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Prevalence of Cardiovascular Disease Risk Factors in the City of Bremen – The 1984 Bremen Baseline Health Survey of the German Cardiovascular Prevention Study[1]

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Introduction

The German Cardiovascular Prevention Study (GCP) is a multicenter[2] community-oriented study for the primary prevention of ischemic heart disease (IHD) and stroke. Its main aim is to reduce the age-specific mortality of these diseases (ICD-9: 410-414, 430-438) among persons 25–69 years of age in communities exposed to seven years of intervention by at least 8% beyond that which one might expect based upon the mortality experience of the remaining non-intervention population (of comparable ages) of the Federal Republic of Germany. The population of all GCP communities combined comprises approximately 1,160,000 males and females of all ages (about 665,000 of 25–69 years of age). The specific study areas consist of Bremen North/West; Berlin-Spandau; Karlsruhe, Bruchsal and Mosbach; Stuttgart West/Vaihingen; and County Traunstein.

Risk factor modification will be directed towards reduction of cigarette smoking, elevated blood pressure, a too high total serum cholesterol, overweight, lack of physical activity, and psycho-social stress, using the methods of community organization and health education as applied in previous community intervention studies: Stanford Heart Disease Prevention Program [1], Minnesota Heart Health Program [2], Pawtucket Heart Health Program [3], Swiss National Research Program I [4], and North Karelia Project [5], among others.

Methods

The specific Bremen part of the GCP comprises two of the five districts of the city of Bremen, i. e., Bremen-North and Bremen-West. These represent 40 percent of the city's surface area and 35 percent of its total population (530,520 in 1984). The age distribution of all residents of the study region is nearly identical to that of the city as a whole, whereas the proportion of foreigners is slightly above average (7.9% vs. 6.6%). Although no recent figures are available, it can be assumed that the percentage of blue collar workers is considerably higher within the study region than in the rest of Bremen. The unemployment rate is relatively high (since 1984, greater than 15%).

In order to evaluate the effects of the intervention activities within Bremen, as in other centers, a baseline health survey was conducted, to be followed by similar surveys at both the middle and end of the study period. For methodological reasons, only German residents were eligible to undergo the survey procedures. Simple random sampling was applied, using the compulsory residence registry of the above-mentioned study region as population data base. An original sample of 2,700 (about 3%) males and females aged 25 to 69 was drawn. From this, a net sample of 2,542 available candidates (arrived at after deducting the addresses of 158 persons who had moved prior to the start of the survey, could not be located due to an incorrect address, or were deceased) resulted.

The survey[3] took place at four study locations from May 7 to November 28, 1984, utilizing hospitals within the eight boroughs comprising the target area as field examination sites. Eligible candidates for study were invited to participate by means of personal letters delivered ten days prior to the examination date. Reminders, in the form of a second letter, were sent out to non-responders and further telephone contact was sought with those persons not reacting to both letters, so as to achieve the required minimal response rate of 70%.

An extensive, for the most part, self-administered questionnaire was completed by all participants covering among other things:

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[2] The following centers are cooperating in the conduct of the GCP: The Bremen Institute for Prevention Research and Social Medicine (BIPS), Bremen; The German Institute for Combatting High Blood Pressure (DIBHB), Heidelberg; The Clinical Institute for Physiology and Sport Medicine of The Medical Clinic St. Irmingard (KIPSI), Prien; The Institute for Applied Health Research (SINAG), Berlin; The Department of Clinical Social Medicine of the University of Heidelberg, Medical Clinic (AKS), Heidelberg; The Scientific Institute for German Physicians (WIAD), Bonn; The Department of Medical Sociology of the University of Freiburg, Freiburg; The Institute for Social Medicine and Epidemiology of the Federal Health Office (BGA), Berlin; Infratest Health Research, Inc., Munich

[3] In cooperation with Infratest Health Research, Inc., Munich (organization and questionnaire) and the Institute for Social Medicine and Epidemiology of the Federal Health Office (BGA), Berlin (laboratory analyses)

- socio-demographic variables,
- a food-frequency list,
- smoking history,
- work situation and leisure-time activity,
- the Bortner scale (Type A personality) [6],
- the Rose angina questionnaire [7],
- the OECD physical disability questionnaire [8],
- the Zerssen symptom questionnaire [9], and
- a medical history including also both past usage of medical services and therapeutic drugs taken within 7 days prior to the examination. This information was obtained via interview carried out by a physician who also collected the blood specimens.

The following medical examinations were carried out:

- height (without shoes),
- body weight (with jacket or similar outer garments removed),
- blood pressure, taken twice (3 minutes apart) in sitting position on the right arm using a random-zero-sphygmomanometer. For determination of the diastolic pressure, Korotkov-phase V was used,
- pulse rate (taken between first and second blood pressure reading), and
- a determination of total serum cholesterol, HDL-cholesterol, and thiocyanate by means of a venipuncture (sitting position using vacutainer).

The present preliminary analysis restricts itself to that of only the prevalence of the classical risk factors hypertension, smoking, hypercholesterolemia and overweight.

Results

Approximately 70% (N = 1801) of the net sample responded positively to an invitation to take part in the Bremen baseline survey. The participation rates by age and sex are presented in Table 1.

AGE GROUP	MALES N	MALES %	FEMALES N	FEMALES %
25 - 29	80	64.0	100	71.9
30 - 34	97	73.5	93	74.4
35 - 39	95	68.3	83	72.8
40 - 44	124	77.5	115	70.1
45 - 49	123	72.4	139	74.7
50 - 54	122	77.7	99	74.4
55 - 59	96	71.1	117	71.3
60 - 64	80	69.6	110	58.2
65 - 69	58	77.3	70	58.3
ALL	875	72.4	926	69.4
NET SAMPLE	1,208		1,334	

Tab. 1. Response rate of survey sample by age and sex.

An additional weighting of study results has been undertaken, where found appropriate, in order to take into account any differences in the age and sex distribution between survey sample participants and the Bremen GCP study population.

High blood pressure. For the following results, the blood pressure values are based upon the mean of first and second readings. A systematic interobserver variability in both systolic and diastolic blood pressure determinations existed, i.e., one observer measuring about 5 mm Hg higher on the average than the others. Via a regression procedure[4], a more conservative adjustment of this person's readings to that of the

[4] Taking into account age, sex and body mass of examinee

Tab. 2. Average systolic and diastolic blood pressure (mm Hg) by age and sex (adjusted for interobserver variability).

	MALES					FEMALES				
		SYSTOLIC		DIASTOLIC			SYSTOLIC		DIASTOLIC	
AGE GROUP	N	MEAN	(SD)	MEAN	(SD)	N	MEAN	(SD)	MEAN	(SD)
25 - 29	78	131.7	(14.0)	75.3	(11.9)	100	118.8	(13.2)	71.0	(10.9)
30 - 34	96	131.8	(13.5)	77.0	(11.5)	94	123.0	(14.4)	74.2	(13.5)
35 - 39	95	131.3	(14.3)	79.8	(11.4)	81	125.3	(16.1)	76.8	(12.5)
40 - 44	124	134.0	(15.6)	82.5	(10.0)	115	129.1	(18.6)	78.1	(10.8)
45 - 49	123	137.9	(16.5)	83.8	(11.3)	139	134.3	(21.1)	82.6	(12.1)
50 - 54	122	142.9	(20.7)	86.3	(12.4)	98	137.3	(20.8)	82.2	(12.0)
55 - 59	95	144.0	(21.6)	83.4	(11.5)	117	143.5	(19.8)	82.9	(11.3)
60 - 64	81	141.3	(18.7)	78.4	(10.4)	108	151.0	(23.0)	82.6	(10.3)
65 - 69	58	147.4	(21.7)	79.0	(12.3)	70	153.1	(16.9)	79.6	(10.1)
ALL	872	137.7	(18.3)	81.2	(11.8)	922	134.9	(21.7)	79.2	(12.2)
WEIGHTED		137.3	(17.8)	80.8	(11.7)		135.4	(22.1)	79.2	(12.3)

AGE GROUP	A) HYPERTENSION: SBP ≥ 160 mm Hg AND/OR DBP ≥ 95 mm Hg OR ON ANTIHYPERTENSIVE MEDICATION WITH CONTROLLED BP		B) HYPERTENSION: SBP ≥ 160 mm Hg AND/OR DBP ≥ 95 mm Hg	
	MALES n = 872	FEMALES n = 922	MALES n = 872	FEMALES n = 922
25 - 29	6.4[++)]	4.0	6.4	4.0
30 - 34	5.2	8.5	4.2	8.5
35 - 39	10.5	8.6	9.5	4.9
40 - 44	16.1	10.4	14.5	9.6
45 - 49	24.4	18.7	21.1	15.8
50 - 54	33.6	24.5	27.0	17.3
55 - 59	32.6	34.2	26.3	24.8
60 - 64	27.2	44.4	18.5	32.4
65 - 69	34.5	52.9	27.6	35.7
ALL	21.1	22.3	17.3	16.8
WEIGHTED	20.2	23.2	16.6	17.4

[+)] Adjusted for interobserver variability

[++)] Per Cent

Tab. 3. Prevalence of hypertension[+)] according to different criteria by age and sex.

other examiners' was, therefore, applied to the present analysis. Estimates of the average systolic and diastolic blood pressure by age and sex for the Bremen study area are shown in Table 2. Males had higher average systolic and diastolic blood pressure than females at younger ages, while females had higher average blood pressure readings than males in the older age groupings. The increase in blood pressure, especially for systolic determinations, with age was found greater among females.

Approximately 22% of the population were hypertensive when observing the criteria: SBP ≥ 160 mm Hg and/or DBP ≥ 95 mm Hg or on antihypertensive medication with controlled BP (about 17% were hypertensive when not considering controlled cases). The previous findings regarding blood pressure measurements by age and sex are reflected somewhat in the pattern of hypertensive frequency existing in the community (*Table 3*). Males tended to have more high blood pressure than females at younger ages. The opposite was true, however, at older ages. The increase in hypertension with age was found stronger among females.

Smoking. Smokers were found among some forty per cent of the study sample (based on 818 smokers who supplied information regarding type of smoking: 94% of these were consuming cigarettes, of which 3%, only males, were combining cigarettes with pipes and/or cigars. The remainder of smokers, 6%, were males who were using only cigars and/or pipes). An additional 25% of the population were ex-smokers. The remaining 35% of persons had never started smoking. Present smoking was more prevalent among males (about 50%) than females (31%). Females, in turn, had refrained significantly more frequently from ever smoking (51% versus 16% for males). Both findings regarding sex were noted regardless of age. Also, smokers were found more often at younger ages for both sexes (*Table 4*).

Of cigarette smokers, 27% consumed 21+ cigarettes (2%, 41+ cigarettes) per day. Male cigarette smokers used more cigarettes, at all ages, than their female counterparts. An inverse trend was shown between age of smoker and amount of cigarettes smoked.

Hypercholesterolemia. The average total serum cholesterol (mg/100 ml) was 233.0 (Mean, SD = 48.4), and 227.0 (Median, 1 Q = 198.7 and 3 Q = 263.0) for all subjects studied. Average values appeared higher among younger males than among females of corresponding ages. The reverse was observed, however, at older ages. Furthermore, a continual rise in total serum cholesterol level with age was viewed particularly among females; males having somewhat identical averages at ages greater than 50 (*Table 5*).

Hypercholesterolemia (defined as a total serum cholesterol of 250+ mg/100 ml) was found among 34% of the population. The above-mentioned relationships between age/sex and average total serum cholesterol held, more or less, as well for prevalence of hypercholesterolemia (*Table 6*).

AGE GROUP	MALES N	MALES smoking at present	MALES ex-smoker	MALES never smoked	FEMALES N	FEMALES smoking at present	FEMALES ex-smoker	FEMALES never smoked
25 - 29	80	70.0 ++)	10.0	20.0	100	56.0	18.0	26.0
30 - 34	96	64.6	22.9	12.5	94	42.6	18.1	39.4
35 - 39	95	62.1	26.3	10.5	82	39.0	32.9	26.8
40 - 44	123	45.5	35.0	19.5	115	33.9	18.3	47.8
45 - 49	123	58.5	22.0	19.5	139	26.6	10.1	63.3
50 - 54	122	41.0	38.5	20.5	99	26.3	13.1	60.6
55 - 59	96	46.9	46.9	6.3	117	24.8	16.2	59.0
60 - 64	81	45.7	42.0	12.4	109	17.4	20.2	62.4
65 - 69	58	32.8	53.5	13.8	69	13.0	21.7	65.2
ALL	874	52.3	32.3	15.5	924	31.1	18.0	50.9
WEIGHTED		53.1	31.2	15.5		30.7	18.3	50.9

+) Have you smoked formerly or are you smoking presently?
- I am smoking at present
- I have smoked formerly and I am not smoking at this time
- I have never smoked"

++) PER CENT

Tab. 4. Smoking history+) by age and sex.

AGE GROUP	MALES N	MALES MEAN	MALES (SD)	FEMALES N	FEMALES MEAN	FEMALES (SD)
25 - 29	80	199.1	(40.8)	93	192.0	(37.4)
30 - 34	93	211.9	(45.5)	92	200.3	(37.5)
35 - 39	93	228.6	(44.1)	82	209.7	(38.3)
40 - 44	123	233.1	(45.2)	112	212.8	(28.8)
45 - 49	120	243.3	(50.3)	136	238.3	(44.8)
50 - 54	117	237.3	(42.9)	97	253.0	(46.1)
55 - 59	94	238.2	(40.6)	108	257.8	(47.7)
60 - 64	80	241.7	(39.1)	105	269.3	(54.3)
65 - 69	58	241.5	(40.9)	67	272.0	(43.0)
ALL	858	231.1	(45.7)	892	233.9	(50.9)
WEIGHTED		230.0	(45.5)		234.9	(51.9)

Tab. 5. Average total serum cholesterol (mg/100 ml) by age and sex.

AGE GROUP	MALES N = 858	FEMALES N = 892
25 - 29	10.0+)	5.4
30 - 34	23.7	10.9
35 - 39	26.9	11.0
40 - 44	29.3	10.7
45 - 49	42.5	38.2
50 - 54	38.5	53.6
55 - 59	37.2	55.6
60 - 64	41.3	62.9
65 - 69	34.5	74.6
ALL	32.1	35.4
WEIGHTED	31.1	36.4

HYPERCHOLESTEROLEMIA : TOTAL SERUM CHOLESTEROL OF 250 + mg/100 ml

+) PER CENT

Tab. 6. Prevalence of hypercholesterolemia by age and sex.

Overweight. The Body Mass Index[5] distribution of the survey population by age and sex is presented in Table 7. Overweight (males: BMI > 25.0 and females: BMI > 24.0) [15] was present in about 60% of the persons studied. The female was more frequently overweight relative to the male after 59 years of age, whereas the condition was more prevalent among males in younger age groups. The percentage of overweight increased with age for both sexes, although this relationship, as was the case with other variables, appeared more striking among females (*Table 8*).

Number of risk factors. As shown in Table 9, at least one of the risk factors (hypertension, smoking, hypercholesterolemia and overweight) was prevalent in more than 85% of the study population. More specifically, 36% of subjects had only one factor, 31% two,

[5] Body Mass Index = (weight) / (height)**2

AGE GROUP	MALES N	MALES MEAN	MALES (SD)	FEMALES N	FEMALES MEAN	FEMALES (SD)
25 - 29	80	23.5	(2.8)	100	22.3	(2.9)
30 - 34	96	24.9	(3.3)	94	23.2	(3.6)
35 - 39	95	26.1	(3.5)	83	24.7	(4.3)
40 - 44	124	26.1	(3.2)	115	25.2	(4.0)
45 - 49	123	26.8	(3.4)	139	26.1	(4.5)
50 - 54	121	27.4	(4.2)	99	27.3	(4.7)
55 - 59	96	26.9	(3.3)	117	27.9	(4.9)
60 - 64	81	26.5	(2.9)	108	27.3	(4.0)
65 - 69	58	26.9	(2.9)	70	26.8	(3.3)
ALL	874	26.2	(3.5)	925	25.7	(4.5)
WEIGHTED		26.0	(3.5)		25.7	(4.5)

Tab. 7. Average Body-Mass-Index by age and sex.

17% three and about 2% all four. The older the individual, the higher was the total of risk factors, this increase with age being greater for females. Sex differences in risk factor load were rather age-dependent. Thus, males, at ages younger than 55 years, presented a higher proportion of those having 3 or more factors than did females. The contrary was noted at older ages.

AGE GROUP	MALES N= 874	FEMALES N= 925
25 - 29	28.8[+)]	24.0
30 - 34	46.9	27.7
35 - 39	54.7	49.4
40 - 44	62.1	52.2
45 - 49	66.7	64.7
50 - 54	75.2	71.7
55 - 59	75.0	74.4
60 - 64	76.5	82.4
65 - 69	70.7	85.7
ALL	62.4	59.2
WEIGHTED	60.8	59.9

OVERWEIGHT : MALES BMI > 25
FEMALES BMI > 24

[+)] PER CENT

Tab. 8. Prevalence of overweight by age and sex.

Discussion

The major aims of the survey presented here are:

1. to supply initial time-point or baseline risk factor data necessary for an adequate evaluation of the intervention effect within the Bremen study population,
2. to provide a basis for the best selection of models regarding preventive measures to be carried out (i.e., by the identification of both priority risk areas and high-risk groups, and

Tab. 9. Distribution of number of risk factors[+)] by age and sex.

AGE GROUP	MALES N	MALES 0	MALES 1	MALES 2	MALES 3	MALES 4	FEMALES N	FEMALES 0	FEMALES 1	FEMALES 2	FEMALES 3	FEMALES 4
25 - 29	78	19.2[++)]	52.6	21.8	6.4	-	93	26.9	55.9	15.1	2.2	-
30 - 34	93	16.1	44.1	24.7	14.0	1.1	92	34.8	42.4	19.6	3.3	-
35 - 39	92	11.8	39.8	34.4	11.8	2.2	78	26.6	43.0	24.1	6.3	-
40 - 44	122	14.8	40.2	26.2	14.8	4.1	112	30.4	40.2	23.2	6.3	-
45 - 49	120	10.8	28.3	28.3	22.5	10.0	136	11.0	45.6	28.7	13.2	1.5
50 - 54	116	10.3	21.6	40.5	25.9	1.7	96	7.3	31.3	38.5	21.9	1.0
55 - 59	93	1.1	34.4	39.8	19.4	5.4	108	8.3	25.0	39.8	24.1	2.8
60 - 64	80	2.5	33.7	40.0	18.8	5.0	103	3.9	24.3	35.9	33.0	2.9
65 - 69	58	8.6	32.8	39.7	15.5	3.4	66	1.5	15.2	40.9	42.4	-
ALL	852	10.8	35.8	32.5	17.1	3.9	884	16.7	36.6	29.4	16.3	1.0
WEIGHTED		11.1	36.8	31.8	16.5	3.8		16.4	35.9	29.7	17.0	1.0

[+)] Hypertension (adjusted) including medically controlled BP, smoking, hypercholesterolemia and overweight

[++)] PER CENT

3. to allow the application of quantitative methods to decision making regarding alternative approaches for reaching specific risk factor modification goals.

The results offer the possibility, as well, of comparing risk factor burden in different communities (to be elaborated upon later in this discussion) which, when additional end-point data are available, can further serve in arriving at 'ecological associations' of the risk factors and the incidence (and mortality) of cardiovascular disease.

Mainly two factors are apt to decrease the validity of risk factor assessment within populations: inadequate participation rates and observer bias. The 71% response rate for the survey in Bremen seems to be adequate for proper risk factor estimations. Other major baseline risk factor surveys in Europe and the USA have achieved similar participation rates. Clearly a response rate of above 90%, as achieved by NÜSSEL et al. [10] in a small community, is neither cost-effective nor feasible when the study is performed in a major city. Furthermore, responders and nonresponders to the Bremen survey did not apparently differ in specific socio-demographic characteristics which affect risk factor rates [11]. Weighted estimates, for any age and sex discrepancies between survey sample participants and study population, differed little if at all from unweighted ones. Observer-induced bias cannot be excluded regarding blood pressure determinations. One observer had, on the average, higher measurements compared with the others even after controlling for variables, among the examiners, which may have played a role in affecting this difference. A more conservative estimate of hypertension in Bremen was, therefore, applied to the data.

There have been only a few coronary heart disease risk factor surveys in the last years which have utilized similar study methods as the present investigation and a still smaller number of such studies which, furthermore, have been conducted in German-speaking communities. The latter studies, and more specifically the following, therefore, provide the best basis for examining Bremen's risk-factor prevalence status relative to other populations:

- The Eberbach/Wiesloch Community Study, first survey 1976/77, 30–60 year old men and women, participation rate of 98%, N = 9,600 [10]
- The Swiss National Research Program: Prevention of Cardiovascular Diseases, first survey 1977/78, 16–69 year old males and females, participation rate of 59%, N = 4,675 [12, 13]. Only the age groups from 25–69 years are here used for the various comparisons.
- The Monica-Project Augsburg, first survey 1984/85, 25–64 year old men and women, participation rate of 79%, N = 4,022. The first results were presented at the International Monica Congress, Augsburg in 1986 [14]

The prevalence of high blood pressure (here, a systolic BP ≥ 160 mm Hg and/or a diastolic BP ≥ 95 mm Hg) varied from 10–17% within the various centers studied. The highest hypertension rates were recorded in Bremen and Eberbach/Wiesloch, where both men and women demonstrated a prevalence of about 17%. In Augsburg and Switzerland, the prevalence for males was 14% and 15%, respectively and for females 10% and 11%, respectively. The prevalence of high blood pressure was found to be clearly age-dependent (and, as a rule, more so for the female than male) in all study regions.

Prevalence data regarding hypercholesterolemia using the cut-off point of 260 mg/dl total serum cholesterol are available for all four studies. Considering this criterion, distinctly higher prevalence rates were noted for Bremen (26%) and Augsburg (24%) than for the Swiss study area and Eberbach/Wiesloch (15% and 13%, respectively). Differences in prevalence rate by sex were trivial regardless of study location. However, the increase in cholesterol value with age was found more obvious among females than males. The average total serum cholesterol was higher among males in younger age groups and the opposite was true at ages beyond 55 years.

The results of all four studies demonstrated both that the amount of present smokers was found higher among males than females and that the amount of smokers tended to decrease with increasing age. The prevalence of smoking was found highest for both males and females in Bremen (males 52%, females 31%), next highest for the Swiss (males 50% and females 27%), and least for both Augsburg and Eberbach/Wiesloch (about 43% of males and 22% of females).

Severe overweight was defined as a BMI value greater than 30 in Bremen and Augsburg, and as a Broca-Index greater than 120 in Eberbach/Wiesloch. The prevalence of overweight for Switzerland was not available. On the basis of the above classifications, between 14 and 19% of examined persons in the above-mentioned three centers had severe overweight. For both males and females, the prevalence was highest in Bremen (17% and 19%, respectively) (about 15% and 17% for males and females, respectively, in the other study centers). On the whole, the proportion of females having severe overweight was slightly higher than that noted for males. Clearly shown, in all three surveys, was that, as with other risk factors, the prevalence of overweight among women was more strongly associated with age than was the case among men.

In summary, the above comparison of prevalence rates for the risk factors hypertension, hypercholesterolemia, smoking and overweight between the four centers pointed, for the most part, to the highest rates being shown for the GCP survey in Bremen. Only regarding hypercholesterolemia among females was the prevalence in one of the other study regions, namely Augsburg, found higher. Furthermore, as noted earlier, the hypertension rates for Bremen and

Eberbach/Wiesloch were almost identical. Uniform results were obtained from study to study regarding both the differences by sex and the age relationships for the various factors examined. The stronger age dependency of these risk factors among females than males is particularly noteworthy.

Bremen is obviously a community with a higher cardiovascular disease risk profile relative to other German-speaking populations and in great need of appropriate preventive measures. It is hoped that via the community-based multifactor intervention program which has recently begun, such risk can be reduced in the coming years manifesting itself in lower incidence and mortality rates for both ischemic heart disease and stroke.

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Abstract

Both an introduction to the 1984 Bremen baseline health survey of the German Cardiovascular Prevention Study and preliminary results therefrom regarding the prevalence of the classical cardiovascular disease (CVD) risk factors (high blood pressure, smoking, hypercholesterolemia and overweight) are presented here. German males and females, 25–69 years of age and resident in Bremen-North and Bremen-West comprised the study population. Of these, about one in five were hypertensive, 40% were smokers, around one-third possessed too high levels of serum cholesterol and 60% were overweight (circa 20% were severely overweight). Males and younger persons smoked more. The prevalence of hypertension, hypercholesterolemia and overweight were similar for the two sexes overall; however, these rates were shown higher among males than females at younger ages, while the opposite was true at older ages. The increase in prevalence of high blood pressure, hypercholesterolemia and overweight with age, more conspicuous among females, was also noted. Bremen appears to be at higher CVD risk than other German-speaking communities.

Zusammenfassung

Prävalenz der Risikofaktoren für kardiovaskuläre Krankheiten in Bremen – Der 1. Bremer Gesundheitssurvey (1984) der Deutschen Herzkreislauf-Präventionsstudie.

Vorliegend wird eine Einführung zum 1. Bremer Gesundheitssurvey der Deutschen Herzkreislauf-Präventionsstudie und deren vorläufige Ergebnisse mit Bezug auf die Prävalenz der klassischen Risikofaktoren für kardiovaskuläre Krankheiten (Bluthochdruck, Rauchen, Hypercholesterinämie und Übergewicht) präsentiert. Die Studienpopulation bestand aus deutschen Männern und Frauen im Alter von 25–69 Jahren, die in Bremen-Nord und Bremen-West wohnhaft sind. Von diesen hatte ein Fünftel Bluthochdruck, 40% waren Raucher, etwa ein Drittel hatte einen zu hohen Serum-Cholesterinspiegel und 60% hatten Übergewicht (ca. 20% hatten starkes Übergewicht). Männer und jüngere Personen rauchten mehr. Die Prävalenz der Hypertonie, der Hypercholesterinämie und des Übergewichts war bei beiden Geschlechtern insgesamt ähnlich; jedoch zeigte sich, dass diese Raten bei Männern in jüngerem Alter höher lagen als bei Frauen, während in höherem Alter das Gegenteil zutraf. Ein Ansteigen der Prävalenz des hohen Blutdrucks, der Hypercholesterinämie und des Übergewichts mit dem Alter, das bei Frauen deutlich sichtbarer war, wurde ebenfalls festgestellt. Es scheint, dass Bremen ein höheres Risiko für kardiovaskuläre Krankheiten hat als andere deutschsprechende Gemeinden.

Résumé

Prévalence des facteurs de risque des maladies cardio-vasculaires à Bremen

On décrit ici l'examen de santé initial du programme allemand de recherche sur la prévention des maladies cardio-vasculaires et les résultats préliminaires sur la prévalence des facteurs de risque (hypertension, tabagisme, hypercholestérolémie, excès de poids). L'échantillon de population est composé d'hommes et de femmes allemands, âgés de 25 à 69 ans, habitant Bremen-nord et Bremen-ouest. Parmi les personnes examinées, 20% présentait une hypertension, environ un tiers un taux de cholestérol plasmatique élevé, et 60% un excès de poids (environ 20% une obésité extrême). 40% étaient des fumeurs. Le pourcentage de fumeurs était plus élevé parmi les hommes et les jeunes. Dans l'ensemble, la prévalence d'hypertension, d'hypercholestérolémie et d'excès de poids était pareille pour les deux sexes. Cependant, elle était plus élevée pour les hommes jeunes que pour les femmes et inversément pour les personnes plus âgées. On a trouvé que la fréquence des trois facteurs de risque principaux augmentait avec l'âge, résultat qui est plus marqué pour les femmes. Il apparaît que Bremen présente un risque plus élevé que les autres communes de langue allemande en ce qui concerne les maladies cardio-vasculaires.

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Médecine et prévention: considérations éthiques

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L'éthique ne s'élabore pas dans le vide; le contexte est déterminant de ses jugements et de ses prises de position. C'est pourquoi ce texte cherchera d'abord à préciser les termes médecine et prévention. En effet, selon les définitions que l'on attribuera aux deux termes, les considérations d'ordre éthique s'orienteront différemment. Dans le contexte des discussions contemporaines sur santé et médecine, la primauté de la prévention sur la dimension curative est de plus en plus affirmée. Cette affirmation qui a pour elle de nombreux arguments de tous ordres n'est pas sans soulever des questions. Ce sera l'objet du second point. La troisième partie abordera la question de la responsabilité de la prévention.

Les termes en cause

Si la médecine n'existe qu'en fonction de la personne malade, si le fait de la maladie définit l'acte médical [1], le champ de la prévention en médecine peut être circonscrit avec une certaine précision. Dans ce contexte, la médecine n'est pas responsable de toutes les dimensions de la santé, elle n'est pas ce que l'on appelle la santé publique. Au sens strict des termes, médecine et santé publique ne s'identifient que dans la prévention tertiaire; il faut même ajouter que médecine préventive et santé publique sont des concepts différents bien qu'à leur origine ils aient été souvent confondues [2].

La médecine dont l'objectif est de favoriser la santé en la restaurant n'en a pas toute la responsabilité; elle doit donc s'intégrer à un ensemble plus vaste qu'elle-même. Elle doit reconnaître que, malgré l'espérance qu'elle a toujours représentée pour une personne atteinte dans son intégrité et la puissance technologique dont elle s'est maintenant entourée, elle n'est pas le tout de la santé mais seulement une province, si centrale fût-elle. Si la médecine définit la prévention, celle-ci se développera selon un modèle médical. En raison de ses tendances centrifuges, elle privilégiera des options comme le dépistage précoce dans les cas de grossesses à risque ou de travailleurs à haut risque, les examens individuels de santé comme les «check-up» et les consultations pédiatriques de dépistage, les opérations préventives comme certains pontages coronariens, les interventions d'ordre chimique comme dans certains cas d'hypertension.

Le modèle médical arrive mal à reconnaître que les conditions de vie sont déterminantes de la qualité de l'existence humaine et que la maladie est aussi un facteur social. L'histoire des cent dernières années concernant l'allongement de l'espérance de vie et l'analyse des causes contemporaines de mortalité montrent à souhait que l'environnement et le style de vie sont les facteurs décisifs d'une réelle prévention.

Cette vision des choses n'oblige-t-elle pas dès lors à transformer la médecine en politique ou en éducation permanente comme certains sont parfois tentés de le faire? La définition du rôle médical comme promotion du savoir-vivre n'est pas née avec la révolution culturelle des années 1960; la conférence d'ouverture de la première rencontre annuelle de l'American Public Health Association de 1873 défendait déjà ce point de vue [2]. Identifier prévention et médecine en transformant la nature de la seconde ne sert pourtant ni l'une ni l'autre car la médecine réduira la première à son modèle et ne pourra elle-même remplir ses objectifs parmi lesquels se trouve la prévention. Si une approche systémique ou conviviale est nécessaire pour promouvoir la bonne santé individuelle et collective, s'imposent aussi des stratégies préventives proprement médicales dans lesquelles la rencontre clinique est de première importance [3].

Plutôt que de vouloir changer la nature de la médecine, ne faut-il pas plutôt reconnaître que de multiples variables déterminent l'état de santé? Celui-ci est à la fois conditionné et renforcé par le style de vie de tout un chacun et il est préservé, au sens large du terme, par le jeu des interactions complexes entre la structure génétique de l'individu et les forces de l'environnement [4]. Tout cela (style de vie, structure génétique, environnement) concourt à façonner la courbe individuelle de santé et exige des formes variées d'interventions. Surgit alors une double question: le monde médical peut-il accepter de s'intégrer aux autres univers de la prévention et les autres secteurs de la santé