	41.7
	DN	N	132	147	279
		%	63.2	46.8	53.3
Blood_pressure	Yes	N	44	61	105
		%	20.9	19.3	19.9
	No	N	144	223	367
		%	68.2	70.6	69.6
	DN	N	23	32	55
		%	10.9	10.1	10.4
Overweight	Yes	N	63	139	202
		%	30.7	45.3	39.5
	No	N	113	107	220
		%	55.1	34.9	43.0
	DN	N	29	61	90
		%	14.1	19.9	17.6
WC	Yes	N	45	122	167
		%	21.4	39.2	32.1
	No	N	110	72	182
		%	52.4	23.2	34.9
	DN	N	55	117	172
		%	26.2	37.6	33.0
Blood_sugar	Yes	N	52	90	142
		%	24.8	28.8	27.2
	No	N	135	186	321
		%	64.3	59.6	61.5
	DN	N	23	36	59
		%	11.0	11.5	11.3

Table 10 show comparison between male & female about information of patients to risk factors high total cholesterol male DN about 40% from total male cases but female 28% from total female cases but both about 33% from total case, Low HDL male case DN 63% from total male cases but female 47% from total female cases but both 53% from total cases, High Blood Pressure DN male , female, and both 10% , Over weight male DN 14% , female 20%, both 17.6% from total cases, WC DN male 26%, female 38%, both 33% , Blood Sugar DN male, Female , both 11%

Pearson Chi-Square Tests

		Sex
Cholesterol	Chi-square	9.935
	Sig.	.007(*)
HDL	Chi-square	13.726
	Sig.	.001(*)
Blood_pressure	Chi-square	.323
	Sig.	.851
Overweight	Chi-square	20.634
	Sig.	.000(*)
WC	Chi-square	48.011
	Sig.	.000(*)
Blood_sugar	Chi-square	1.253
	Sig.	.534

Table 11 show Chi-square the relation between male & female are significant in relation to cholesterol, HDL, Over weight and WC but not significant in Blood Pressure and Blood sugar

	%(yes/Yes and No)
Cholesterol	26.826%
HDL	10.707%
Blood_pressure	22.235%
Overweight	47.879%
WC	47.910%
Blood_sugar	30.665%

Table 12 show % of who has high total cholesterol about 27.%, low HDL 11%, High blood pleasure 22%, over weigh 48% , with increase WC 48% and high blood sugar about 31%
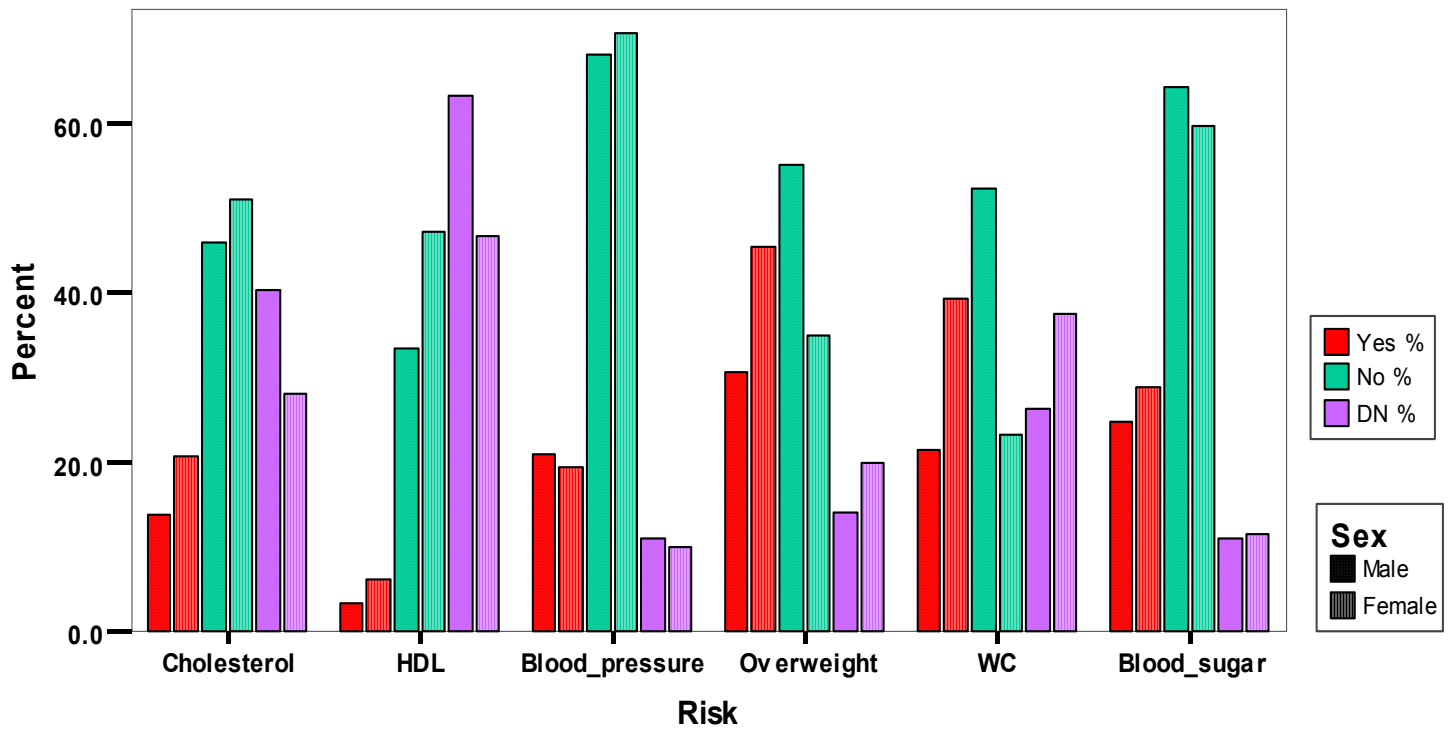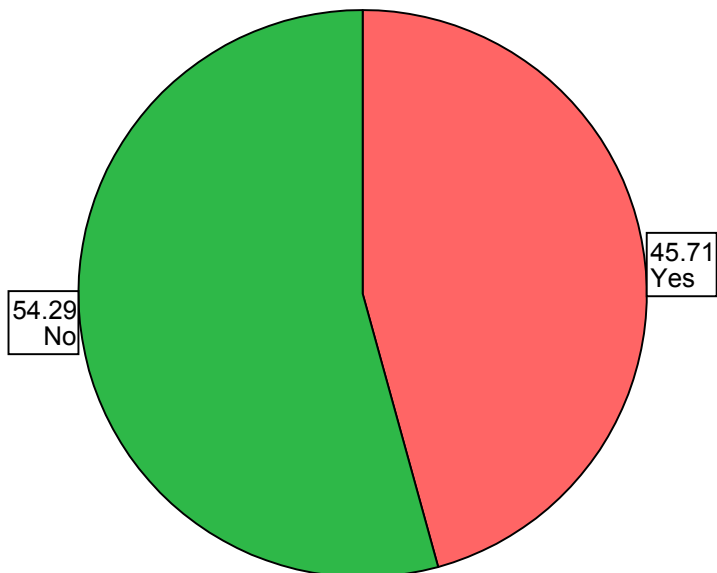
Graph 7

	Sex											
	Male						Female					
	Yes		No		DN		Yes		No		DN	
	N	%	N	%	N	%	N	%	N	%	N	%
Cholesterol	29	13.7	97	46.0	85	40.3	66	20.8	162	51.1	89	28.1
HDL	7	3.3	70	33.5	132	63.2	19	6.1	148	47.1	147	46.8
Blood_pressure	44	20.9	144	68.2	23	10.9	61	19.3	223	70.6	32	10.1
Overweight	63	30.7	113	55.1	29	14.1	139	45.3	107	34.9	61	19.9
WC	45	21.4	110	52.4	55	26.2	122	39.2	72	23.2	117	37.6
Blood_sugar	52	24.8	135	64.3	23	11.0	90	28.8	186	59.6	36	11.5

Table 13 Show comparison between male and female risk factors

Ever_told_BP

	Frequency	Percent
Yes	48	45.7
No	56	54.3
Total	104	100.0

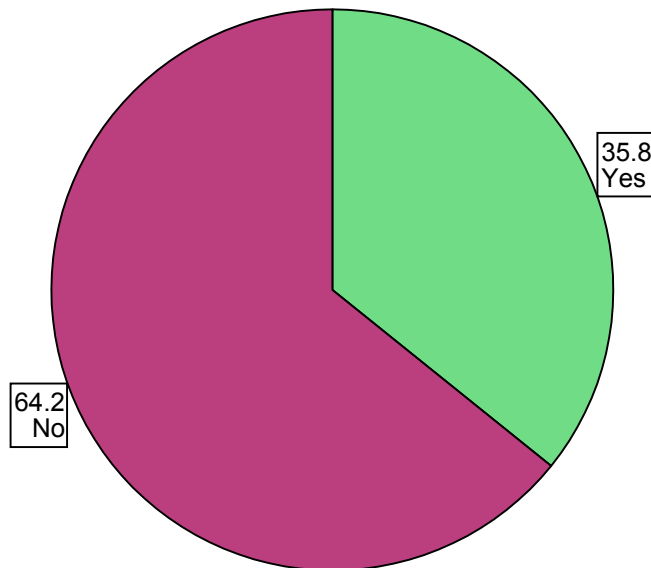**Table 14 show who told that has high blood pressure used medicine 45.7%**

54.29 No

45.71 Yes

Graph 8 show who told that has high blood pressure used medicine 45.7%

Excercise

	Frequency	Percent
Yes	189	35.8
No	339	64.2
Total	528	100.0

Table 15 show that not make exercise 64.2%


35.8 Yes

64.2 No

Graph 9 shows who not make exercise

Excer_time

	Frequency	Percent
Daily	94	50.5
Every other day	31	16.7
2 times weekly	32	17.2
1 time weekly	29	15.6
Total	186	100.0

Table 16 show exercise time daily 50.5%

Sugar medicine

	Frequency	Percent
Yes	80	55.8
No	62	44.2
Total	142	100.0

Table 17 show that used sugar medicine from total number of cases told yes has high blood sugar

44.16
No

55.84
Yes
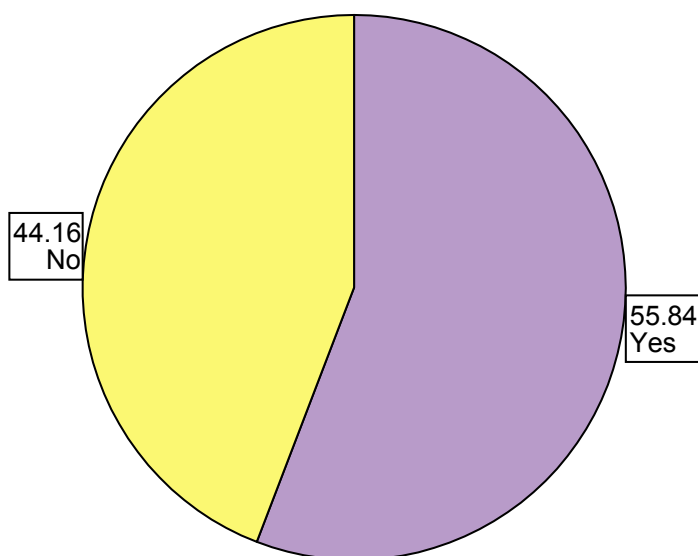
Graph 10 show that used sugar medicine from total number of cases told yes has high blood

risks

	Frequency	Percent	Cumulative Percent
0	28	5.3	5.3
1	81	15.3	20.6
2	125	23.6	44.2
3	123	23.3	67.5
4	89	16.8	84.3
5	53	10.0	94.3
6	26	4.9	99.2
7	4	.8	100.0
Total	529	100.0	

Table 18 show risk factors more than two risks about 80% must be go to family doctors
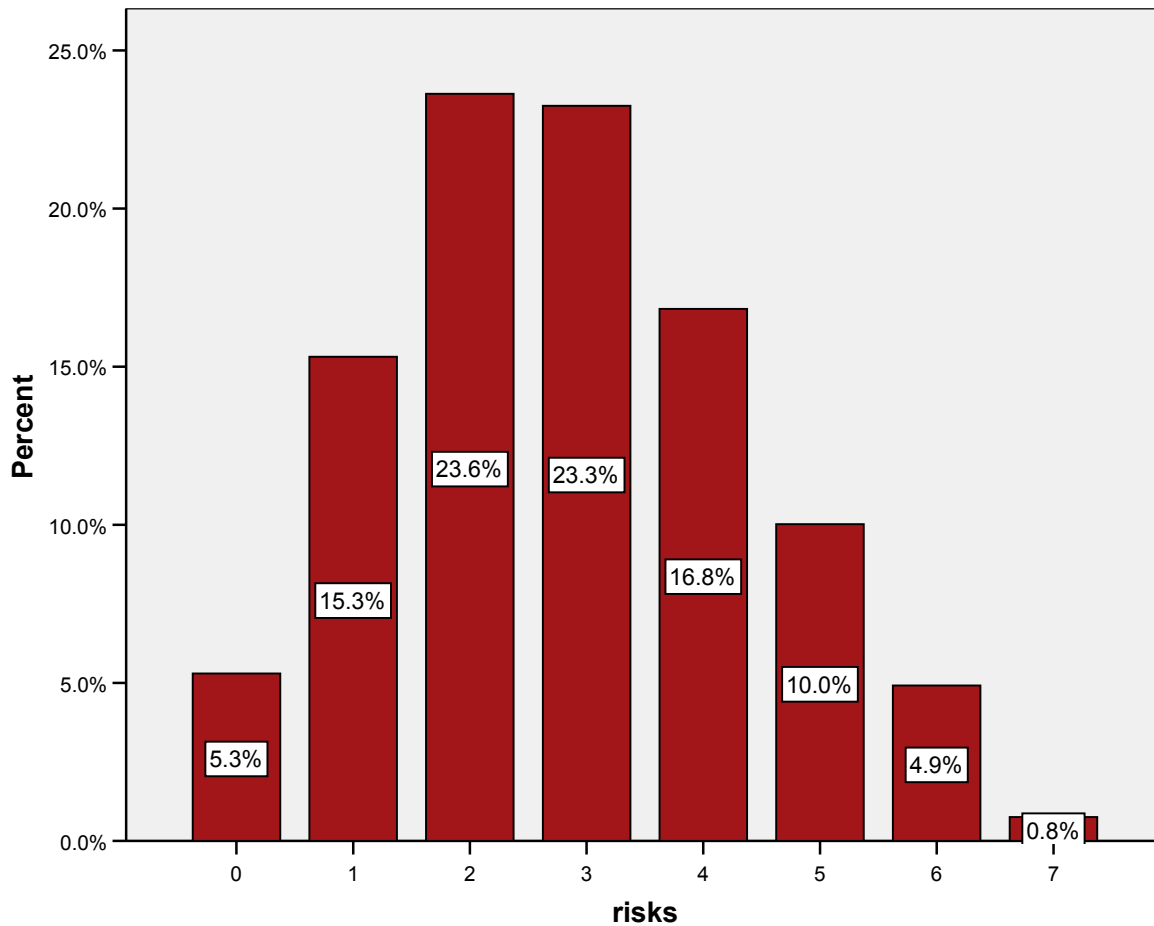
Graph 11 show risk factors more than two risks about 80% must be go to family doctors

	Yes		No	
	Count	%	Count	%
Coronary	21	4.0%	508	96.0%
heart_attack	14	2.6%	515	97.4%
Stroke	4	.8%	525	99.2%

Table 20 show % of has Coronary disease 4.0%, heart attack 2.6% and stroke 8%

Discussion

Across section study was alone on 529 cases from the capital of Bahrain (Manama) health centers. Including 167 (31.6%) of the cases from AL Hoora, 124 (23.4%) from Naim HC, 93 (17.6%) from Belad Al Qadeem HC, 82 (15.5%) from Ibin Seena HC and 63 (11.9%) of the cases from Sh. Sabah HC, as Al Razi HC was excluded due to its mission in dealing with labour cases. So, 529 Bahraini cases, their age between 35-65 years old were chosen to included in the research 60.1%(318) cases were females and 211 cases (39.9%) of them were males, 219 (42.86%) of cases works and 298 (57.14%) don't work 116 (55%) of males cases their age is 45 years where as 93 (29.3%) of the females their age is >55 years old from the total number of female cases (318), 137 (43.1%) were menopause and 6 case (1.9%) had their ovaries removed we can see that **history of father – brother** had heart attack 28 (13.3%) from the males cleared whereas, 30 cases of the female (9.6%) said that their father or brother had heart attack, total male and female for history of father-brother of attack 58 cases (11.1%), no history of attack for male 174 cases (82.9%) but female 264 case (84.3%) total no history of attack 438cases (83.7), patient don't know (DN) history of attack for father-brother male 8 cases (3.8%), female cases 19 (3.6%) total cases of male and female has and not has history for father – brother of heart attack 496 cases (94.8%) but who don't know (DN) for both male and female 27 cases (5.2%).

In regard history **of heart attack in mother - sisters**, 16 (7.6%) male cases and 27 (8.6%) female cases cleared that their mother or sister had heart attack, total male and female had history of heart attack 43 (8.2%) cases, no history of attack male 189(90%), female 269(85.7%) both male and female no history of attack for mother- sister 458 (87.4) but don't know of history of hart attack mother- sister for male 5 (2.4%), female 18 (5.7%), total number of know information about history of attack for mother- sister i.e. Yes/No 5.1 cases (95.6%) both 23 (4.4%) but **history of relative stroke** 25 (11.8%) male cases and 36 female cases (11.5%) said that stroke happened in their relatives (mother, father, sister, brother or grandparent), Total male and female know history of relative stroke 61 (11.6%) cases no history of relative stroke male 180 (85.3%), female 261 (83.4%) total no history male and female 441 (84.2%) also total who know information about relative stroke total yes and know 502 (95.8), don't know (DN) male history of relative stroke 6 (2.8%), female 16 (5.1%) total male and female DN information about relative stroke 22 (4.2 %) cases. The relation between male and female about history of stroke and attack not significant but the relation between who know the information and DN are significant

Smoker patient are, 90 (17.1%) cases where as 437 (82.9%) cases were non smoker and from those smoker cases 90(17.1%), 46 (65.7%) cases are cigarette smoker, 20 (28.6%) cases smokes shisha and only 4 (5.7%) cases smokes both. Tobacco quantity 1 cigarette/ day 14(20.3%) cases, 10 cigarette/ day 8 (11.6%) cases from 1 cigar to 10 cigar/ day 56.5% cumulative percent, 20 cigarette/ day 13 (18.8%) cases from 1 cigar to 20 cigar/ day (81.2%)

cumulative percent, 30 cigarette/ day 3 (4.3%) cases, from 1cigar to 30 cigar/ day (87.0%) cumulative, lastly 60 cigarette/day 3 (4.3%) totally 69 cases (100.0%), who live or work with smoker 209 (40.9%) cases and not live or work with smoker 302 (59.1%) but who exposure to passive smoker from 209 (40.9%) are 119 (57.0%) and who don't exposure passive smoker 90 (43.0%).

Total cholesterol. who know has high cholesterol level 95 (18%) cases who now has normal cholesterol level 259 (49.1%) cases Total who know information about high total cholesterol level (yes +No) 354(67.1%) cases and how don't know (DN) any information about total cholesterol level 174(33%)cases comparison between male, female about high total cholesterol level male know has high total cholesterol level 29 (13.7%) cases, know normal cholesterol level 97(46%) and Don't know (DN) about level of total cholesterol 85 (40.3%) but female know has high total cholesterol level 66(20.8%) cases , female know normal cholesterol level 162(51.1%) and Don't know (DN) about level of cholesterol 89(28.1%) . The Relation between male and female about and information of total cholesterol level female has more information and less don't know (DN) than male and relation +ve relationship P-value <007.

LOW HDL: who now has low HDL 26(5%) cases but how know normal HDL 218(41.7%)cases and how don't know (DN) any information about level of HDL 279(53.3%) cases, The total No. who know information about low HDL (yes + No) 244(46.7%) cases, comparison between male and female about low HDL, male who know has low HDL 7(3.3%) cases, normal HDL 70(33.5%) cases and DN 132(63.2%) cases also female know about HDL 19(6.1%) cases,

normal HDL 148(47.1%) cases and DN 147(46.8%) cases. The relationship between male and female about information level of HDL female more information than male and less who DN and relation are significant P-Value <001.

High Blood pressure: Who know has high Blood Pressure 105(19.9%) cases, but know normal Blood Pressure 367(69.6%)cases, but DN 55(10.4%) cases, total who know information about Blood Pressure (Yes + No) 472 (89.6%) cases, comparison between male and female are male who know high Blood pressure 44(20.9%) cases, normal Blood pressure 144(68.2%) cases, and DN 23(10.9%) cases, but female has know high Blood pressure 61(19.3%) cases, normal Blood pressure 223(70.6%) cases, and DN 32 (10.1%) cases, The Relationship between male and female about information of Blood Pressure are equal and the relation not significant. The No. of patient told that Blood Pressure to – high and need medicine 104 cases from them 48(45.7%) cases need medicine but not take medicine 56(54.3%) cases.

Overweight: Who know information about has overweight 202(39.5%)cases, and who know has normal with 220(43%) cases, DN 90(17.6%) cases Total No. for who know information about Overweight (Yes + No) 422(82.4%) cases, comparison between male and female about information of overweight male who know has overweight 63(30.7%) cases, Who know has no overweight 133(55.1%) cases, and DN 29(14.1%) cases, but female she has know overweight 139(45.3%) cases, who she know has no overweight 107(34.9%) cases, and DN 61(19.9%)cases, The relationship between male and female about information for

From information the female more than male in overweight.

Waist circumference(WC): Who know information about has increase in WC 167(32.1%) cases, who know normal WC182(34.9%) cases, and DN 172(33%) cases, Total who know information about WC(Yes + No) 349(67%) cases, and comparison between male and female about WC, male who know information about has increase in WC 45(21.4%) cases, who know normal WC 110(52.4%) cases, and DN 55(26.2%) cases, but female she know information about increase WC 122(39.2%) cases, normal WC 72(23.2%) cases, and DN 117(37.6%) cases.

FASTING BLOOD SUGAR (FBs): Who know information about high FBs 142(27.2%) cases, normal FBs 321(61.5%) cases, and DN 59(11.3%) cases, Total No. know information about level of FBs (Yes + No) 463(88.7%) cases, comparison between male and female about information for level of FBs, male who know information that high FBs 52(24.8%) cases, normal FBs 135(64.3%) cases, and DN 23(11%) cases but female she know has high FBs 90(28.8%) cases, normal FBs 186(59.6%) cases and DN 36(11.5%) cases, The relationship between male and female about information of level FBs equal and not significant. The No. of cases who told that has high FBs 142 cases from them 80(55.8%) cases used medicine but 62(44.2%) cases not used medicine.

In asking about **exercise** 339 (64.2%) of the cases admit that they don't do exercise, and 189(35.8%) cases made exercise, where 94 (50.5%) of the cases do daily exercise for less than 30min, and 31 (16.7%) of cases do exercise every other day and 32 (17.2%) do exercise 2 times/ week where 29 (15.6%) do exercise 1 time/ week.

In relation to cases with changeable risk factors (smoking, cholesterol, HDL, Bp, over weight, WC and blood sugar), No risk factors 28(5.3%) cases, 81 of the cases admit that they have one risk factor and 420(89.4%) cases, knows that they have (2-7) Means that two risk factors are more this means that about 80% of Research has two risk factors or more. From the 529 cases 21 (4%) had CAD, 14(2.6%) had heart attack and 4 (0.8%) had stroke. The % of (Yes / Yes and No) for changeable risk factors are WC 47.9%, overweight 47.8%, Exercise 35.8%, cholesterol 26.8%, Blood sugar 30.6%, Blood Pressure 22.2%, smoking17% and HDL 10.7%. At the end summarized risk factors that population DN information about it HDL 53.3%, Cholesterol 33%, WC 33%, Overweight 17.6%, Blood sugar 11.3%, and Blood Pressure 10.4%.

Conclusion

Risk factors of heart attack and stroke very important to knowing by every person to avoid CVD by evaluation of information about each risk factors of modifiable and non modifiable and give him information need to increase his knowledge by health team, risk factors expect some of them like high total cholesterol, low HDL and WC need more strength and increase information and knowledge to population to decrees gap of don't know of information about each risk factors, smoking 17% in this study must be effort make by health team to decrease the percentage of it, exercise about 64% not make exercise also about 80% of study group has 2 risk factors and more this good for population knowledge to know it but not good about this percentage of population has risk factors health team must be knowing this is big problems and must be solve it also comparison between male and female about risk factors in relation to information about don't know (DN) in cholesterol and law HDL male more than female and relation is significant but in weight and WC female more than male and relation is significant but equal in both blood pressure and high blood sugar.

Recommendation

1. Every person must know information about all risk factors of CVD and how can change modifiable risk factors.
2. Every person must be known that if has 2 risk factors or more consult his family doctor.
3. Risk factors of CVD must be become governorate responsibility and planning to make health education in mass media. And must be study in schools.
4. Health education teams increase his knowledge and information by more up dated continuous medical education.
5. Health education of population by Video, lecture, posture and leaflet.
6. Health education by health team for example must be told patient about his blood pressure by number instead of good or not good or high or low.
7. If work about modifiable risk factor can be decrease percentage of death from CVD to half.
8. in this research commonest risk factors high percentage of not knowing by population are low HDL, total cholesterol level and WC must be increase information about this factors.
9. Smoking 17% health team must be work to decrease this percentage.
10. Exercise about 69% not make must be encouraged population to make exercise and give him information about important of exercise instead of sedentary life through health teams.

11. Population percentage in this research knowing has 2 risk factors or more about 80% this is good to know. But it is dangers and health team must be put this in consideration.

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