



Prevalence of Subjectively Experienced Symptoms in a Population Sample of Women with Special Reference to Women with Arterial Hypertension

Calle Bengtsson, Kristina Edström, Bente Furunes, Johann A. Sigurdsson & Gosta Tibblin

To cite this article: Calle Bengtsson, Kristina Edström, Bente Furunes, Johann A. Sigurdsson & Gosta Tibblin (1987) Prevalence of Subjectively Experienced Symptoms in a Population Sample of Women with Special Reference to Women with Arterial Hypertension, *Scandinavian Journal of Primary Health Care*, 5:3, 155-162, DOI: [10.3109/02813438709013997](https://doi.org/10.3109/02813438709013997)

To link to this article: <https://doi.org/10.3109/02813438709013997>



Published online: 12 Jul 2009.



Submit your article to this journal [↗](#)



Article views: 168



View related articles [↗](#)

Prevalence of Subjectively Experienced Symptoms in a Population Sample of Women with Special Reference to Women with Arterial Hypertension

CALLE BENGTTSSON,¹ KRISTINA EDSTRÖM,² BENTE FURUNES,¹
JOHANN A. SIGURDSSON³ and GÖSTA TIBBLIN⁴

¹Department of Primary Health Care and ²Department of Psychology, Gothenburg University, ⁴Department of Family Medicine, Uppsala University, Sweden and ³The Health Centre of Hafnarfjörður, Iceland

Bengtsson C, Edström K, Furunes B, Sigurdsson JA, Tibblin G. Prevalence of subjectively experienced symptoms in a population sample of women with special reference to women with arterial hypertension. *Scand J Prim Health Care* 1987; 5: 155-62.

Women, participants in a population study and representative of middle-aged women in the general population, were asked to complete a questionnaire containing 30 questions about prevalence or absence of 30 specified complaints during the last three months prior to the investigation. As a whole, complaints were common. E.g. more than 30 % reported sleep disturbances, 40 % general fatigue and 40 % depressive symptoms. There were some differences between the different age groups studied with respect to different complaints but the total number of stated complaints were similar in the different ages. A special analysis was made concerning antihypertensive drugs and blood pressure levels. The most obvious finding with respect to these variables was that symptoms were common in women with low blood pressure (below 120 mmHg).

Key words: complaints, symptoms, age influence, antihypertensive drugs, blood pressure levels, population study, women.

Calle Bengtsson, MD, Department of Primary Health Care, Redbergsvägen 6, S-416 65 Göteborg, Sweden.

Subjects suffering from different complaints will at times visit a doctor, but it is more common that they deal with their problems on their own. There is scanty information about the prevalence of subjectively experienced symptoms in a population. In a previous study of middle-aged men in Gothenburg (1, 2), Tibblin & Lindström included questions about 30 defined complaints. The second phase of a longitudinal population study of women in Gothenburg was carried out in 1974-75, and the participating women were at that time asked about the same complaints in order to obtain corresponding information in a population sample of women. As far as we know, there has been no other previous population survey which in a comprehensive way has studied the prevalence of symptoms in a general population.

MATERIAL AND METHODS

A population study of women was carried out in 1968-69 (3). Altogether 1 462 women participated in five age strata between 38 and 60 years of age. The way of sampling and a high participation rate (over 90 %) ensured that the sample was representative for women of these ages in the general population.

When the same sample was re-studied in 1974-75, 1 302 women participated (4). The participation rate was on this occasion 89 % of those who had taken part in the study in 1968-69. The data presented in this paper refer to this second study in 1974-75. Number of participants in 1974-75 are shown in Table I.

The examinations were mostly carried out during a 10-month period in 1974-75. Women born at the beginning of the year were called first. In this way,

Table I. Number of participants and participation rate (out of those investigated in 1968–69) in the population study of women in Gothenburg, Sweden, in 1974–75

Age	Number of participants	Participation rate (%)
44	336	90.3
52	387	89.8
56	351	88.2
60	163	90.6
66	65	80.2
Total	1 302	89.1

the women within each age stratum were of almost identical age when examined. The women were examined in a standardised way and circulated between various examination stations in consecutive order as described previously (4).

All participants answered a standardised self-administered questionnaire supplemented by an interview about their social situation and state of health. This interview included questions about antihypertensive treatment. Blood pressure (BP) was taken after about five minutes' relaxed conversation with the women in the seated position and according to the WHO instructions, using a mercury sphygmomanometer. The BP was read to the nearest 2 mmHg. A self-administered questionnaire included 30 questions (Table II) about different complaints. The main question was: "Have you had any of the following symptoms during the last three months? Try to answer the question even if you are in doubt." The answers to the various questions were registered separately, and, in addition, "complaint scores" were calculated for each woman, which means number of symptoms out of these 30 standardised questions reported by each woman (1, 2).

Statistical methods

The hypothesis of no differences in frequencies between two groups was tested with the χ^2 -test and, when all age strata were included in the same analysis, by means of the Mantel-Haenszel procedure with one degree of freedom (5), which is an extension of the χ^2 -test (two-tailed test). This was used in order to minimise the effect of age as a confounding factor as far as possible. The relative risk for having a complaint or a defined number of

complaints in comparison with a reference group was calculated according to the Mantel-Haenszel procedure (5, 6).

The statistical significance was tested by two-tailed tests at the levels of $p < 0.1$, $p < 0.05$, $p < 0.01$, $p < 0.001$. A difference was considered statistically significant if the p -value was < 0.05 .

RESULTS

Prevalence of complaints

Table II shows the prevalence of those 30 complaints which had been included in the questionnaire in the different age strata studied. Significant differences between different age strata were observed for 18 of the 30 complaints studied, and for another two there were differences which were almost significant ($p < 0.10$).

Complaints from the *eyes* were more often reported by women aged 66 than by women in the other age strata ($p < 0.01$), while there were no differences between women in these other age strata. A defect of *hearing* was also more common in women aged 66 than in other women in the population sample ($p < 0.001$), and the percentages of women who reported defect of hearing seemed to increase with age.

The proportion of women reporting *headache* seemed to decrease continuously with age, and a significant difference was observed between women aged 44 and the other women ($p < 0.01$, headache being more common in women aged 44), and between women aged 66 and other women ($p < 0.05$, headache being less common in women aged 66).

General fatigue also seemed to decrease with age, but a significant difference was only observed when comparing the oldest and the youngest women in the population sample (women aged 44 compared to women aged 66, $p < 0.05$).

Sleep disturbances seemed to be most common in women aged 52, 56 and 60 and less common in women aged 44 and women aged 66. A significant difference was observed between women aged 44 and women aged 52 ($p < 0.01$) and also when women aged 44 were compared to all the other women ($p < 0.001$). The difference between women aged 66 and the other women was not statistically significant.

Sweatings were more common in women aged 52 than in women aged 44 ($p < 0.001$) but were again

Table II. Prevalence of reported complaints experienced during the last three months according to a special questionnaire (%)

Complaint	44 yrs	52 yrs	56 yrs	60 yrs	66 yrs	Total sample
Dizziness	22.1	20.1	19.3	19.4	21.5	20.4
Complaints from the eyes	24.5	20.2	19.3	23.1	36.9	22.3
Defect of hearing	8.5	10.6	12.7	15.6	26.6	12.0
Headache	39.9	34.1	31.7	29.4	20.0	33.6
General fatigue	46.5	42.0	40.3	40.6	32.3	42.0
Sleep disturbances	22.5	33.6	38.6	40.0	32.3	32.8
Nervous symptoms	21.8	26.2	24.2	26.3	22.6	24.3
Sweatings	22.1	47.4	35.7	25.0	14.1	33.2
Breathlessness	13.3	14.5	21.0	20.0	28.1	17.3
Chest pain	15.1	13.7	18.4	16.9	13.8	15.8
Cough	20.5	13.2	16.1	13.8	10.8	15.8
Irritability	33.8	28.5	27.1	30.0	20.3	29.3
Over-exertion	18.7	21.6	23.7	20.6	9.4	20.7
Reduced mental concentration capacity	15.2	22.8	23.3	20.0	14.1	20.2
Restlessness	20.5	26.1	27.1	25.0	15.6	24.3
Depressive symptoms	35.5	42.9	38.3	37.5	32.3	38.5
Readiness to crying	20.8	27.4	23.1	22.5	23.4	23.7
Reduced capability of relaxing	30.8	34.1	35.2	33.1	21.9	32.8
Abdominal pain	24.8	20.1	17.3	21.3	16.9	20.5
Indisposition	13.0	12.1	9.2	13.1	4.6	11.3
Diarrhoea	9.4	9.2	6.1	7.5	6.2	8.0
Obstipation	12.4	13.8	14.7	13.8	12.3	13.6
Poor appetite	3.0	4.5	2.6	5.6	4.6	3.7
Loss of weight	5.5	5.8	4.9	6.3	4.6	5.5
Overweight	25.7	25.9	35.5	36.3	26.2	29.8
Sensitiveness to cold	22.5	18.7	18.2	18.1	17.2	19.4
Micturition disturbances	2.7	5.0	3.7	3.1	7.7	4.0
Joint complaints	17.8	32.8	34.0	31.3	29.2	28.9
Complaints from the back	37.8	38.1	41.2	38.8	27.7	38.4
Complaints from the legs	31.0	32.4	35.2	29.4	36.9	32.7

less common in women aged 56 than in women aged 52 ($p<0.01$), less common in women aged 60 than in women aged 56 ($p<0.01$) and tended to be less common in women aged 66 than in women aged 60 ($p<0.10$).

Breathlessness was more common in the upper ages with a significant difference between women aged 66 and the other women ($p<0.05$). *Breathlessness* was also more common when comparing women aged 56 and 60 on one hand and women aged 44 and 52 on the other ($p<0.01$).

Cough was most common in women aged 44, while similar percentages were observed in the other age strata. There was a difference of statistical significance between women aged 44 and women aged 52 ($p<0.05$) and also when comparing women aged 44 with all the other women ($p<0.01$).

It seemed that a lower proportion of women aged

66 reported *irritability* than women in the other age strata, but a difference of statistical significance was only observed when comparing the oldest and the youngest women ($p<0.05$).

Over-exertion was also less commonly reported by the oldest women, and a difference of statistical significance was observed between women aged 66 and women aged 60 ($p<0.05$) and also between women aged 66 and all the rest of the women ($p<0.05$).

No differences of statistical significance were observed concerning *reduced mental concentration capacity*.

Restlessness seemed to be most common in women aged 52, 56 and 60. A difference of statistical significance was observed between women in these three age strata and women aged 44 ($p<0.05$), and the difference was almost significant between

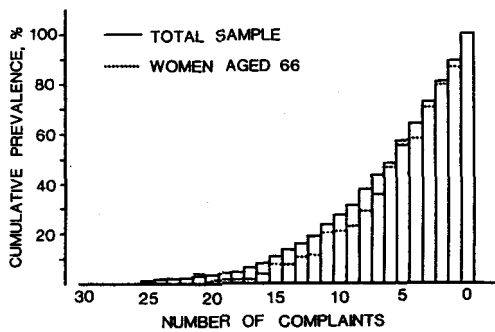


Fig. 1. Cumulative frequency of women with different numbers of complaints (complaint scores).

the group of women aged 52–60 and women aged 66 ($p < 0.10$).

Depressive symptoms were more common in women aged 52 than in women aged 44 ($p < 0.05$), otherwise there were no differences of statistical significance.

With respect to readiness to *crying*, a difference of statistical significance was observed when comparing women aged 44 and women aged 52 ($p < 0.05$, more common in women aged 52), but no other significant differences were observed.

Reduced capability for *relaxing* seemed to be most common in women aged 52, 56 and 60, and a difference of statistical significance was observed between women aged 56 and women aged 66 ($p < 0.05$) and almost of statistical significance between women aged 60 and women aged 66 ($p < 0.10$) and between women aged 66 and the other women ($p < 0.10$).

There was a tendency for *indisposition* to be less commonly reported in women aged 66 than in other women ($p < 0.10$) and also when comparing women aged 66 and women aged 60 ($p < 0.10$), but there were no differences of statistical significance.

Overweight seemed to be most commonly reported by women aged 56 and 60 with a significant difference between women aged 44 and 52 on one hand and women aged 56 and 60 on the other ($p < 0.001$). The differences between women aged 66 and the other women did not reach statistically significant levels.

Micturition disturbances seemed to be less common in women aged 44 and more common in women aged 66, and a difference of statistical significance was observed when these two age strata were compared ($p < 0.05$).

Joint complaints were less often reported by women aged 44 than by women aged 52 ($p < 0.001$), and a significance of the same levels was observed when comparing women aged 44 and women in the other age strata taken together.

Complaints from the *back* were less commonly reported by women aged 66 than by the other women. A difference of statistical significance was observed between women aged 66 and women aged 56 ($p < 0.05$), and the difference between women aged 66 and the other women when taken together almost reached a significant level ($p < 0.10$).

Number of symptoms (complaint scores)

Fig. 1 shows the cumulative frequency of complaint scores. None of the women answered yes to more than 25 of the 30 questions. Although there were age differences with respect to different complaints, there seemed to be no obvious age difference with respect to number of complaints. If anything there was a tendency for women in the oldest age stratum (women aged 66) to report a lower number of symptoms than other women. For example, 7.7% of 66-year-old women reported at least 15 complaints compared to 10.8% of other women, and 21.5% of 66-year-old women reported at least 10 symptoms compared to 27.8% of other women. There were, however, no differences of statistical significance.

Visits to a doctor for complaints

The women were also asked whether they had visited a doctor for one or more of the 30 complaints mentioned. Altogether 45.8% reported that they had (36.7% in women aged 44, 48.0% in women aged 52, 48.5% in women aged 56, 53.0% in women aged 60 and 47.5% in women aged 66). There was a difference of statistical significance between women aged 44 and women aged 52 ($p < 0.01$) and also when comparing women aged 44 with all the other women taken together ($p < 0.001$).

Complaints in hypertensive women

When comparing women with and without antihypertensive treatment, BP levels were not taken into consideration with the exception that women who stated that they had untreated hypertension were excluded (altogether 13 women in the total population sample). In a similar way, a comparison was made between women with different levels of systolic BP without taking into consideration whether

Table III. Risk ratio for different complaints in women with different levels of systolic BP (mmHg) (reference group women with systolic BP 120–138 mmHg)

Complaint	Systolic BP (mmHg)				
	<100	100–118	140–158	160–178	≥180
Dizziness	1.96	1.76**	1.15	1.00	1.21
Complaints from the eyes	1.34	1.50*	1.30	1.18	1.35
Defect of hearing	0.55	1.57*	0.95	0.77	0.94
Headache	0.88	1.06	1.18	1.05	1.87
General fatigue	1.12	1.80***	1.03	0.79	1.52
Sleep disturbances	1.43	1.34(*)	0.91	1.07	1.02
Nervous symptoms	1.27	1.13	1.08	0.74	1.15
Sweatings	1.02	1.13	1.05	0.96	2.68*
Breathlessness	1.61	1.24	1.21	0.97	2.16*
Chest pain	1.94	1.29	1.00	1.01	1.28
Cough	4.37**	1.74**	0.84	0.50(*)	1.76
Irritability	0.36	1.52*	1.36(*)	1.12	2.22
Over-exertion	1.15	1.68**	1.27	0.78	1.11
Reduced mental concentration capacity	1.74	1.52*	1.13	0.59(*)	0.39(*)
Restlessness	1.89	1.61**	1.45*	1.00	0.77
Depressive symptoms	1.29	1.33(*)	1.16	0.86	0.61
Readiness to crying	1.57	1.64**	1.48*	1.52	1.66
Reduced capability of relaxing	1.81	1.25	1.14	0.67	1.05
Abdominal pain	1.11	1.53*	0.89	0.78	1.51
Indisposition	2.59	1.92**	1.17	1.21	2.89*
Diarrhoea	2.13	1.21	0.60(*)	0.59	1.06
Obstipation	2.03	0.98	0.70	0.65	0.82
Poor appetite	5.06*	1.92(*)	1.01	0.20	0.60
Loss of weight	3.66	2.03*	1.08	0.40	0.46
Overweight	0.60	0.73(*)	1.39*	1.03	2.71**
Sensitiveness to cold	1.52	1.35(*)	1.04	0.73	1.06
Micturition disturbances	2.36	1.49	1.50	1.09	3.44(*)
Joint complaints	0.61	1.69**	1.01	1.18	1.59
Complaints from the back	1.93	1.45*	1.00	0.84	1.25
Complaints from the legs	1.10	1.31(*)	1.40*	0.99	2.07*

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$, significantly different from women in the reference group, (*) denotes $p < 0.10$.

the women received antihypertensive treatment or not. The women were classified into groups based on intervals of 20 mmHg. Women with systolic BP 120–138 mmHg were defined as a reference group.

Table III shows risk ratios for different complaints in relation to levels of systolic blood pressure. Women with a systolic BP of 120–138 mmHg have been defined as a reference group, and Table III shows risk ratios for different complaints in women with different levels of systolic BP in relation to women with systolic BP 120–138 mmHg.

Risk ratio was significantly increased for 15 of 30 complaints in women with systolic BP 100–118 mmHg compared with women with a level of 120–138 mmHg, among others for complaints such as problems with the eyes and defect of hearing. It

was significantly increased in five of 30 complaints in women with systolic BP ≥ 180 mmHg compared to those with systolic BP 120–138 mmHg. Relative risk was increased for many of the complaints in women with a systolic BP < 100 mmHg, but the total number of women with a systolic BP below this level was low, which is probably the main reason for the few significances in this group.

Table IV shows numbers of women who reported ≥ 10 complaints and of women who reported ≥ 15 complaints, respectively, grouped into different intervals of systolic BP. There was an increased proportion of women with systolic BP 100–118 mmHg who reported ≥ 10 complaints and ≥ 15 complaints than in women with systolic BP 120–138 mmHg, otherwise the risk ratio was not significantly in-

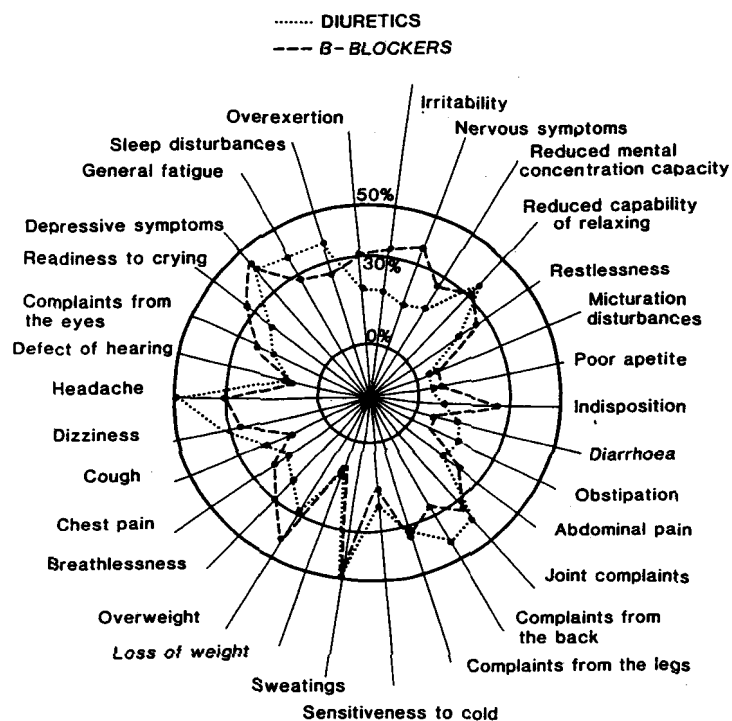


Fig. 2. Risk for having experienced different complaints during the last three months among women taking antihypertensive drugs (women taking diuretics or β -blockers as sole drugs are included in the figure).

creased or decreased compared with that of the reference group. Age was not taken into consideration for the statistical analysis of number of complaints, as there were no age differences with respect to number of complaints in the total population sample.

With respect to *antihypertensive treatment*, Fig. 2 shows the prevalence of different symptoms included in the questionnaire in subjects taking diuretics and β -blockers respectively. If the relative risk

of the different symptoms in subjects taking antihypertensive drugs is calculated in relation to subjects not taking such drugs according to the Mantel-Haenszel procedure, which takes age into consideration, there was no significantly increased or decreased risk ratio for any of the variables studied among women who used diuretics as a sole antihypertensive drug. Women taking beta-blockers reported more often breathlessness ($p < 0.05$, risk ratio 2.1, 95% confidence levels for risk ratio 1.2–3.7)

Table IV. Number of participants who reported ≥ 10 complaints and ≥ 15 complaints respectively in women with different levels of systolic BP compared with women with systolic BP 120–138 mmHg were used as a reference group when the statistical analyses were carried out

Systolic BP (mmHg)	Total <i>n</i>	≥ 10 complaints		≥ 15 complaints	
		<i>n</i>	%	<i>n</i>	%
<100	17	5	29.4	1	5.9
100–118	309	114	36.9***	52	16.8**
120–138	470	107	22.8	43	9.1
140–158	344	92	26.7	41	11.9
160–178	123	28	22.8	6	4.9
≥ 180	39	12	30.8	5	12.8

** $p < 0.01$, *** $p < 0.001$, significantly different from women with systolic blood pressure 120–138 mmHg.

Table V. Participants who reported ≥ 10 complaints and participants who reported ≥ 15 complaints respectively among women taking diuretics ($n=56$) and beta-blockers ($n=60$) as sole drugs and combinations of antihypertensive drugs ($n=35$) compared to a reference group of women who did not take antihypertensive drugs or state that they had untreated hypertension ($n=1\ 126$)

	≥ 10 complaints		≥ 15 complaints	
	<i>n</i>	%	<i>n</i>	%
Women on diuretics	16	28.6	3	5.4
Women on beta-blockers	21	35.0	16	16.7***
Women on combinations of antihypertensive drugs	9	25.7	4	11.4
Reference group	304	27.0	19	10.6

*** $p < 0.001$, significantly different from women in the reference group.

and indisposition ($p < 0.05$, risk ratio 2.3, 95% confidence levels for risk ratio 1.2–4.5). With respect to women taking combinations of antihypertensive drugs, all of them taking diuretics and β -blockers, some of them also taking other antihypertensive drugs (those on the combination are not included in the figure), over-exertion was less commonly reported than in other women ($p < 0.05$, risk ratio 0.2, confidence levels for risk ratio 0.1–0.9), while dizziness ($p < 0.05$, risk ratio 2.1, 95% confidence levels for risk ratio 1.0–4.3) and overweight ($p < 0.001$, risk ratio 3.2, 95% confidence levels for risk ratio 1.6–6.4) were more often reported.

When comparing numbers of complaints there seemed to be no differences between women taking diuretics or women taking combinations of antihypertensive drugs on one hand and women who were not on antihypertensive drugs on the other. Table V shows numbers of women who reported ≥ 15 complaints and women who reported ≥ 10 complaints respectively. Significant differences were observed with respect to women who reported ≥ 15 symptoms (more common in women on beta-blockers than on diuretics, $p < 0.01$, and more common in women on beta-blockers than in women who did not take antihypertensive drugs, $p < 0.001$). Age was not taken into consideration in this statistical analysis, as there were no differences with respect to number of complaints between the different ages studied.

DISCUSSION

A very large number of statistical analyses have been carried out in this paper, which means that some differences of statistical significance will be

obtained just by chance. This has to be taken into consideration when evaluating the results.

The women reported quite a large number of symptoms experienced during the last three months, when they were asked about them in a defined way. There were age differences for most of the complaints studied, while there were no obvious age differences with respect to number of complaints reported.

Some of the complaints studied were most common in the oldest women, e.g. from the eyes, defect of hearing and breathlessness, which might have been expected. It seems, however, more surprising that the complaints from the back were less common in women aged 66 than in the younger women. Some symptoms were most common in the youngest women, e.g. headache and cough. Still other complaints were most common in the middle age strata, e.g. sleep disturbances, sweatings, reduced mental concentration capacity and restlessness. Taken together, this means that a total number of complaints reported by the women were about the same in all the age strata studied.

Almost half of the women had visited a doctor for one or more of the symptoms reported. The symptoms concerned the last three months, while information was not specified as to when they had seen the doctor for the symptoms.

Complaints are obviously common, but we know little about whether they disturb the quality of life as a whole or not. We cannot state for certain that women with many complaints feel worse than other women. It is, however, important not only to give help to patients who go to see a doctor or another member of a medical staff but also to find out

whether there are complaints among subjects in the general population, whether these have an effect on life quality, and, if so, measures should be made to eliminate them.

The hypothesis has been forwarded that complaints might precipitate disease, e.g. hypertension or ischaemic heart disease (1). On the other hand, a disease might cause complaints, either because of the disease by itself or due to its treatment. As a model to study these questions, a comparison has in this paper been made between women with different levels of systolic BP and between women with and without antihypertensive treatment. There were no obvious differences with respect to antihypertensive treatment. Women taking beta-blockers seemed to experience symptoms more often than other women, but the differences were not impressive. As only few women took antihypertensive drugs other than diuretics and β -blockers, these other drugs could not be studied separately. The most obvious difference was found when comparing different levels of systolic BP. Women with low BP had more often a large number of complaints than women with systolic BP between 120 and 138 mmHg. There was, however, no overrepresentation of women with a large number of symptoms among those with high systolic BP.

ACKNOWLEDGEMENTS

The study was supported by the Swedish Research Council (27X-4578) and the Faculty of Medicine of the Gothenburg University.

REFERENCES

1. Tibblin G, Lindström B. Complaints in subjects with angina pectoris and hypertension. In: Zanchetti A, ed. Neural and psychological mechanisms in cardiovascular disease. Milan: Il Ponte, 1972; 135-9.
2. Tibblin G. Kunskap om symptomens naturalhistoria hjälp för läkaren i kontakten med patienten. (Knowledge about the natural history of symptoms in doctor-patient contacts.) Läkartidningen 1986; 83: 1186-90 (In Swedish).
3. Bengtsson C, Blohmé G, Hallberg L et al. The study of women in Gothenburg 1968-69—a population study. General design, purpose and sampling results. Acta Med Scand 1973; 193: 311-8.
4. Bengtsson C, Hallberg L, Hällström T et al. The population study of women in Gothenburg 1974-1975—the second phase of a longitudinal study. General design, purpose and sampling results. Scand J Soc Med 1978; 6: 49-54.
5. Mantel N. Chi-square tests with one degree of freedom; extensions of the Mantel-Haenszel procedure. Am Stat Assoc J 1963; 690-700.
6. Miettinen O. Estimability and estimation in case-referent studies. Am J Epidemiol 1976; 103: 226-35.