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Risk factors, diseases and Socio-demographic background distribution among attendants of Health Promotion Clinic at Capital Health Region, Kuwait

Authors:
Ibrahim S Al-Eisa
Head of Primary Health Care at Capital Health Region

Adel M Al-Terkit
Head of Preventive Health Department, Primary Care, Capital Health region,

Manal S Al-Mutar
Sawaber Health Center,

Mohamed S Azab
Preventive Health Department Capital Health Region, Ministry of Health, Kuwait

Maged M Radwan
Preventive Health Department Capital Health Region, Ministry of Health, Kuwait

Correspondence:
Ibrahim Al-Eisa, (R.C.G.P.)
P.O. Box : 13061 Kaifan Postal Code:71951
Tel: (965)2541428
Fax: (965)2552358
E-mail: mmutar@doctor.com

ABSTRACT

Objective: To evaluate the health condition of people attending Health Promotion Clinic (HPC) at Capital Health Region.
Subjects and methods: This is a medical records based study of 700 subjects attending Health promotion clinic between May 2002 and June 2003.
Results: The study group consisted of 608(86.9%) Kuwaitis, 447(63.9%) females, 329(47.0%) aged between 20 and 39 years old, 549(79.0%) married and 257(36.7%) clerks. 64(9.1%) of subjects were smokers, 345(49.3%) were practicing exercise and 243(34.7%) were obese. Out of the subjects 79(11.3%) had hypertension, 70(10.0%)had diabetes, 149 (21.3%) had hyper-cholestrolaemia and 21(3.0%) had CVD.
Conclusion: Health Promotion Clinic is important for early detection of diseases and risk factors in order to prevent diseases and complication and decrease rate of death.

Keywords: health promotion, hyper-cholestrolaemia, hypertension, diabetes, obesity

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INTRODUCTION

The World Health Organization declaration of Alma Ata [1] stated that primary health care (PHC) was the key to achieving 'Health for all by the year 2000' and that it should be an integral part of a country's health care scheme. Primary health care is essential health care based on delivering integrated health services (curative and preventive)[2]. Prevention can be primary (i.e. to postpone the disease, event or symptom), secondary (i.e. to prevent recurrence or progression to disease) and tertiary (i.e. prevent the complication of the clinical disease). Primary care can be individually oriented involving screening for risk factors and treatment of these risk factors by pharmacological means -the so-called high-risk approach. On the other hand, primary prevention can be directed towards a whole population group. Secondary prevention is always directed towards individuals [3]. Although, health promotion is an area that has been relatively neglected by health economist [4]. An abundance of evidence has accumulated pointing to the possibility of preventing new events in subjects who have already experienced an event, using specific pharmacological tools such as anti-hypertensive and lipid-lowering drugs [5], and or by multifactorial prevention including such drugs and advice to stop smoking. This high- risk approach has also been shown to prevent/postpone events in subjects previously free of disease, i.e. primary prevention [6].

Obesity is a risk factor for several chronic diseases including coronary vascular disease (CVD), hypertension, diabetes, arteriosclerosis, hyperlipidemias and some types of cancer [7]. Smoking is the risk factor for CVD which theoretically should be the most effective to treat, and is very well proven risk factor for many disorders in long-term observational studies [3]. A lot of researchers confirm that exercise has some benefit in preventing CVD [8].

The prevalence of diabetes is increasing globally. By the end of the 20th century, the worldwide diabetes pandemic had affected an estimated 151 million persons [9]. This figure is expected to double over the next 25 years [10]. A WHO study group on the prevention of diabetes predicts that the majority of the increase will occur in developing countries. This could be due to the most dramatic changes in living conditions as a result of urbanization and demographic changes [11,12]. In Kuwait 1997, the prevalence of diabetes was 15% [13,14]. Early identification of people who have diabetes will reduce the cost, giving a better chance of proper management and reduce the number of lost workdays, hospitalization and emergency visit [15].

A large proportion of the adult population in many parts of the world have blood pressure ranges associated with an excess morbidity and mortality [16,17,18], which can be reduced by appropriate treatment [19,20]. In Kuwait 1999, the prevalence of hypertension was 26.3% [21].

CVD and cancer are the leading causes of death and disability in industrialized nations today, and are becoming an increasing problem in developing countries as well [22,23]. Reducing CVD risk factors may decrease the mortality and morbidity rates of these serious diseases [24]. Risk factors for CVD are related to lifestyle behaviors such as diets rich in cholesterol, saturated fats, sugar, and salt; smoking and lack of physical exercise [25]. Therefore, Department of Public Health at Capital Health Region initiated Health Promotion Clinic (HPC) on May 2002. Subjects were self-referred to the clinic by registering their name to the administrative workers. HPC is staffed by general practitioners, nurses, health educators and administrative workers who are well trained about the subjects. HPC offered health promotion and disease prevention by early detection of risk factors and diseases and modifying personal behavior through full history including lifestyle behaviors, full examination and investigations, then health education, medication and referral were done as necessary.

Given the increasing incidence of chronic diseases across the world, the search for more effective strategies to prevent and manage them is essential [26].

The rational for this study is to provide baseline information for health providers at establishment of HPC at Capital Health Region about sociodemographic background, risk factors and diseases among attendants of HPC, including hypertension, diabetes, CVD, hypercholesterolaemia and cancers, among subjects attending HPC, and to determine the prevalence of diseases among obese subjects.

SUBJECTS AND METHODS

A descriptive study involved reviewing all records of people attending Health Promotion Clinic at Capital Health Region between May 2002 and June 2003. History, physical examination of weight, height and blood pressure, and laboratory results of fasting blood sugar, and total blood cholesterol was extracted from the records.

The subjects were considered as having diabetes, hypertension and hypercholestrolaemia if they had been previously diagnosed as having the disease, or if fasting plasma glucose = 6.1 m mol/L[27], systolic blood pressure =140 mmHg, or diastolic blood pressure =90 mmHg[28,29], and attaining level of total cholesterol >5.2 [30] respectively.

Body mass index (BMI) were calculated from weight and height of subjects. BMI of less than 25 is considered normal, 25-<30 as over weight and equal to 30 and above as obese [31].

Data obtained from records were coded and fed in to an IBM personal computer. The Statistical Package for Social Sciences (SPSS) software Windows version 10.0 was used for data analysis. The chi-square test was used to assess the association between two variables.

RESULTS

A total of 710 records were studied, 700 were completed. Out of all subjects 253(36.1%) were males and 447 (63.9 %) were females. 608 (86.9%) of subjects were Kuwaitis. 549 (79%) were married. The majority of subjects 329(47.0%) were aged between 20 and 39 years old, followed by the age group between 40 and 60 years old. The mean age (± SD) of all subjects was 41(± 12.0) years. 257 (36.7%) of subjects were clerks followed by housewives 124 (17.7%) and retired 108 (15.5%) (Table1).

Table 2 shows the distribution of diseases among subjects attending HPC. More than half of subjects were healthy 381(54.4%) followed by having hypercholestrolaemia 149 (21.3%), high blood pressure 79(11.3%), diabetes 70(10.0%), Bronchial asthma 56(8.0%) and a combination of high blood pressure and hypercholestrolaemia 28(4.0%).

Most of our subjects 636 (90.9%) were non-smokers. Significantly majority of smokers were males ($X2 = 75.3$, $df=1$, $P < 0.0001$). Out of all subjects 345 (49.3%) were practicing exercise with no significant difference for both sexes and majority of them practicing exercise from three to six times per week. About one-third of our subjects were obese. 75.3% of obese subjects were females ($X2 = 26.8$, $df = 4$, $p<0.0001$) (Table3).

Majority of subjects who have hypercholestrolaemia, high blood pressure or diabetes were above than ideal body weight 129 (86.6%), 70 (88.6%) and 55(78.6%) respectively (Table4). In addition, more than two third of asthmatic as well as CVD subjects were above than ideal body weight 40(71.5%) and 17(81%) respectively.

DISSCUSION

A survey of 700 subjects showed that the majority of subjects were Kuwaitis and females. Since most of the residents of the area around the clinic were Kuwaiti nationals, and females were more anxious about their health than males. The results of our study showed that most of our subjects were aged between 20 and 39. This age group corresponds with the age where building up their future is important. The majority of the subjects were clerks and housewives since they have more time.

Regarding exercise, approximately half of subjects do exercise and that is encouraging regarding health education.

More than two-thirds of subjects had greater than ideal body weight. This was consistent with the prevalence of obesity in other countries. Latief [32] showed that 60% of males and 75% of females in Saudi Arabia were above their ideal body weights. The reasons for this are multi factorial. Use of cars for even short distances, routine consumption of high calorie foods including fast food, most of the physical work inside the house and outdoors is being done by foreign manpower, and the rarity of exercise.

Our data showed that the prevalence of obesity, hypercholestrolaemia, high blood pressure and diabetes were 34.7%, 21.3%, 11.3% and 10.0% respectively. Study done in the Mishref area over period of three days screening, showed that the prevalence of obesity, hypercholestrolaemia, high blood pressure and diabetes were 29%, 14.3%, 22.1% and 34.1% respectively [33].

Our data confirm that hypercholestrolaemia, high blood pressure and diabetes, asthma and CVD were more common in overweight individuals.

Therefore, enhanced efforts to prevent and control excessive weight gain from childhood are a critical national priority. To be successful social, cultural and economic influence should be considered [34], and this task must largely be carried by primary care.

CONCLUSION

Information provided by HPC can be an important tool in promoting a prevention strategy to address the emerging epidemic of chronic diseases.

Smoking, hypercholestrolaemia, high blood pressure, diabetes and low physical activity play a role in development of CVD. So, health promotion research is essential to translate research findings to practice in order to reduce mortality and morbidity. Preventive strategies include educating and mobilizing communities with effective outreach programs are important, especially programs involving community institutions such as schools, churches and worksites. Strong media campaigns can help increase awareness among the population. Health care practitioners should be encouraged to counsel their patients about lifestyle and risk factors. Local public health practitioners should emphasize the prevention and reduction of behavioral risk factors in the community.

Table1. Socio-demographic characteristics of 579 subjects included in the study

Characteristic	Male	Female	Total	%
Age				
18-39	106	223	329	47.0
40-60	117	194	311	44.4
≥61	30	30	60	8.60
Mean age=41, SD±12.2				
Nationality				
Kuwaiti	243	365	608	86.9
Non- Kuwaiti	10	82	92	13.1
Marital status				
Married	211	338	549	79
Single	37	77	114	16
Divorced	4	12	16	2.4
Widow	1	20	21	2.6
Education				
Illiterate	1	8	9	1.3
Primary	6	25	31	4.4
Intermediate	17	51	68	9.7
Secondary	54	76	130	18.6
Diploma	40	92	132	18.9
University	135	195	330	47.1
Job				
Doctor	0	3	3	0.4
Nurse	0	1	1	0.1
Clerk	111	146	257	36.7
House wife	0	124	124	17.7
Diplomatic worker	8	0	8	1.1
Soldier	26	0	26	3.7
Engineer	22	14	36	5.2
Teacher	16	49	65	9.3
University teacher	5	10	15	2.1

Businessman	15	2	17	2.4
Student	11	25	36	5.2
Retired	38	70	108	15.5
Lawyer	1	3	4	0.6

Table2. Distribution of diseases among subjects included in the study by sex

Characteristic	**Male**	**Female**	**Total**	**%**
Non	139	242	381	54.4
High blood pressure	27	52	79	11.3
Diabetes	26	44	70	10.0
Hypercholestrolaemia	54	95	149	21.3
CVD	7	14	21	3.0
High blood pressure+Diabetes	5	4	9	1.3
High blood pressure+Hypercholestrolaemia	9	19	28	4.0
High blood pressure+ Diabetes+ Hypercholestrolaemia	4	11	15	2.1
Diabetes+Hypercholestrolaemia	5	9	14	2.0
Asthma	21	35	56	8.0
Cancer	4	1	5	0.7

Table3 Distribution of BMI, smoking and exercise among subjects included in the study: tested by x^2

Characteristic	**Male**	**Female**	**Total**	**%**	**Significant**
BMI					
Ideal weight	68	113	181	25.9	P <0.0001
Over weight	125	151	276	39.4	
Obese	60	183	243	34.7	
Smoking					
Yes	55	9	64	9.1	P <0.001
No	198	438	636	90.9	
Exercise					
Yes	33	70	103	29.9	NS
<3 days /week	50	98	148	42.9	
3-6 days /week	47	47	94	27.2	
daily					
No	123	232	355	50.7	

NS= Not Significant

Table 4. Distribution of diseases among subjects included in the study according to BMI

Disease	Ideal weight	%	Over weight	%	Obese	%
Non	115	30.1	152	40	114	29.9
High blood pressure	9	11.4	30	38	40	50.6
Diabetes	15	21.4	26	37.2	29	41.4
Hypercholestrolaemia	20	13.4	57	38.3	72	48.3
High blood pressure+ Diabetes	2	22.2	3	33.3	4	44.5
High blood pressure+ Hypercholestrolaemia	2	7.2	13	46.4	13	46.4
High blood pressure+ Diabetes + Hypercholestrolaemia	0	0	5	33.3	10	66.7
Diabetes+Hypercholestrolaemia	3	21.4	6	42.9	5	35.7
CVD	4	19	8	38.1	9	42.9
Asthma	16	28.5	21	37.5	19	34
Cancer	1	20	2	40	2	40

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