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A COMPARATIVE STUDY OF MORTALITY BY CAUSE IN FOUR NORDIC COUNTRIES, 1966 – 1968, WITH SPECIAL REFERENCE TO MALE EXCESS MORTALITY

By Anne-Marie Bolander

Utgivare: Statistiska centralbyrån, Fack, 102 50 Stockholm 27

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PREFACE

Statistics on causes of death are an important source of information in epidemiological studies, especially since much interest has been focused on the increase of ischaemic heart disease and of other disorders in the cardiovascular system.

As Denmark, Finland, Norway, and Sweden can be regarded from many viewpoints as a unity with great similarities in tradition, cultural standards, medical and social organization, climate etc., they have often been thought of as a suitable sphere for epidemiological investigations. The advantage offered in these countries is also there system of national population registration, making it possible to trace individuals or groups in the total population registers and in other established sets of records with built-in identification systems. This has increased the demand of informatory studies of equalities and differences in the field of morbidity and mortality. As an attempt in this direction in the domain of mortality by cause this report has been written.

Its aim is also to present the male excess mortality in a comprehensive and as far as possible varied way by a parallel application of different methods of measurement.

Stockholm den 30 juli 1971

LENNART FASTBOM

Nils Elmhammer

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1 INTRODUCTION

The stagnation, or even the rise, in the trend of mortality among men in most Western countries during the past decades has drawn special attention to cause-of-death comparisons. The interest has been focused particularly on cardiovascular diseases. Also other causes of death with a rising trend and with a high male excess mortality have been studied and their probable association with environmental factors has been scrutinized.

The continuous decline in the female death rates, however, which has increased the gap between male and female death curves, though to a smaller extent in the highest and lowest age groups, complicates the interpretation of such associations, since most of the environmental influences should be common to both sexes.

The four Nordic countries, Denmark, Finland, Norway, and Sweden, are often regarded as a unity with few essential differences of background, tradition, cultural standards, social organization or climate. The high quality of statistical information in these countries provides a reliable basis for a comparative study of mortality. The Nordic unity often embraces a fifth country, Iceland, though too small in population to be included in these comparisons. The purpose of the study is to present a survey of the present mortality patterns in the four countries, which may give rise to further questions to be investigated or form a background for new hypotheses to be proved.

The period chosen, 1966-1968, is the last one during which the earlier revision of the International Statistical Classification of Diseases, Injuries, and Causes of Death (ICD) applied. The 1955 revision of ICD was used until the end of 1968 in all the four countries, and the introduction of the 1965 revision caused a delay in the publication of the 1969 data, making it impossible to deal with more recent data. A conversion from the earlier to the later revision of ICD or vice versa would otherwise have been possible for the cause groupings dealt with in this study.

The evaluation and analysis of cause-specific mortality rates call for special precautions when comparing levels in separate countries. Factors such as diagnostic accuracy, basis for cause-of-death determination, national differences in the training of doctors issuing death certificates, carefulness in coding of the underlying cause of death etc., all influence the cause-of-death statistics. This is the reason why the report deals only with broad cause groupings and covers a recent period, during which the quality of the cause-of-death statistics seems to be at a rather high level in all the four countries studied. Analyses of the cause-of-death trends, especially for the cardiovascular diseases, are avoided, as they would involve a careful study of all components, including those hidden by indeterminate diagnoses, e.g. those under the heddings of A 82, "Other diseases of heart", and of section XVI, "Symptoms, senility and ill-defined conditions".

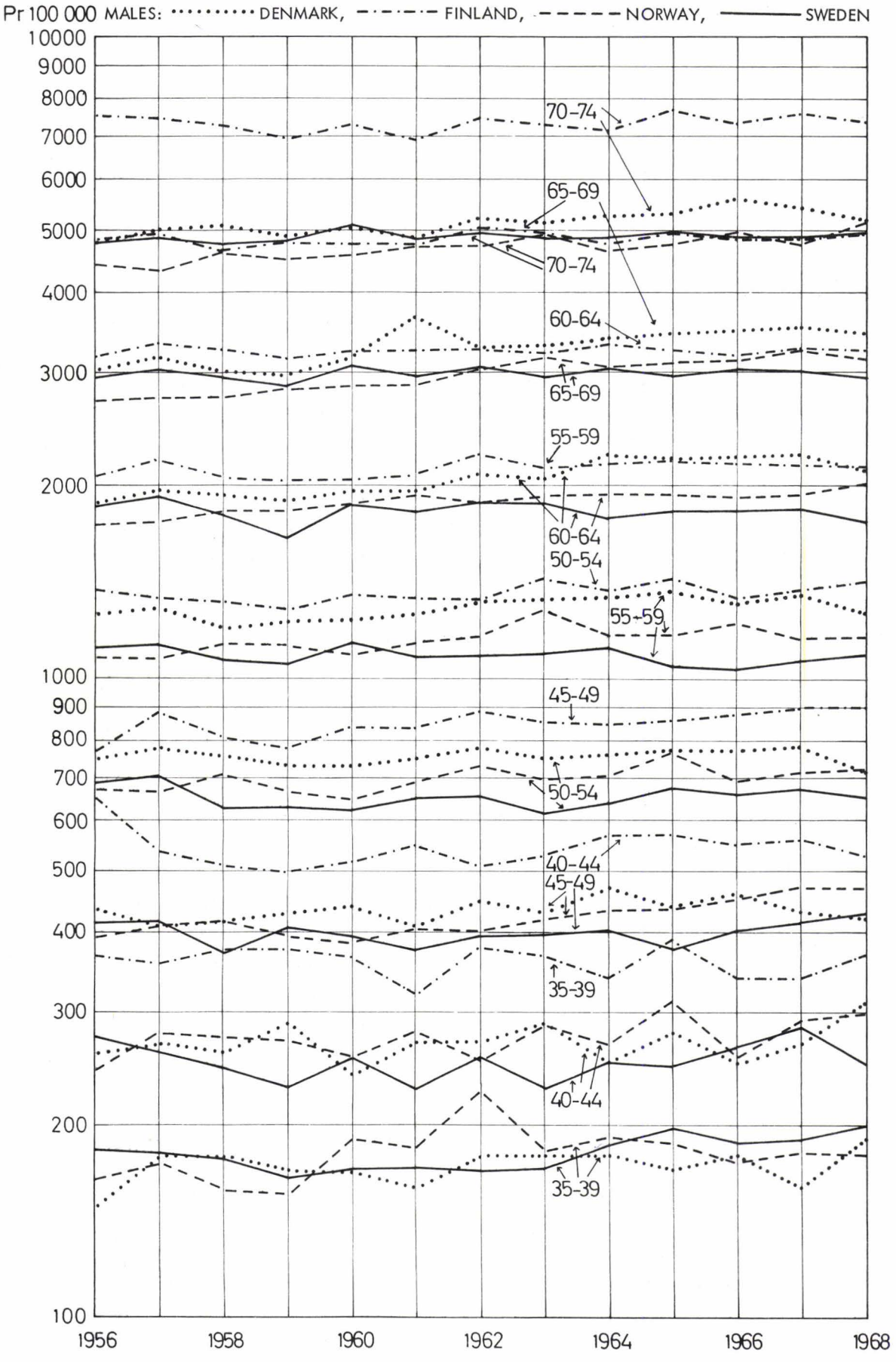

Fig. I TRENDS OF MALE MORTALITY BY AGE IN DENMARK, FINLAND, NORWAY, AND SWEDEN, 1956-1968

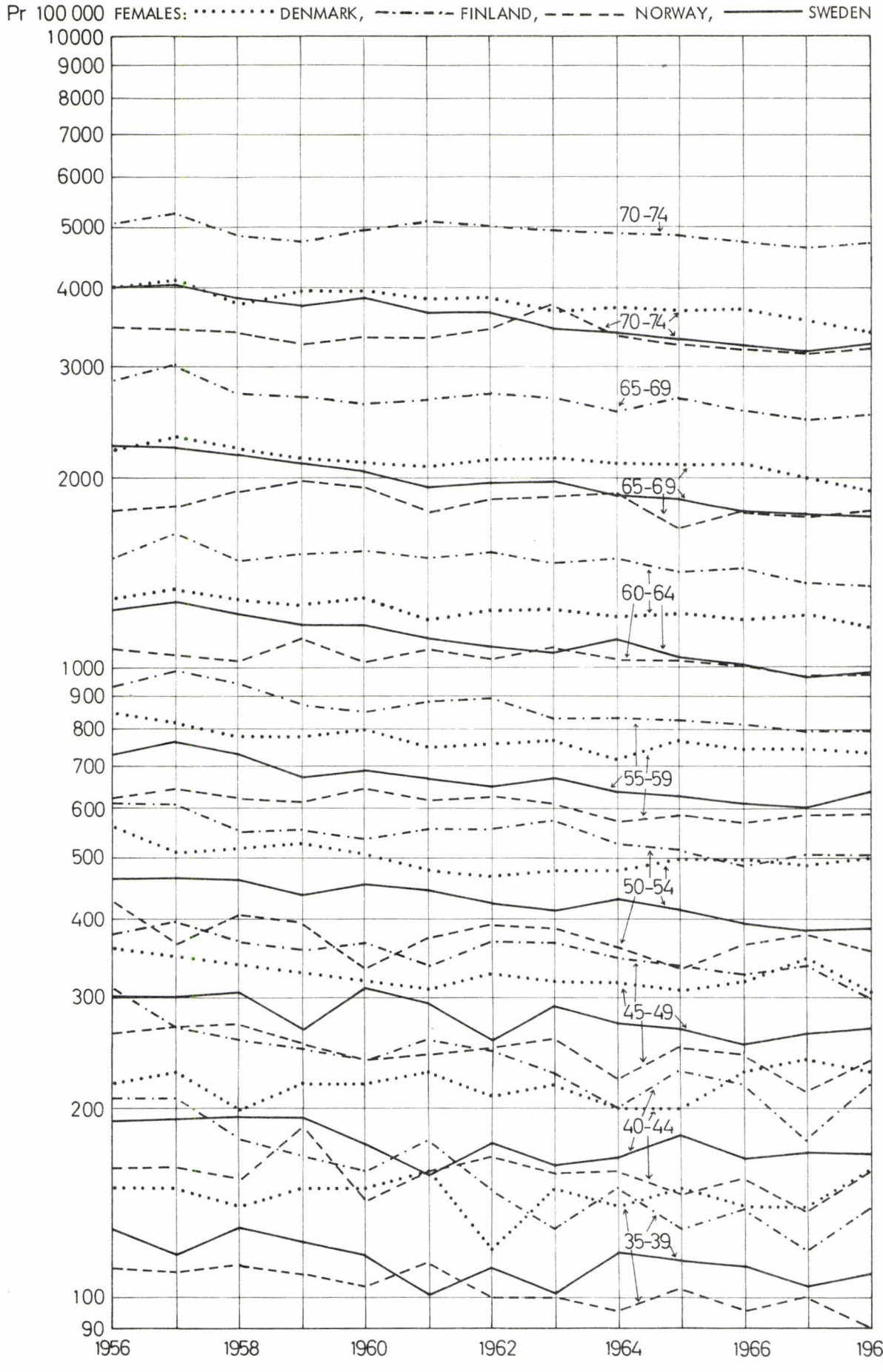

Fig. II TRENDS OF FEMALE MORTALITY BY AGE IN DENMARK, FINLAND, NORWAY, AND SWEDEN, 1956-1968

The report also deals with the sex differences in the mortality pattern, studied according to age and causes of death in the four countries. Different methods of describing male - or female - excess mortality have been applied. Weaknesses of the sex ratio as a measure of mortality, especially regarding its graphical illustration, are discussed in the last chapter, which presents a way of overcoming these deficiencies by using a different scaling and a complementary ratio.

2 TOTAL MORTALITY

2.1 Differences in mortality level

When comparing the mortality level of the four Nordic countries, the most obvious finding is the excess of the Finnish rates over those of the three other countries, and this applies both to male and female mortality (cf. table a and fig A page 45). The only exceptions from this rule during the three-year period 1966-1968 are slightly greater death rates for Norwegian children between the ages of 1 and 5 and for Danish women between 35 and 50 years. Similarly the order of the levels of infant mortality is reserved between Finland and Denmark.

2.2 The trends of mortality

The trends of mortality can be studied in two diagrams (fig I and II), describing the age- and sex-specific death rates in the Nordic countries from the mid -1950s. The development for Sweden has been described in more detail in an earlier series of reports[1] on the cause-of-death patterns, starting with the year 1951. The Finnish mortality level is consistently far above those of the other countries, the levels of which are so close that the lead during the illustrated period is taken alternately by one or the other of the three countries. This does not exclude the fact that there are differences and trends worthy of further analysis in the following chapters.

2.3 Life-table comparisons

The summarized mortality picture is obtained from the life-table comparison in fig. III, giving the expectation of life. For illustrative purposes it is arranged somewhat differently from the usual way, being expressed as expected age at death for selected ages. The computations are based on the period mortality for 1961-1965 for males and females. The ages chosen are 0 years, i.e. at birth, 15, 50, and 65 years, and subtraction of the initial ages from the expected ones gives the ordinary life expectancy figures. The lowest summarized mortality is experienced by Norwegian women, with a life expectancy of 76.0 years at birth, only a few months more than that of Swedish women. The excess over the life expectancy of Finnish women amounts to several years. Yet the values of female expectation of life at different ages are as a rule high enough to pass the male values in all countries. The excess mortality of Finnish men is so high as to create a difference in life expectancy of five to six years at birth and of two to four years at about 50 years in relation to that of men in the other Nordic countries.

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[1] In the series Statistical Reports, published by the National Central Bureau of Statistics, the following reports on the cause-of-death pattern in Sweden by A.M. Bolander have been issued:

SM Be 1966:11, Sex and age patterns of mortality by cause in Sweden in the 1950s
SM Be 1967: 2, Mortality patterns by cause in Sweden in 1961-1963
SM Be 1969: 2, Cause-of-death patterns and mortality trends in 1951-1966
SM Be 1969: 3, Mortality Patterns by cause in 1964-1966

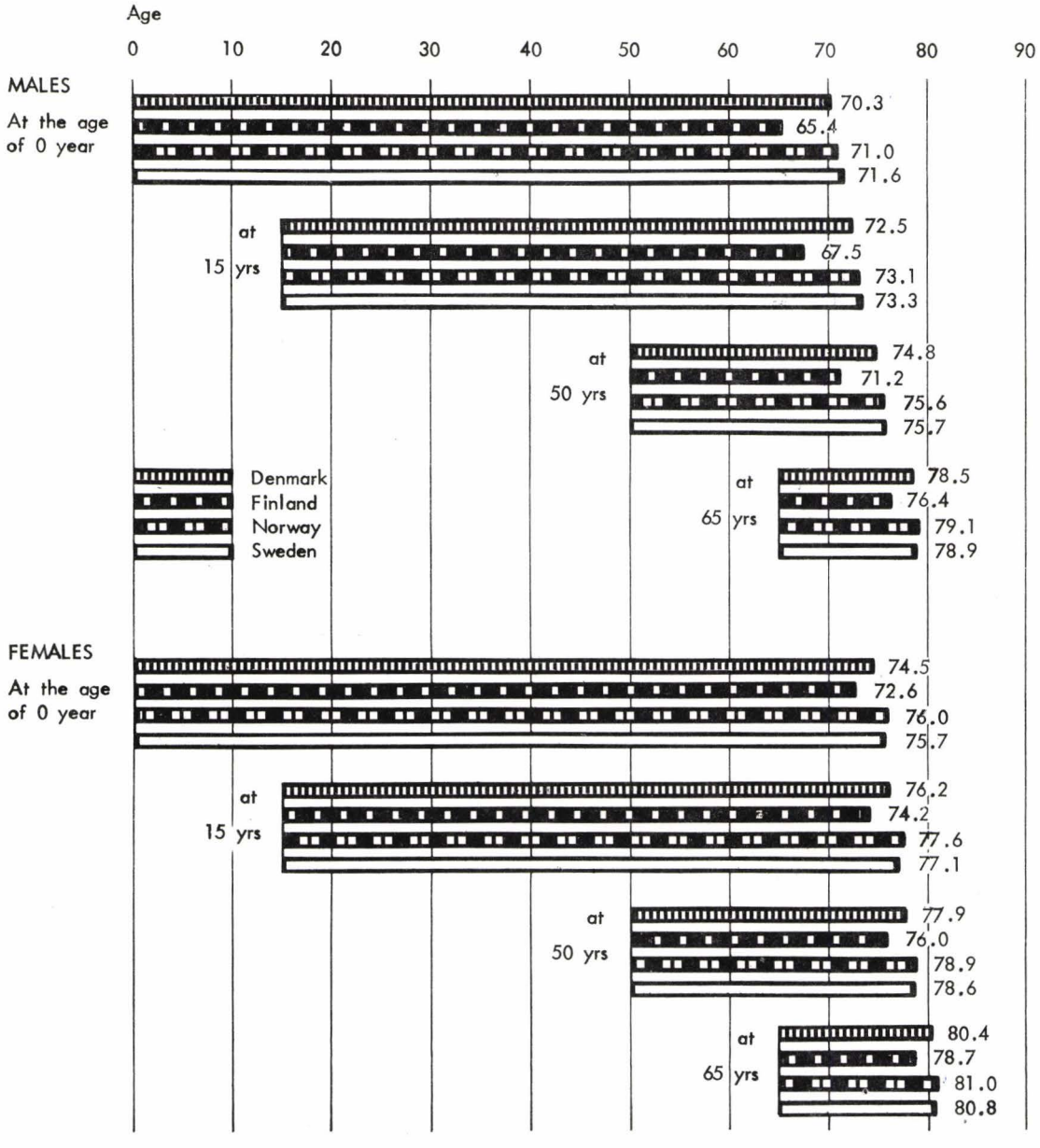


Fig. III EXPECTATION OF LIFE IN DENMARK, FINLAND, NORWAY, AND SWEDEN, 1961-1965, EXPRESSED AS EXPECTED AGE AT DEATH FOR SELECTED AGES OF MEN AND WOMEN

The average age to be attained is given at the end of each bar. The computations are based on period mortality for 1961-1965.

Table 1

INFANT MORTALITY IN DENMARK (Dk), FINLAND (Fi), NORWAY (No) AND SWEDEN (Sw), 1966-1968
Deaths per 100 000 live births by sex and age

Age	Males				Females			
	Dk	Fi	No	Sw	Dk	Fi	No	Sw
Early neonatal period, 0-6 days	1298	1162	1044	1057	918	899	777	775
Late neonatal period, 7-27 days	166	140	141	130	104	129	125	109
Post neonatal period, 28 days - 11 months	441	325	407	264	335	290	363	215
First year of life	1905	1627	1592	1451	1357	1318	1265	1099

2.4 Infant mortality

Though infant mortality is given a high weight in the computations of life expectancy, when counted from birth, its level in the Nordic countries nowadays has the effect of reducing the average number of years of life by only 1-2 years compared to 7 or 8 at the beginning of the century. In the graphical illustration of total mortality the infant death rates are excluded, as their level and construction make them hard to fit into the picture. A separate table illustrates the death rates for the different parts of the first year of life, counted per 100,000 live births (Table 1). There is always an arbitrary element in the comparison of very early infant deaths, as the borderline to still-birth may be drawn differently in spite of common definitions and rules. Differences in the rates for the later parts of the infant year are more reliable and are probably influenced to a greater extent by environmental factors. However, the excess males rates are important also in this period of life, pointing to inherent rather than to environmental differences between the sexes.

2.5 Sex and age distributions of populations and of deaths

From a comparison of the crude or general death rates for the four countries with the sex- and age-specific series of rates, presented in table a, one may conclude that there must be considerable differences in the age distribution of the countries in question, as the crude death rates do not even rank the different countries according to mortality level. These differences in sex and age structure of the four populations can be studied in fig IV, representing the population pyramids for the period 1966-1968. The actual size of the populations at risk, i.e. the mean population in the period of study, is illustrated by the graphs. The percentages by sex and ten-year age groups given in columns on the sides of each pyramid make it easier to grasp the dissimilarities. In a similar way the percentage distributions of annual deaths by age and sex are illustrated by a profile for each country in fig. V. The black parts of the bars represent the deaths from natural causes and the excess of the white over the black bars shows the accidents. The main characteristics of the profiles are common to all four countries but are more or less predominant. The excess of male over female deaths perceivable from the lowest age group and up to or beyond pensionable age is to some extent explained by differences in population, e.g. the larger number of male than of female births, but there is no doubt that the main cause is the male excess mortality. The supermortality of men in its turn has a bearing on the shape of the population pyramids, giving a visible "overweight" of women in the upper age classes, starting earlier and with more emphasis in Finland. It is sometimes easier to make comparisons

Table 2

MEDIANS, LOWER AND UPPER QUARTILES OF AGE AT DEATH OF MEN AND OF WOMEN BY COUNTRY, 1966-1968

Country	Lower quartile		Median		Upper quartile	
	Males	Females	Males	Females	Males	Females
DENMARK	60.8	64.9	71.4	75.2	79.9	82.5
FINLAND	54.3	63.7	65.3	73.6	74.7	80.8
NORWAY	60.8	67.1	71.7	76.7	80.3	83.8
SWEDEN	62.1	67.2	72.6	76.6	80.7	83.4

on a numerical basis and therefore the differences in age distribution of deaths is also given in table 2 in the form of order statistics. The median and the upper and lower quartiles are counted separately for each sex in the four countries.

These fractiles of age at death, completing the image given by the profiles, illustrate the actual situation in each country. They reflect the combined effect of differences in mortality and in population structure. Their purpose is merely informatory for each country by itself and they relate solely to the present conditions. As a basis for objective comparisons of mortality differences they have too complex a structure. The fact that half of the deaths among Finnish men occur before the age of 65.3, whereas the median age of male deaths in Denmark, Norway, and Sweden is 71.4, 71.7 and 72.6 respectively, ought to have an impact on health programmes, preventive measures, and organization of medical attendance of old people in the particular countries.

2.6 Standardized death rates

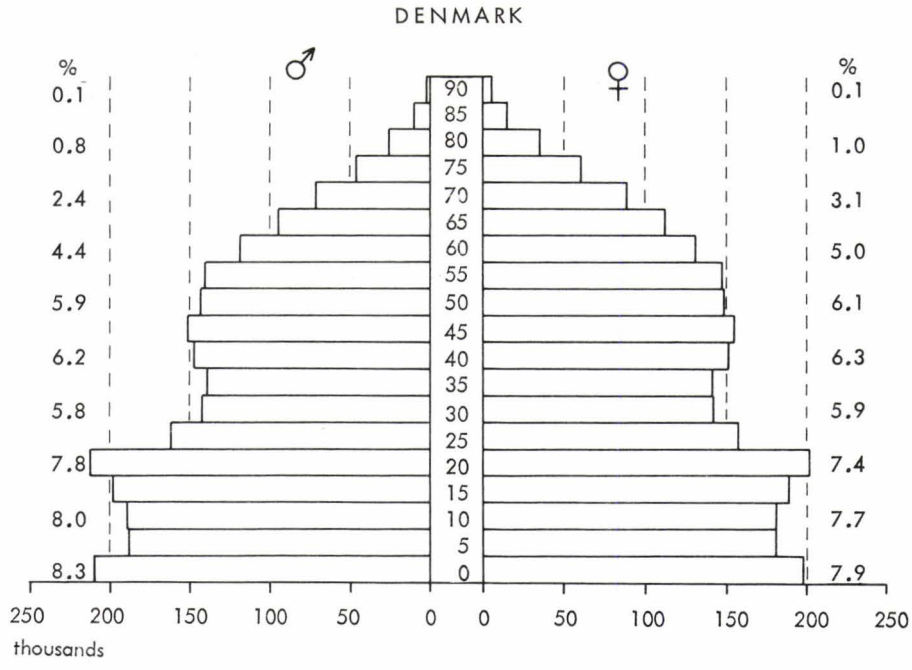
A usual way to avoid the influence of differences in age structure, and yet to obtain comprehensible and summarizing mortality measurements, is to standardize by a direct method, i.e. applying the observed rates to a standard population as close to the actual populations as possible. The population chosen for the calculations of standard rates for the Nordic countries has the age distribution of both sexes by five-year groups of the four countries together. In the standard rates obtained by this method the differences in age structure are eliminated between sexes as well as between countries. The results are given in table 2 for broad age groupings by sex and country.

Table 3

STANDARDIZED DEATH RATES BY COUNTRY, SEX, AND BROAD AGE GROUPS, 1966-1968

The computations are based on male and female death rates per 100 000 mean population by five-year age groups applied to a standard population of the mean of both sexes and all the four countries.

Country	Age 1 - 14		15 - 24		25 - 44		45 - 74		75 -	
	M	F	M	F	M	F	M	F	M	F
DENMARK	60	40	96	39	169	126	1 888	1 147	12 106	9 892
FINLAND	67	46	119	46	321	122	2 841	1 384	15 814	13 034
NORWAY	65	40	100	36	176	86	1 730	970	11 211	9 306
SWEDEN	47	33	99	44	180	103	1 634	991	11 805	9 655



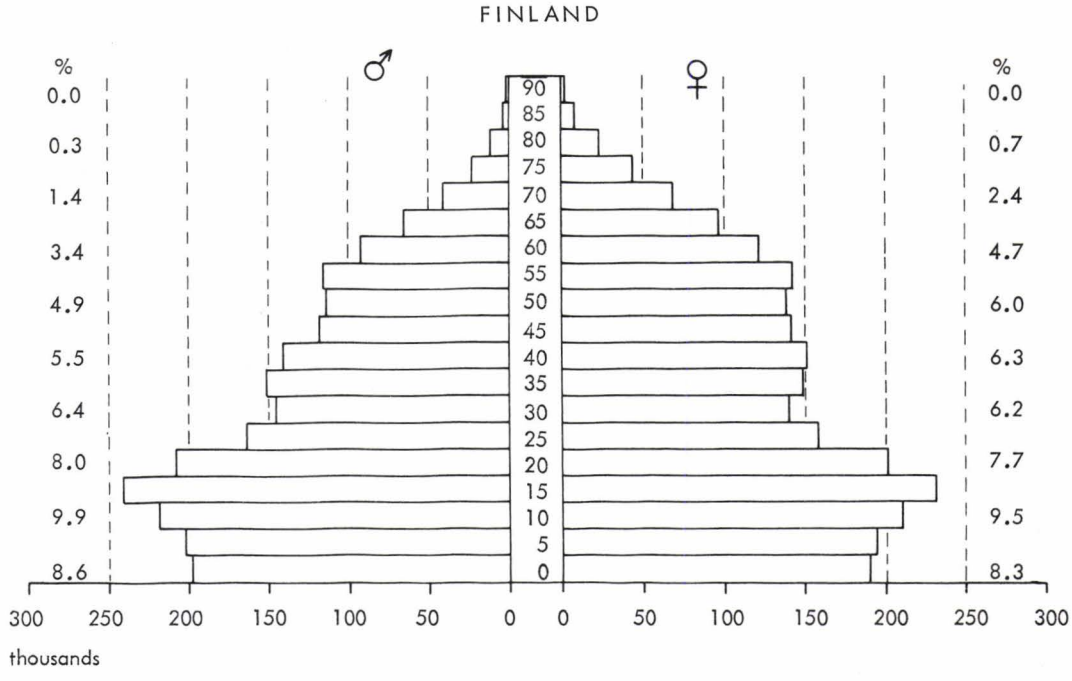
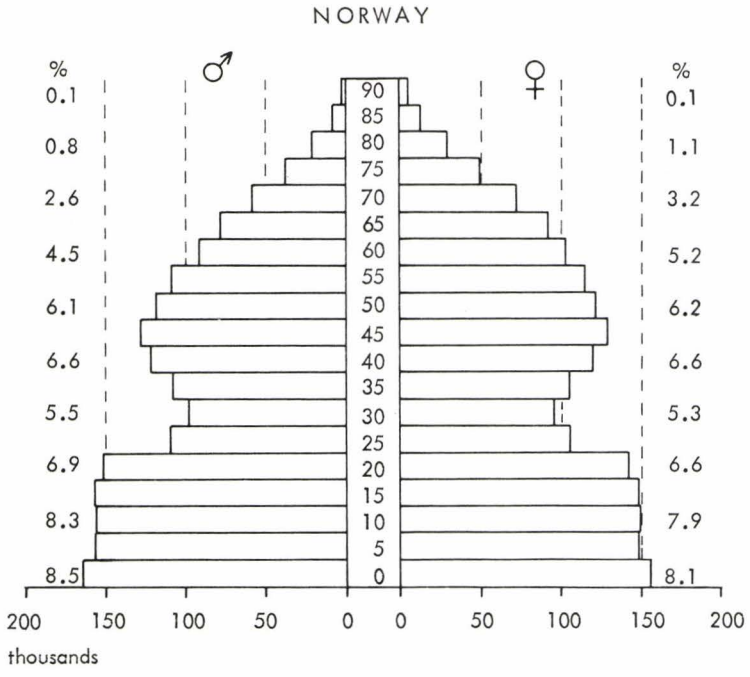


Fig. IV POPULATION PYRAMIDS FOR DENMARK AND FINLAND

The pyramids reflect the distribution of the mean population of each country in 1966-1968 by sex and five-year age groups in thousands of inhabitants. Percentage by sex and ten-year age groups of the total population are given on each side of the pyramids.

MEAN POPULATION	Denmark:	2.40 million males	2.44 million females
	Finland:	2.25 million males	2.41 million females



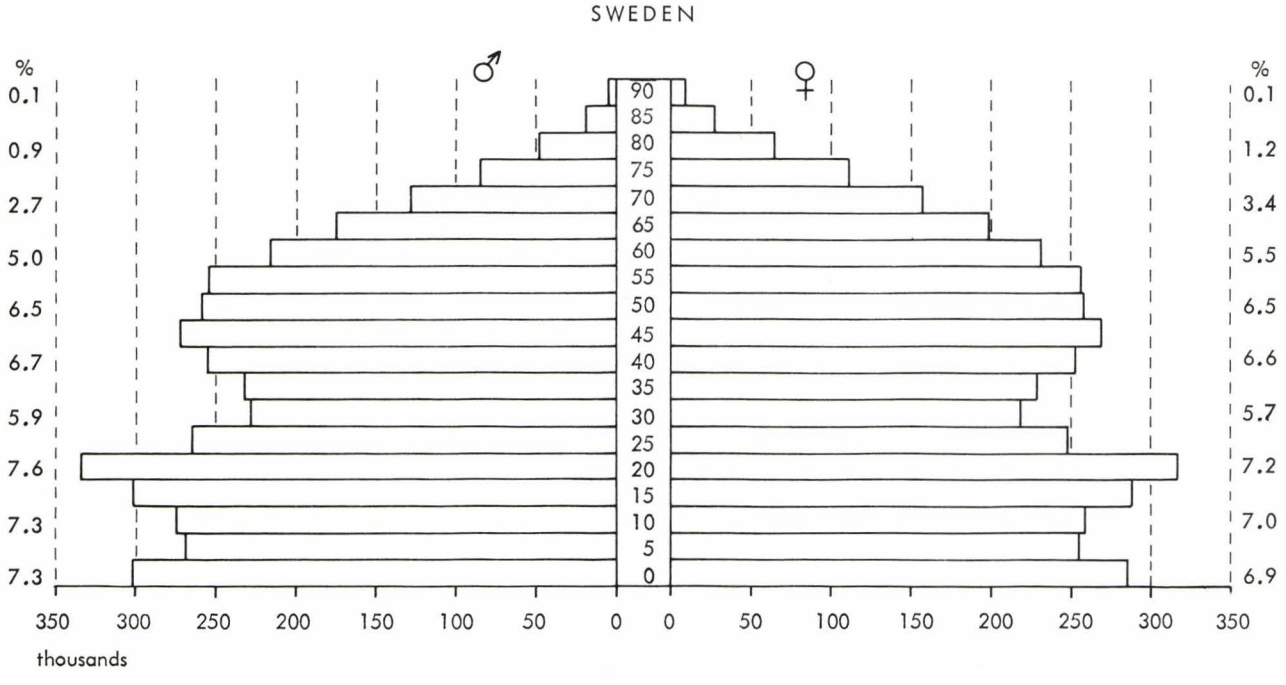


Fig. IV cont. POPULATION PYRAMIDS FOR NORWAY AND SWEDEN

The pyramids reflect the distribution of the mean population of each country in 1966-1968 by sex and five-year age groups in thousands of inhabitants. Percentages by sex and ten-year age groups of the total population are given on each side of the pyramids.

MEAN POPULATION	Norway:	1.89 million males	1.90 million females
	Sweden:	3.93 million males	3.94 million females

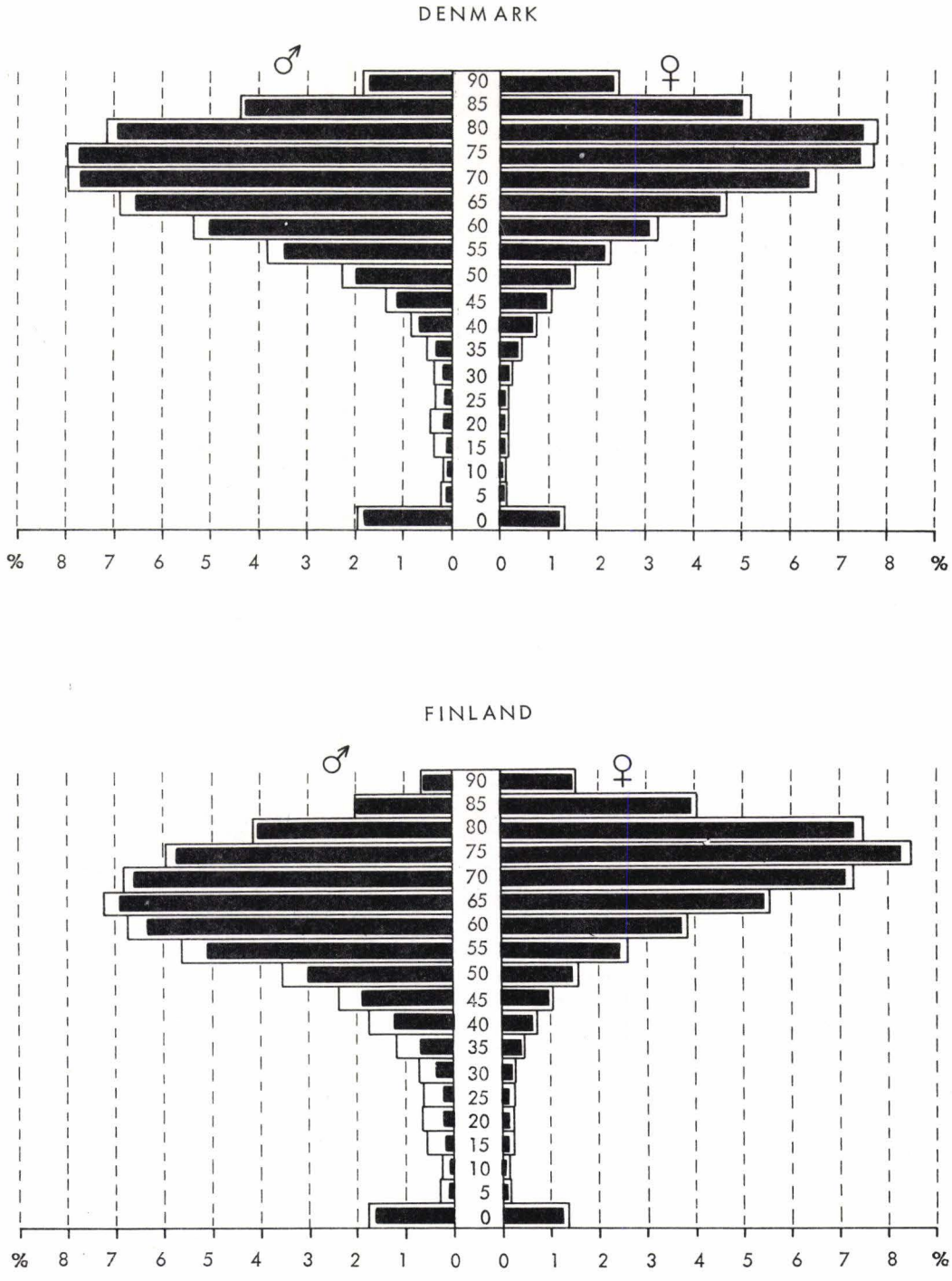


Fig. V PROFILES OF THE PERCENTAGE DISTRIBUTION OF DEATHS BY SEX AND AGE IN DENMARK AND FINLAND, 1966-1968

The black parts of the bars represent the deaths from natural causes. The entire profile illustrates the percentage of deaths by sex and five-year age groups. The area of each profile is equal to 100%.

ANNUAL DEATHS	Denmark:	26 100 males	22 100 females
	Finland:	23 300 males	20 800 females

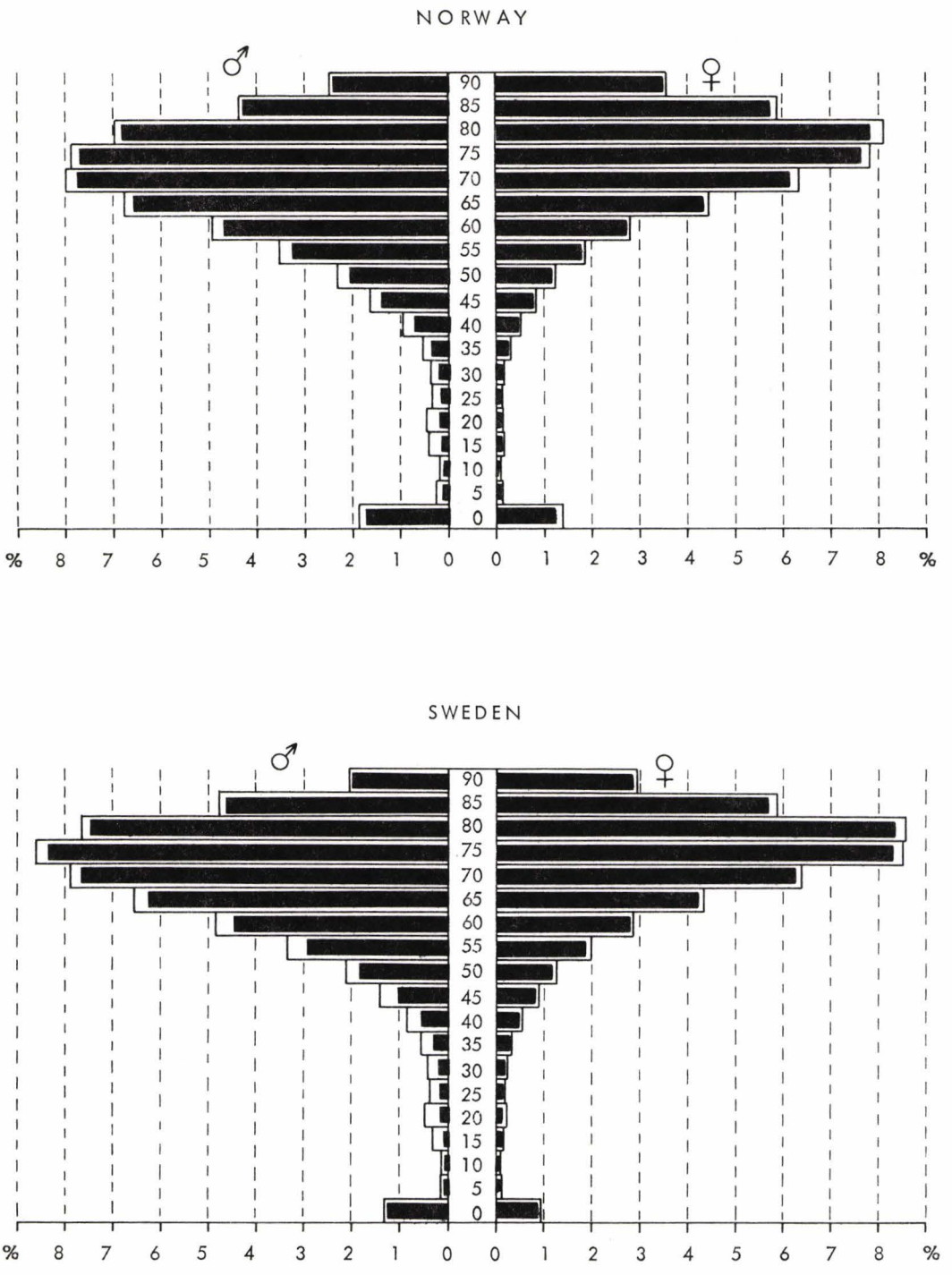


Fig. V cont. PROFILES OF THE PERCENTAGE DISTRIBUTION OF DEATHS BY SEX AND AGE IN NORWAY AND SWEDEN, 1966-1968

The black parts of the bars represent the deaths from natural causes. The entire profile illustrates the percentages of deaths by sex and five-year age groups. The area of each profile is equal to 100%

ANNUAL DEATHS	Norway:	19 900 males	16 800 females
	Sweden:	43 200 males	37 000 females

2.7 Sex- and age-specific death rates

It has often been said that the safest measure of mortality comparisons is the sex- and age-specific central death rates for narrow age groups of not more than five years. The only disadvantage of such a procedure is the quantity of figures to survey. This can be partly remedied, however, by assembling the data in diagrams and curve charts. This has been the principle for almost all the numerical data in this study. Comments on more or less obvious findings in tables and diagrams have not been considered necessary in this report, the purpose of which is to serve as a background for further investigations of Nordic mortality differences. The set of age curves of male and female mortality from all causes as well as from separate cause groupings makes it easy to follow the mortality patterns in the countries. When dealing with total mortality, very few precautions in interpretation have to be observed as long as national rates are considered in populations in which the external migration, as is the case in the Nordic countries, has not yet had an impact on ages at which mortality has reached an important level.

Judging from the age curve of male and female mortality in Fig. A and the numerical data underlying the graph in table a, referred to earlier in this chapter, the characteristic pattern seems to be common to all the four countries. The lowest age rate comes around 10 to 14 years, followed by the steepest rise on the whole age scale. The minimum of the curve seems to have fallen in the same age interval for centuries, but the steep rise was formerly prolonged to include also the subsequent age group up to 25 years. This development is clarified by the parallel study of the age curves for "natural causes" (Fig. B) and for "accidents and violence" (Fig. G). Nowadays the sudden increase in the age rate for young people is almost entirely explicable by the development of the death rates due to accidents, probably connected with the age at which a driving licence may be obtained (cf. fig H). The fact that the tendences are less outspoken among young girls is further evidence of this assumption. Only thirty years agothere was still an increase in this part of the age curve of mortality from tuberculosis and other infection diseases.

The impact of the accidental group on the male excess mortality seems to play a key role in its development, but only in the first half of the age scale. As the sex differences of total mortality along the age curves can hardly be dealt with without a differentiation into so-called natural causes and accidents, the whole question will be considered later. The main graphs and the tables, illustrating the male excess of total mortality will be found on pages 45 and 64.

3 CAUSE-OF-DEATH PATTERNS

3.1 The distribution of causes in broad outline

It is seldom possible to distinguish differences between countries with relatively similar cause-of-death patterns from summary diagrams. This is partly the case for the bar-charts illustrating the male and female cause-of-death distribution at different ages in the four Nordic countries (Fig. VI a-d page 20-23). The purpose of these graphs, however, is not to reflect the differences in mortality by age, sex, and country, but to embrace and give a view of the pattern as a whole, disregarding the distortion caused by the considerable differences in death intensity at the beginning and end of the age scale, and also between the countries. The death rates starting with less than one death per thousand mean population in childhood, and increasing by stages to a value of more than 200, are indicated on the graphs above or below each bar. Overlookning the obvious sex differences, it is as important to emphasize the similarity of the patterns as to demonstrate modest differences.

For guidance in reading the graphs, tables have been worked out of proportionate distributions of the cause groupings, given per thousand deaths in each sex and age group (Tables 4 a-d).

3.2 Deaths caused by accidents and violence

Deaths among the young and the middle-aged are often more upsetting than among the elderly. It is therefore natural to pay more attention to them than their relative importance would warrant. This is exactly what is achieved by illustrating the mortality pattern by proportionate distributions of causes of death by separate age groups. The most striking feature of the left parts of the bar-charts is the predominance of accidents and suicides, covering more than half of the area for young males of all the four countries. One is more apt to regard the so-called natural causes of death as inevitable, whereas mortal accidents would seem to be more controllable by preventive measures. The pattern clearly points to a considerable need for such measures.

The main section XVII of the ICD, giving the external causes of accidents, poisoning and violence, is here broken down by motor vehicle accidents (AE 138), suicides (AE 148), and a remainder group. The low proportion of suicides in Norway may to a small extent be compensated by a higher percentage of deaths in the remainder group, including drowning, accidental falls from a height, and poisoning. Very few deaths on the whole from poisoning by analgesics and soporifics have in fact occurred in Norway.

There is a characteristic increase in the proportion of accidents shown by the female bars at advanced ages, which may need some explanation. The cause of this increase is accidental falls, mostly "falls at the same level", with a femur fracture as the injury which, according to the WHO selection rules, should be regarded as the underlying cause of death. But the initial event is often dizziness, a slight stroke, or other cerebrovascular injury, and the fracture, coded as the mortal injury, will often have this outcome because of earlier impairment of the circulatory system caused by arteriosclerosis, making it unable to function under the strain of a long spell in bed.

DENMARK

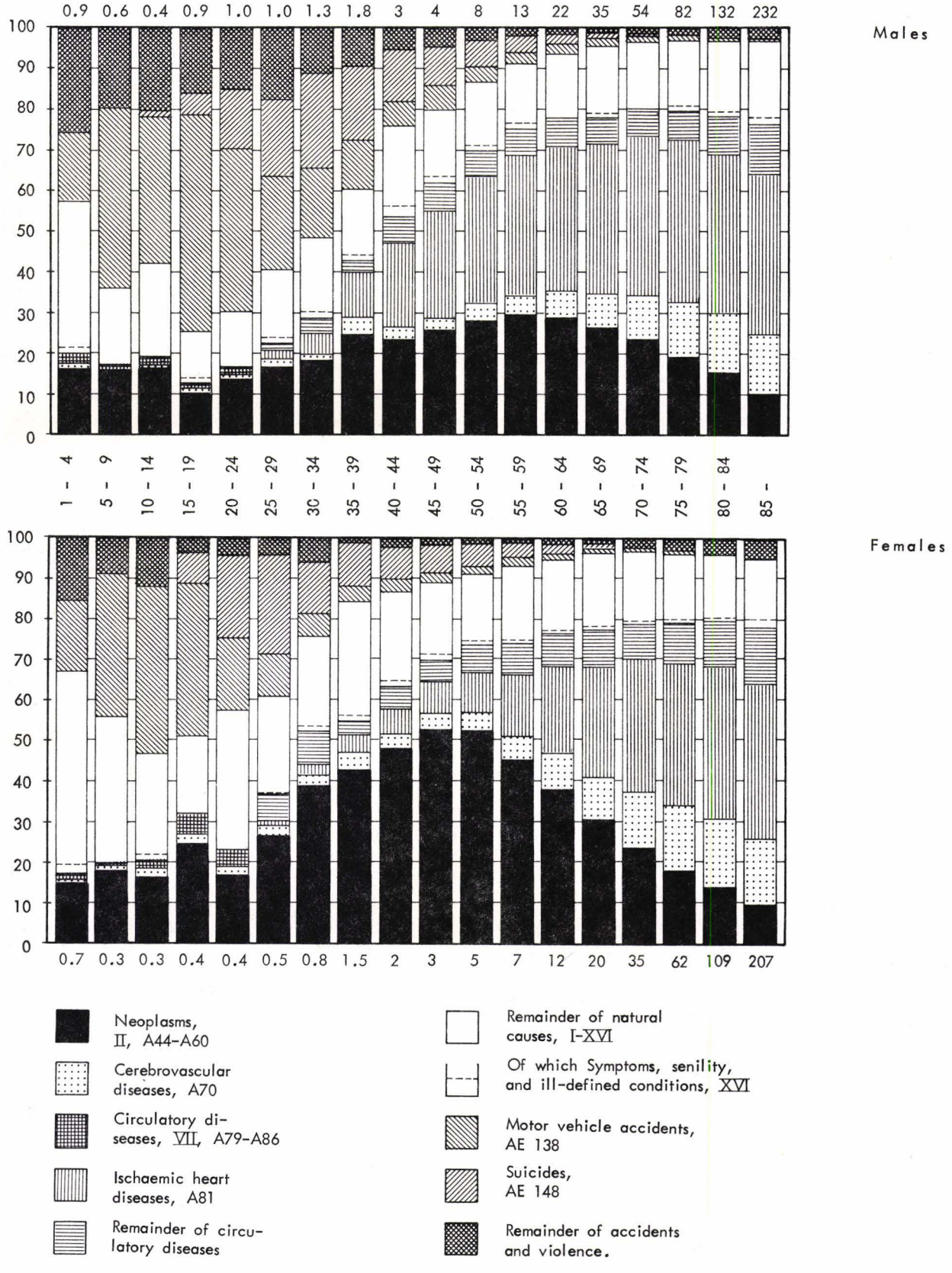
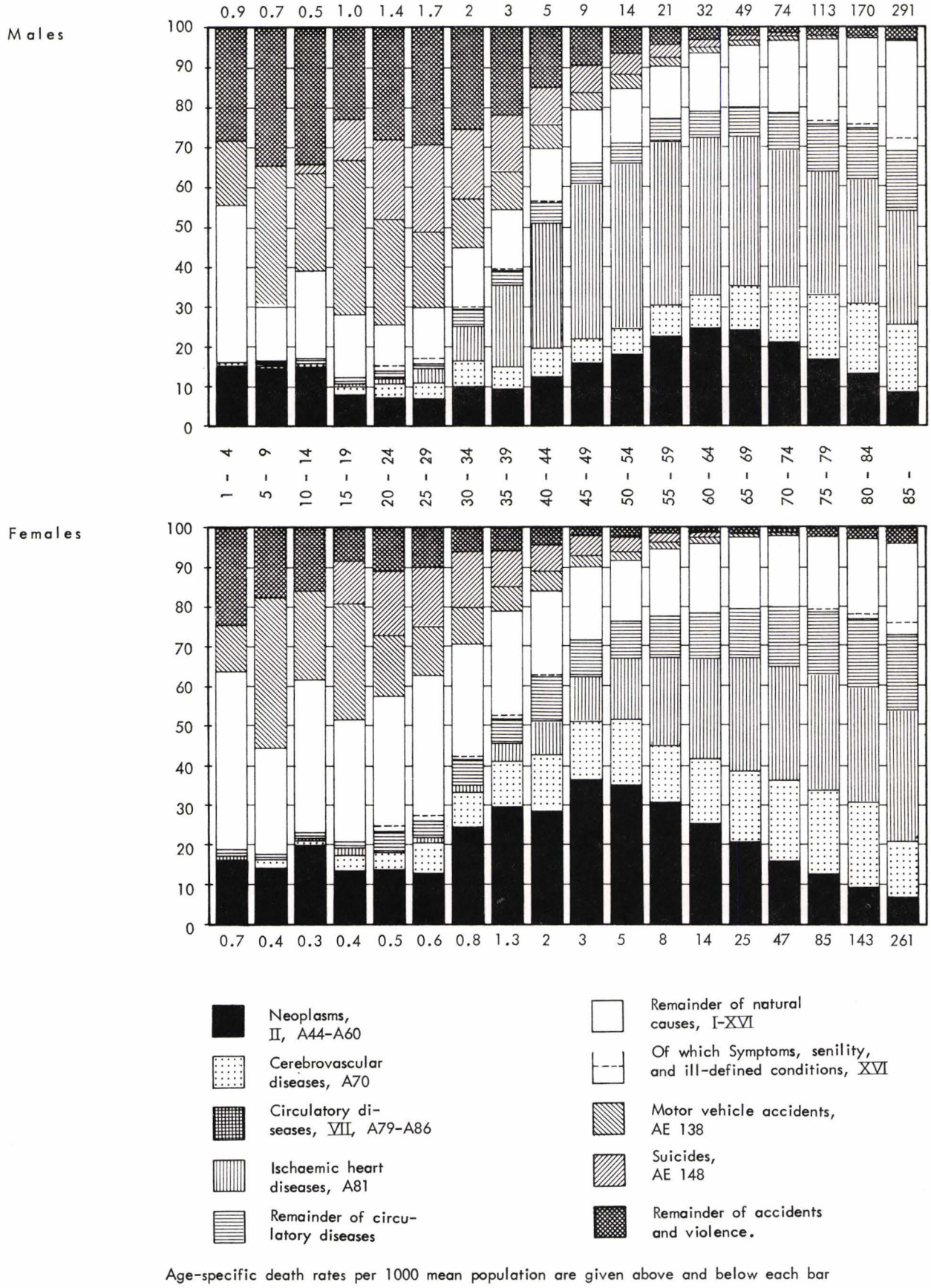


Fig. VI PROPORTIONATE DISTRIBUTIONS OF DEATHS ON MAIN CAUSE GROUPINGS, 1966-1968

FINLAND



Age-specific death rates per 1000 mean population are given above and below each bar

NORWAY

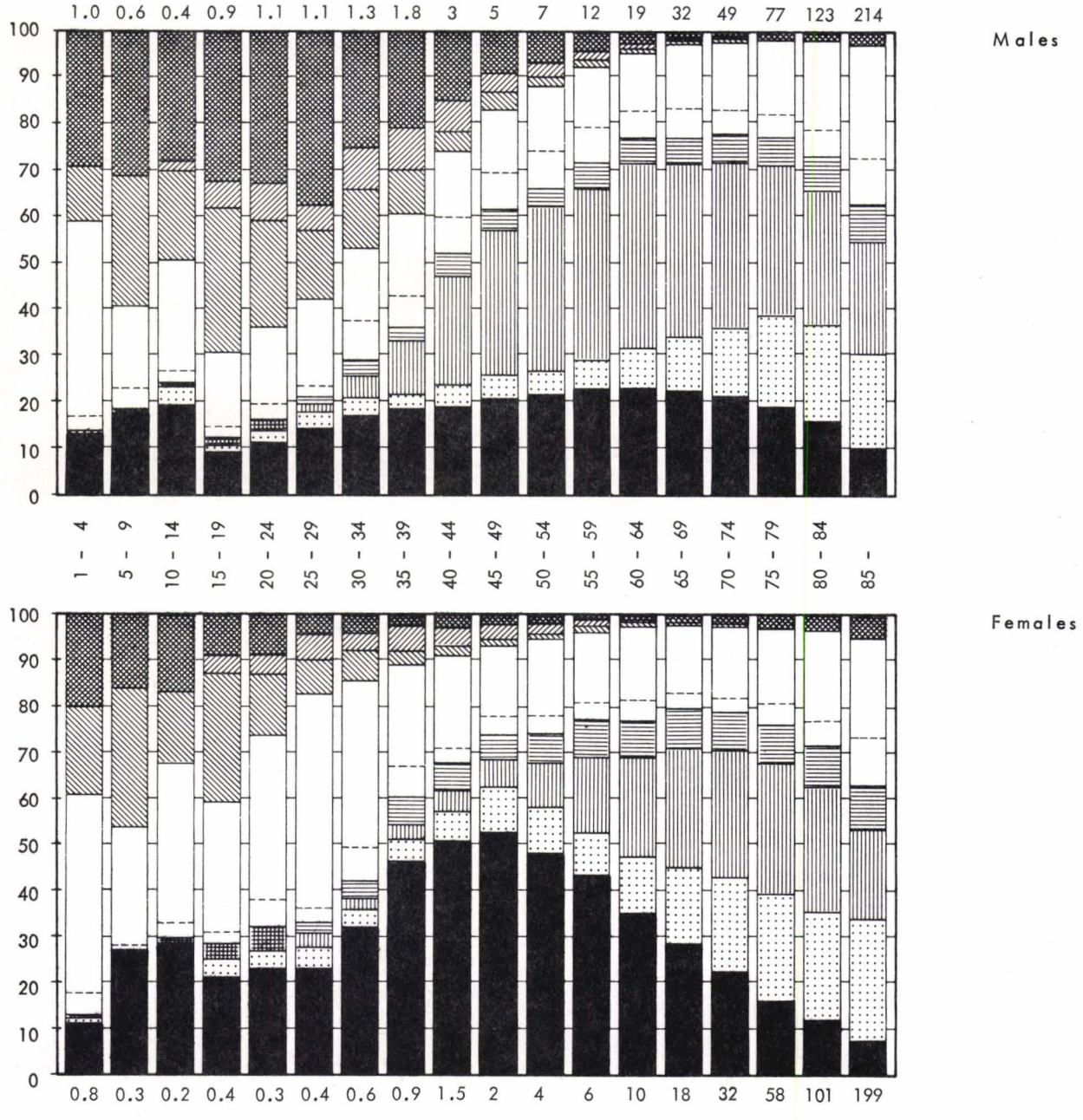
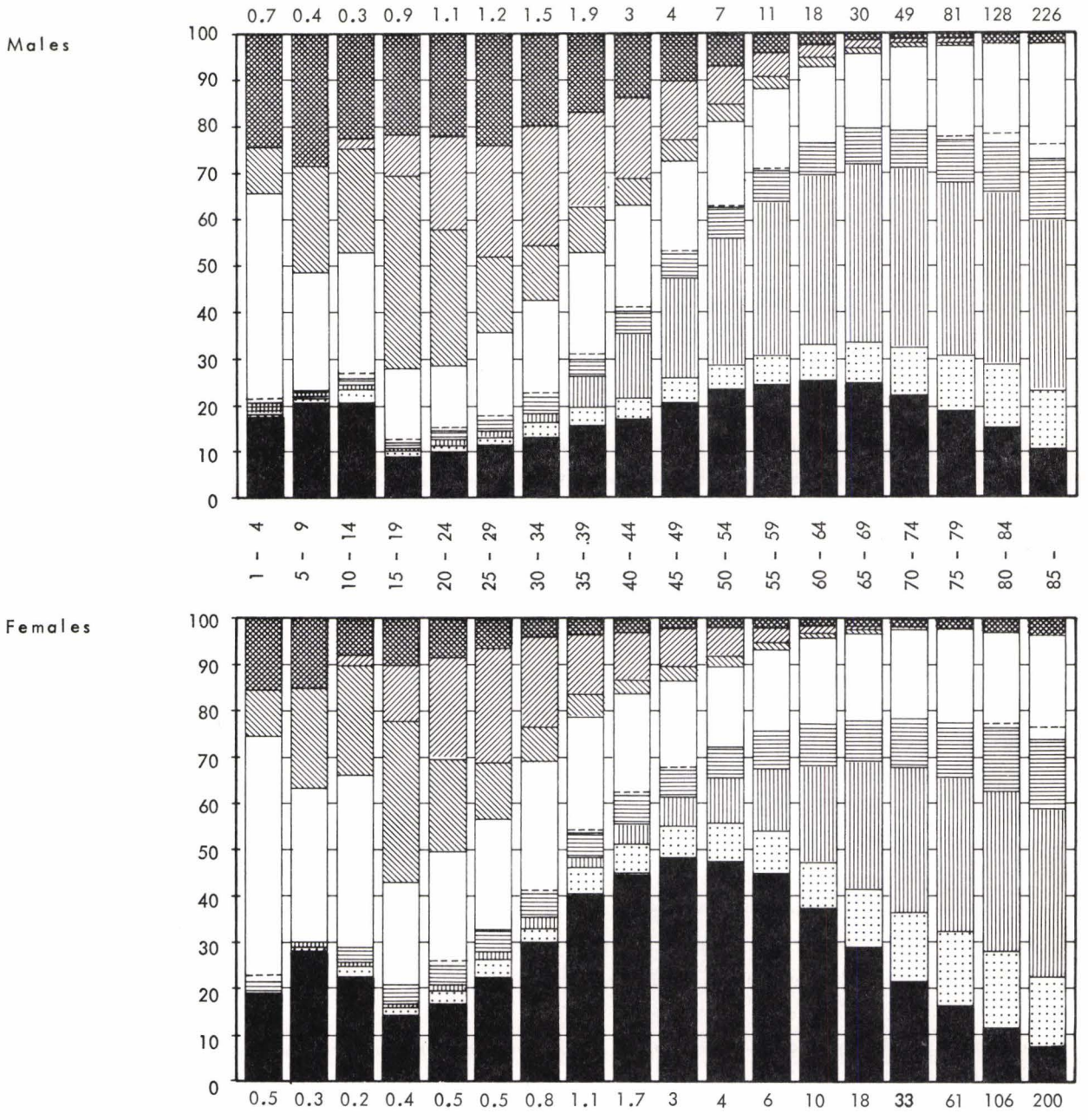


Fig. VI cont. PROPORTIONATE DISTRIBUTIONS OF DEATHS ON MAIN CAUSE GROUPINGS, 1966-1968

SWEDEN



Age-specific death rates per 1000 mean population are given above and below each bar

3.3 The main disease groups in the cause-of-death pattern

The greater relative importance of neoplasms as cause of death in women than in men of active age is obvious and is most pronounced in Denmark (Fig. VI a-d). The genital system is the dominant site of mortal neoplasms among young women in all the Nordic countries. The most common type of genital neoplasms in men, prostate cancer, starts at a later age and causes fewer deaths than do the female sites, breast, uterus and ovaries.

The majority of all male and female deaths from cancer, however, are diagnosed to the digestive system. Although lung cancer has been very much in focus during the last decade, it is quantitatively less important, ranging from every third to fourth death from neoplasms among Finnish and Danish men, and every eighth among Norwegian and Swedish men, respectively. Among female deaths from neoplasms only 3 to 5 per cent are lung cancer cases.

The distribution by age of the three kinds of areas representing the cardiovascular diseases deserves examination. This will be considered later on, however, when presenting some other illustrations of the quantitative importance of the CVD components. The dotted areas represent the cerebrovascular lesions, the vertically striped parts ischaemic heart diseases, and the horizontal stripes other diseases of the circulatory system. The four countries present a more or less varied picture, all dominated by the IHD component. It is hard to know whether the distributions reflect real differences between the countries in the CVD pattern.

Differences in diagnostic habits and in the bases for cause determination may have artefact influences on the frequencies. The assembly of causes referred to the CVD group in the varions countries has a more similar distribution than the seperate components if the sex patterns are kept apart. A few characteristics stand out very clearly. One is the much lower age of incipience in Finland, especially among men. Another is the consistently increasing proportion of the cardiovascular diseases by age in all countries but Norway. This deviation from the common pattern is most likely due to the large proportion in the Norwegian distribution of cases of section XVI, "Symptoms, senility, and ill-defined conditions", often concealing probable CVD deaths. It is therefore easy to be misled by influences from these ill-defined and uncertain diagnoses in the interpretation of differences between countries.

The predominance in Norway of cases referred to this group, of which moste come under the heading of "Sudden death (unknown cause)", is more probably a result of differing habits in issuing death certificates than of real differences in the disease pattern. An increase in the proportion of autopsies i Norway would evidently help to overcome this deficiency. The frequency of cases in section XVI is in fact often regarded as a quality test of the cause-of-death material. In the present set of graphs it is illustrated by a dotted line separating it from the remainder group of natural causes.

As will be seen from table 4, the proportion is obviously so small in all countries except Norway that its influence can be left out of consideration, possibly with the exception of the very last age group, for which the determination of underlying cause-of-death is on the whole an intricate and very uncertain undertaking. A further study of the content of the ICD detailed list level favours a simple addition of the cases in section XVI to the CVD group in order to remedy as far as possible their disturbance of the comparability. This has also been done in the comparative graphs of CVD mortality, described later in this report.

Table 4a

PROPORTIONATE DISTRIBUTION OF DEATHS IN DENMARK ON MAIN CAUSE GROUPINGS BY AGE AND SEX, 1966-1968

Age	Neo-plasms	Cerebro-vascular	IHD	Other circulatory	Senility, ill-defined	Remainder nat. causes	Motor veh. accidents	Suicide	Remainder accidents	Total	Death rate per 100 000
	II	A70	A81	part of VII	XVI		AE138	AE148			
MALES											
0	9	1	-	2	34	930	1	-	23	1000	1 905
1 - 4	162	16	2	19	14	358	171	-	258	1000	85
5 - 9	162	-	3	6	6	185	441	-	197	1000	56
10 - 14	164	8	8	12	8	220	360	16	204	1000	44
15 - 19	103	11	2	11	11	116	532	55	159	1000	89
20 - 24	137	11	6	14	8	125	402	145	152	1000	103
25 - 29	167	19	21	19	13	165	231	188	177	1000	96
30 - 34	182	15	52	39	15	180	171	234	112	1000	126
35 - 39	247	42	111	28	12	163	122	182	93	1000	177
40 - 44	235	31	204	64	26	199	62	126	53	1000	274
45 - 49	259	29	263	70	15	162	59	96	47	1000	440
50 - 54	281	42	312	64	13	157	38	64	29	1000	761
55 - 59	297	46	345	64	13	149	27	39	20	1000	1 307
60 - 64	290	66	354	70	9	147	25	23	16	1000	2 181
65 - 69	265	84	365	67	10	164	22	12	11	1000	3 481
70 - 74	237	108	389	68	9	155	15	8	11	1000	5 394
75 - 79	192	136	398	71	10	161	14	5	13	1000	8 238
80 - 84	155	146	389	93	11	175	8	4	19	1000	13 237
85 -	103	146	393	122	17	187	5	3	24	1000	23 223
Total	209	96	342	73	12	189	32	23	24	1000	1 088
FEMALES											
0	11	-	-	3	24	940	1	-	21	1000	1 357
1 - 4	151	6	-	16	19	480	174	-	154	1000	65
5 - 9	179	11	6	-	-	363	352	-	89	1000	33
10 - 14	163	21	-	21	14	249	411	-	121	1000	26
15 - 19	246	22	4	49	4	188	375	76	36	1000	39
20 - 24	169	21	-	42	8	336	178	203	43	1000	39
25 - 29	266	26	9	69	4	235	103	245	43	1000	49
30 - 34	391	24	27	82	12	222	58	127	57	1000	77
35 - 39	429	44	42	36	11	280	41	104	13	1000	145
40 - 44	482	36	61	57	11	219	34	77	23	1000	233
45 - 49	529	40	78	53	14	179	24	67	16	1000	327
50 - 54	527	45	97	68	10	166	18	55	14	1000	496
55 - 59	455	59	149	78	9	183	22	35	10	1000	743
60 - 64	382	90	212	82	10	173	15	23	13	1000	1 191
65 - 69	310	103	272	91	9	180	11	11	13	1000	2 009
70 - 74	239	139	327	87	7	170	9	6	16	1000	3 547
75 - 79	182	163	348	102	9	159	7	3	27	1000	6 174
80 - 84	142	171	373	112	10	155	4	2	31	1000	10 925
85 -	99	164	380	141	20	147	2	0	47	1000	20 681
Total	234	127	289	97	11	187	14	14	27	1000	905

Table 4b

PROPORTIONATE DISTRIBUTION OF DEATHS IN FINLAND ON MAIN CAUSE GROUPINGS BY AGE AND SEX, 1966-1968

Age	Neo-plasms II	Cerebro-vascular A70	IHD A81	Other circulatory part of VII	Senility, ill-defined XVI	Remainder nat. causes	Motor veh. accidents AE138	Suicide AE148	Remainder accidents	Total	Death rate per 100 000
MALES											
0	6	1	2	3	4	954	2	-	28	1000	1 627
1 - 4	153	9	2	-	-	391	162	-	283	1000	90
5 - 9	145	5	5	7	2	135	354	-	347	1000	66
10 - 14	147	9	-	13	3	217	245	22	344	1000	49
15 - 19	78	20	8	16	-	157	388	104	229	1000	101
20 - 24	72	33	15	18	11	105	266	198	282	1000	136
25 - 29	68	40	38	11	11	129	191	217	295	1000	168
30 - 34	98	66	86	45	5	148	122	174	256	1000	214
35 - 39	92	66	196	35	7	147	95	141	221	1000	348
40 - 44	123	72	314	51	6	131	58	95	150	1000	547
45 - 49	157	64	388	52	3	128	44	68	96	1000	894
50 - 54	181	64	414	53	4	131	35	53	65	1000	1 371
55 - 59	225	79	409	57	3	130	21	33	43	1000	2 148
60 - 64	246	86	391	67	2	143	17	19	29	1000	3 247
65 - 69	243	110	374	74	2	151	14	14	18	1000	4 861
70 - 74	211	139	344	90	3	179	11	8	15	1000	7 445
75 - 79	168	160	312	118	7	205	10	4	16	1000	11 311
80 - 84	130	177	312	128	9	217	6	4	17	1000	16 971
85 -	84	170	285	152	30	244	5	3	27	1000	29 062
Total	181	106	325	77	5	187	33	31	55	1000	1 034
FEMALES											
0	5	-	3	2	3	950	1	-	36	1000	1 318
1 - 4	163	-	9	18	3	445	116	-	246	1000	73
5 - 9	141	22	-	13	4	265	379	-	176	1000	39
10 - 14	198	11	5	16	-	385	225	-	160	1000	29
15 - 19	134	39	20	13	-	309	293	107	85	1000	44
20 - 24	136	45	3	49	14	326	154	161	112	1000	48
25 - 29	127	77	13	43	13	352	124	151	100	1000	63
30 - 34	244	88	20	62	8	283	93	142	60	1000	84
35 - 39	295	113	46	63	10	261	62	92	58	1000	131
40 - 44	283	143	86	111	5	213	47	67	45	1000	210
45 - 49	364	147	112	94	3	179	30	51	20	1000	324
50 - 54	350	166	154	94	2	150	21	39	24	1000	502
55 - 59	307	143	220	106	2	167	18	22	15	1000	806
60 - 64	254	163	253	115	2	174	14	12	13	1000	1 394
65 - 69	208	178	286	124	3	176	9	6	10	1000	2 532
70 - 74	159	205	287	148	3	177	7	2	12	1000	4 695
75 - 79	126	212	291	159	5	183	3	1	20	1000	8 505
80 - 84	93	215	289	174	11	190	3	0	25	1000	14 339
85 -	67	191	282	191	30	199	1	-	39	1000	26 086
Total	164	182	252	140	8	205	14	10	25	1000	863

Table 4c

PROPORTIONATE DISTRIBUTION OF DEATHS IN NORWAY ON MAIN CAUSE GROUPINGS BY AGE AND SEX, 1966-1968

Age	Neo-plasms II	Cerebro-vascular A70	IHD A81	Other circulatory part of VII	Senility, ill-defined XVI	Remainder nat. causes	Motor veh. accidents AE138	Suicide AE148	Remainder accidents	Total	Death rate per 100 000
MALES											
0	4	2	-	-	49	909	1	-	35	1000	1 592
1 - 4	130	5	-	2	29	421	117	-	296	1000	104
5 - 9	175	-	-	4	46	178	281	-	316	1000	56
10 - 14	192	40	-	5	25	243	192	20	283	1000	42
15 - 19	89	14	5	14	23	157	314	57	327	1000	93
20 - 24	111	25	-	25	33	163	232	80	331	1000	107
25 - 29	142	34	17	17	74	136	148	54	378	1000	106
30 - 34	168	40	45	35	85	158	125	90	254	1000	135
35 - 39	183	32	116	29	67	177	96	90	210	1000	180
40 - 44	187	48	236	48	80	141	43	68	149	1000	282
45 - 49	207	49	315	43	83	134	36	39	94	1000	463
50 - 54	216	50	353	41	83	138	19	33	67	1000	710
55 - 59	228	62	371	55	76	130	15	16	47	1000	1 177
60 - 64	229	87	397	56	58	122	12	11	28	1000	1 949
65 - 69	224	116	373	57	62	137	8	5	18	1000	3 172
70 - 74	213	148	356	61	51	145	8	5	13	1000	4 938
75 - 79	190	196	323	62	51	157	4	2	15	1000	7 654
80 - 84	159	208	288	76	57	189	4	1	18	1000	12 287
85 -	99	205	242	80	102	239	1	1	31	1000	21 363
Total	182	135	304	59	65	184	18	11	42	1000	1 054
FEMALES											
0	10	1	-	1	70	883	2	-	33	1000	1 265
1 - 4	110	11	-	4	50	430	192	-	203	1000	76
5 - 9	272	-	-	-	16	248	304	-	160	1000	28
10 - 14	284	-	11	-	32	347	158	-	168	1000	21
15 - 19	209	43	-	31	25	281	282	37	92	1000	37
20 - 24	231	34	7	48	68	347	136	41	88	1000	34
25 - 29	229	46	31	23	31	464	76	53	47	1000	41
30 - 34	319	37	25	37	74	361	67	37	43	1000	57
35 - 39	462	47	33	60	67	221	30	54	26	1000	94
40 - 44	506	64	46	59	33	202	22	39	29	1000	152
45 - 49	525	98	61	53	41	153	14	33	22	1000	232
50 - 54	480	101	96	63	39	166	12	22	21	1000	369
55 - 59	434	91	163	81	42	148	14	14	13	1000	588
60 - 64	350	123	216	79	47	159	10	5	11	1000	991
65 - 69	284	166	258	87	37	145	7	3	13	1000	1 763
70 - 74	225	204	274	84	34	153	5	2	19	1000	3 196
75 - 79	160	234	282	84	48	163	4	1	24	1000	5 767
80 - 84	121	233	271	90	54	196	1	0	34	1000	10 111
85 -	74	214	244	96	106	213	0	0	53	1000	19 918
Total	197	187	234	82	58	198	9	4	31	1000	882

Table 4d

PROPORTIONATE DISTRIBUTION OF DEATHS IN SWEDEN ON MAIN CAUSE GROUPINGS BY AGE AND SEX, 1966-1968

Age	Neo-plasms II	Cerebro-vascular A70	IHD A81	Other circulatory part of VII	Senility, ill-defined XVI	Remainder nat. causes	Motor veh. accidents AE138	Suicide AE148	Remainder accidents	Total	Death rate per 100 000
MALES											
0	8	1	-	4	3	962	3	-	19	1000	1 451
1 - 4	181	2	-	24	8	444	98	-	243	1000	68
5 - 9	208	6	3	15	-	255	229	-	284	1000	42
10 - 14	205	29	14	11	11	259	223	22	226	1000	34
15 - 19	91	12	5	14	8	150	414	88	218	1000	86
20 - 24	100	13	12	19	10	132	302	193	219	1000	112
25 - 29	114	16	14	23	10	179	164	241	239	1000	115
30 - 34	129	35	19	34	9	198	120	255	201	1000	146
35 - 39	156	39	67	38	11	221	95	203	170	1000	193
40 - 44	169	45	141	47	10	220	55	173	140	1000	266
45 - 49	205	53	215	54	6	193	47	125	102	1000	416
50 - 54	235	52	274	64	5	181	35	81	73	1000	660
55 - 59	243	62	333	66	5	171	26	52	42	1000	1 058
60 - 64	252	78	365	68	4	160	19	28	26	1000	1 801
65 - 69	247	87	385	76	3	157	14	16	15	1000	2 997
70 - 74	219	105	388	80	4	174	9	9	12	1000	4 892
75 - 79	186	119	373	92	6	197	8	7	12	1000	8 097
80 - 84	151	135	372	105	9	204	5	4	15	1000	12 802
85 -	103	128	367	133	28	218	2	2	19	1000	22 632
Total	188	97	336	84	8	203	22	28	34	1000	1 100
FEMALES											
0	9	-	-	3	4	964	4	-	16	1000	1 099
1 - 4	192	-	-	22	16	518	101	-	151	1000	46
5 - 9	282	8	8	-	-	335	216	-	151	1000	32
10 - 14	226	23	6	34	-	372	237	23	79	1000	23
15 - 19	143	16	6	43	3	221	348	121	99	1000	37
20 - 24	165	30	11	44	11	234	201	207	97	1000	50
25 - 29	224	40	15	48	3	235	123	226	86	1000	54
30 - 34	301	29	24	51	8	281	61	181	64	1000	78
35 - 39	404	58	20	55	7	244	50	124	38	1000	110
40 - 44	450	62	44	65	5	215	27	97	35	1000	168
45 - 49	485	68	61	62	4	186	33	72	29	1000	262
50 - 54	476	84	98	66	3	171	23	56	23	1000	391
55 - 59	451	91	136	81	2	175	15	32	17	1000	617
60 - 64	375	99	210	91	2	181	13	15	14	1000	993
65 - 69	293	123	279	87	3	184	9	9	13	1000	1 751
70 - 74	221	147	314	104	3	190	6	4	11	1000	3 262
75 - 79	166	160	333	118	5	196	3	2	17	1000	6 130
80 - 84	120	165	347	136	9	196	1	1	25	1000	10 562
85 -	78	150	364	151	27	197	1	0	32	1000	20 027
Total	203	136	288	112	9	208	10	12	22	1000	941

Table 5

AUTOPSY PROPORTIONS PER HUNDRED DEATHS BY AGE AND SEX IN DENMARK AND SWEDEN, 1966-1968

		Age							
		< 1	1 - 14	15 - 24	25 - 44	45 - 64	65 - 74	75 -	Total
DENMARK	MALES	57.8	33.8	40.4	45.1	43.8	39.4	28.1	36.7
	FEMALES	56.8	42.2	48.7	50.8	44.5	38.9	27.5	35.1
SWEDEN	MALES	72.4	58.4	59.4	62.2	55.1	47.9	34.2	45.0
	FEMALES	73.0	62.4	66.9	64.8	54.0	47.7	33.9	42.1

3.4 Difference in the autopsy rate

Another criterion of the quality of cause-of-death attestation is a high proportion of autopsies and of hospital diagnoses. The autopsy rate is very unequal in the Nordic countries, varying from 44 per hundred in Sweden, to 36 in Denmark, 27 in Finland and only 12 in Norway during the period 1966-1968. The distribution is evidently uneven also within the countries, with the big cities in an advantageous situation. There are also differences according to age and to cause of death. The differentiation by age is demonstrated here for Denmark and Sweden only (Table 5). Obviously the younger the age at death, the higher is the autospy rate. The Nordic countries give a very different account of the frequency of autopsies by cause of death. Sweden and Denmark have detailed distributions by sex, age and cause according to the detailed list and the B-list, respectively. Finland and Norway have no breakdowns by age and sex and only distribute the causes by main sections of ICD.

To obtain some degree of comparability the autopsy rates have been estimated with breakdowns for the main sections of ICD for all the four countries in table 6, which has involved exclusion of causes in the remainder group B 46 in the Danish rates and a rough estimate in the separation of some sections in the Finnish rates. The patterns and levels are rather similar in Sweden and Denmark. Finland has a very high autopsy rate in some sections, e.g. accidents, with a rate of almost 70 per hundred, and Norway has a distribution equal to the other three countries but with a much lower autopsy frequency. The overall percentage of autopsies in cases of diseases of the circulatory system - viz. 39 for Sweden, 30 for Denmark, 23 for Finland and 10 for Norway - should be broken down by age to have real significance, even if the figures rank the countries fairly well. The comparatively low standard of Norwegian cause-of-death statistics, reflected in the high proportion of cases in section XVI, is more understandable in view of the autopsy rate of one out of nine deaths.

Table 6

PROPORTION OF AUTOPSIES PER THOUSAND DEATHS BY MAIN CAUSE SECTIONS OF ICD AND BY COUNTRY, 1966-1968

Cause of death		Denmark[1]	Finland[2]	Norway	Sweden
I.	INFECTIVE AND PARASITIC DISEASES	563	323	221	568
II.	NEOPLASMS	438	187	169	480
III.	ALLERGIC, ENDOCRINE SYSTEM, METABOLIC, AND NUTRITIONAL DISEASES	308	230	105	392
IV.	DISEASES OF THE BLOOD AND BLOOD-FORMING ORGANS	570	367	209	584
V.	MENTAL, PSYCHONEUROTIC, AND PERSONALITY DISORDERS	..	243	72	481
VI.	DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS	236	161	74	334
VII.	DISEASES OF THE CIRCULATORY SYSTEM	304	232	104	392
VIII.	DISEASES OF THE RESPIRATORY SYSTEM	346	190	77	394
IX.	DISEASES OF THE DIGESTIVE SYSTEM	659	502	256	723
X.	DISEASES OF THE GENITO-URINARY SYSTEM	399	253	129	499
XI.	DELIVERIES AND COMPLICATIONS OF PREGNANCY, CHILDBIRTH, AND THE PUERPERIUM	714	738	292	854
XII.	DISEASES OF THE SKIN AND CELLULAR TISSUE	..	217	106	417
XIII.	DISEASES OF THE BONES AND ORGANS OF MOVEMENT	..	216	130	364
XIV.	CONGENITAL MALFORMATIONS	632	734	391	778
XV.	CERTAIN DISEASES OF EARLY INFANCY	544	678	219	670
XVI.	SYMPTOMS, SENILITY, AND ILL-DEFINED CONDITIONS	135	47	11	93
I-XVI.	SUBTOTAL	362	231	114	427
XVII.	ACCIDENTS, POISONINGS, AND VIOLENCE	326	694	123	573
I-XVII.	TOTAL	360	271	115	437

[1] The basic data on causes of death according to autopsy frequency for Denmark are based on the B-list of ICD. The remainder group B46 has been excluded instead of being proportioned out on the separate sections causing lack of information for a few groupings.

[2] In the Finnish rates data on autopsy frequency have only been available for the combined sections III-IV and XII-XIII. The proportions for the respective sections have therefore been estimated by means of given information.

4 THE DEATH RATE LEVEL AND THE MALE EXCESS MORTALITY FOR SELECTED CAUSES

4.1 Presentation of the assembled information on causes of death adapted to comparisons and of the methods applied

The comparative study of cause-specific mortality in the Nordic countries has been focused on two items, the differences in the death rate level between the countries and the diversity in male and female mortality.

The information available for a study of this kind is extremely abundant and its processing is a laborious task. As the purpose of the presented material is mainly to give information in a broad sense without being directed to particular questions, it has been limited to a few cause groupings. Instead, more diverse means of illustrating the differences have been applied.

The graphs providing the basic information are the semilogarithmic age curves of mortality by sex and country for separate cause groupings (figs. A-I), which are assembled in an appendix at the end of the report. They are supplemented by tables (tables a-i), often ranging over a wider age distribution than can be clearly illustrated in such diagrams of the particular series of death rates. A few additional tables are included on causes of some informative value for the analysis (tables j and k). These causes are, on the other hand, quantitatively too insignificant to be described by graphs. The tables also present two series of ratios demonstrating the male - or female - excess mortality. One is in the form of ordinary sex ratios calculated as the quotients between the male and female age-specific death rates. The other is sometimes also called sex ratio, but has merely the form of a male proportion consisting of the quotient between the male death rate and the sum of the male and female death rates in the same age group. As the procedure may be regarded as a standardization for differences in the age distribution of the male and female population, it has here been called the "standardized male proportion", throughout abbreviated SMP. A brief discussion of these two kinds of measures of male or female excess mortality will follow at the end of this report. They can also be compared in the series of graphs shown in the appendix (figs. K-S and W-Z), the first set illustrating the male supermortality in each of the selected cause groupings of the four Nordic countries and the second set giving a picture for each country of its development along the age scale when successively excluding one cause after the other from the total death rates.

Another way of illustrating the excessive male death rates over the female is to show the horizontal distance between the cause-specific male and female death curves representing the age gap, by proceeding from age points on the male curve in multiples of five, as at 40, 45, 50 up to 75 years. Below this interval the curve often has too flat a course to give measurable indications, and above it the rates are somewhat arbitrary because of the skew population distribution towards the end of the age scale (figs. T-V).

It has already been emphasized that the most important procedure im comparisons of mortality is to account for age differences in the populations or groups to be compared. Even if the most common and appropriate way is to relate the respective sex- and age-specific death rates to each other, there are

other methods which may be easier to grasp for those who are less familiar with the almost logistic development of the death rates by increasing age. A model for comparison, mirroring reality as closely as possible, is often easier to explain and to understand. Such a model is the one illustrated in figs. VII to X. It reflects the distribution of deaths by sex, age, country and cause, obtained when the respective rates, differentiated according to these characteristics, are applied to a standard population calculated from the population distributions of the four countries and made up to an arbitrary size of 1 million individuals.

The age distributions of deaths with breakdowns by cause and age, obtained by means of this procedure, are what one calls the expected distributions as distinct from the observed distributions for each sex and country. The number of deaths in each class is comparable between sexes as well as between countries. Because the standard population is the average of all populations involved, the resulting distributions of deaths will have reasonable proportions conformable with reality. The scale of the graphs is the number of deaths per million total population of males and females.

4.2 Some remarks concerning cause groupings and the differences in their male and female death rates

To consider some causes of death as natural, and consequently to give other causes the epithet unnatural, is certainly contrary to the modern conception of premature death, i.e. death before advanced age. Still the term "Natural causes" has long been used for deaths from disease in a broad sense as an antithesis to deaths from accidents or violence. For the want of a better terminology the causes of death of sections I-XVI of ICD have here been called "Natural causes" and those of section XVII, Accidents, poisonings and violence, have retained their denomination, sometimes abbreviated to Accidents.

Although the terminology seems doubtful, the differentiation of deaths in this manner evidently makes sense if an exception is made for a few details, e.g. the accidental falls on even level, pointed out in chapter 3.

The age curves of mortality with the accident group excluded are represented in fig. B on a semilogarithmic scale. Their shape compared to that of total mortality has been discussed in chapter 2.7. The role of mortal accidents and violent deaths in the cause-of-death pattern of the young and the middle-aged is evidently upsetting enough to be made widely known. Because of the considerable male excess mortality prevailing among almost all causes in this section a close study of the sex ratio and SMP graphs in figs. Q, R and S is advisable. In a somewhat different way these relations are shown in the series of diagrams in two versions for each country separately (figs. W-Z). The first version of every pair illustrates the sex ratios and the second the standardized male proportions. The curve describing the male excess mortality from all causes has in all four countries two more or less marked peaks, one around the age of 20 and the other at upper middle age. The curve below it depicts the male excess mortality from all natural causes, i.e. with the effect of accidents on the total rate eliminated. A comparison of the graphs from the four countries tells a good deal about the significance of the accident group for male excess mortality. Another cause of death, in which the male excess has often been stressed, is lung cancer. One of the evidences for its relation to smoking is the high sex ratio. The next curve in the collection shows, however, that lung cancer plays a minor part in the assembled male excess mortality, though more important in Denmark and Finland than in Norway and Sweden. Ischaemic heart disease comes next into focus. When excluding IHD the

Table 7

STANDARDIZED DEATH RATES BY SEX AND BROAD AGE GROUPS FOR TOTAL DEATHS AND SELECTED CAUSES OF DEATH IN DENMARK (Dk), FINLAND (Fi), NORWAY (No), AND SWEDEN (Sw), 1966-1968

The Standard Population applied is the total population of both sexes in the four countries by five-year age groups in 1966-1968

Cause of death	Age	Males				Females			
		Dk	Fi	No	Sw	Dk	Fi	No	Sw
ALL CAUSES, I-XVII	15-24	96.0	118.6	100.0	99.0	39.0	46.0	35.5	43.5
	25-44	168.7	320.5	176.3	180.2	126.4	122.4	86.3	102.7
	45-74	1887.9	2840.6	1729.6	1633.9	1147.2	1383.9	969.7	991.3
ALL NATURAL CAUSES, I-XVI	15-24	26.5	31.6	33.0	28.0	21.0	25.5	23.5	20.5
	25-44	104.3	180.4	109.0	93.8	103.3	95.1	76.5	78.4
	45-74	1764.9	2629.8	1635.7	1505.5	1091.2	1332.1	939.4	947.1
NEOPLASMS, II	15-24	11.7	8.9	10.1	9.5	8.1	6.2	7.8	6.8
	25-44	36.8	33.1	30.9	26.8	54.8	31.6	37.2	38.9
	45-74	503.7	627.0	381.3	384.8	400.3	314.5	309.6	322.8
LUNG CANCER, A50	45-74	153.1	243.5	62.7	67.9	24.0	13.8	10.8	14.5
CEREBROVASCULAR DISEASES, A70	45-74	145.1	288.1	179.7	136.1	112.8	247.2	150.1	116.1
ISCHAEMIC HEART DISEASE, A81	45-74	676.8	1076.5	635.8	585.0	272.8	353.9	216.8	234.5
SYMPTOMS, SENILITY, AND ILL-DEFINED CONDITIONS, XVI	45-74	17.0	7.9	108.5	6.9	10.3	3.3	37.5	2.8
ACCIDENTS, POISONINGS AND VIOLENCE, XVII	15-24	69.5	87.0	67.0	71.0	18.0	20.5	12.0	23.0
	25-44	64.4	140.1	67.3	86.4	23.1	27.3	9.8	24.3
	45-74	123.0	210.6	93.8	128.1	56.0	52.2	30.3	44.3
MOTOR VEHICLE ACCIDENTS, AE138	15-24	44.3	37.7	27.0	34.8	10.8	10.1	7.5	11.4
	25-44	20.5	30.7	15.4	17.3	5.9	8.4	3.2	5.3
	45-74	46.0	53.5	20.9	29.9	16.0	16.2	8.4	11.5
SUICIDE, AE148	15-24	9.9	18.7	7.0	14.6	5.5	6.2	1.4	7.4
	25-44	28.5	43.7	13.2	37.5	13.8	11.9	3.8	14.0
	45-74	46.5	66.3	20.0	51.1	24.4	16.5	7.2	17.8

excess of male over female rates is either considerably lowered or even disappears, as in part of the age scale for Denmark and Sweden. The last curve in the set depicts the effect of excluding accidents, lung cancer and IHD simultaneously. All of these effects are easier to follow and explain when supplemented by the assembly of male and female death rates for all the cause groupings concerned. They are reproduced in tables l, m, n, and o, together with the series of sex ratios and SMPs.

In order to permit simultaneous comparisons of cause-specific mortality in all the four countries and still have the perspective of rapidly increasing death rates by age in mind, standardized death rates for broad age groups have been worked out (table 7). For causes with few deaths at lower ages, rates have been calculated only for ages between 45 and 75. No standard rates at all have been calculated for higher age groups, as the differentiation by cause of death for old people is less reliable than for others, because of the often multi-factorial circumstances leading to death at high age.

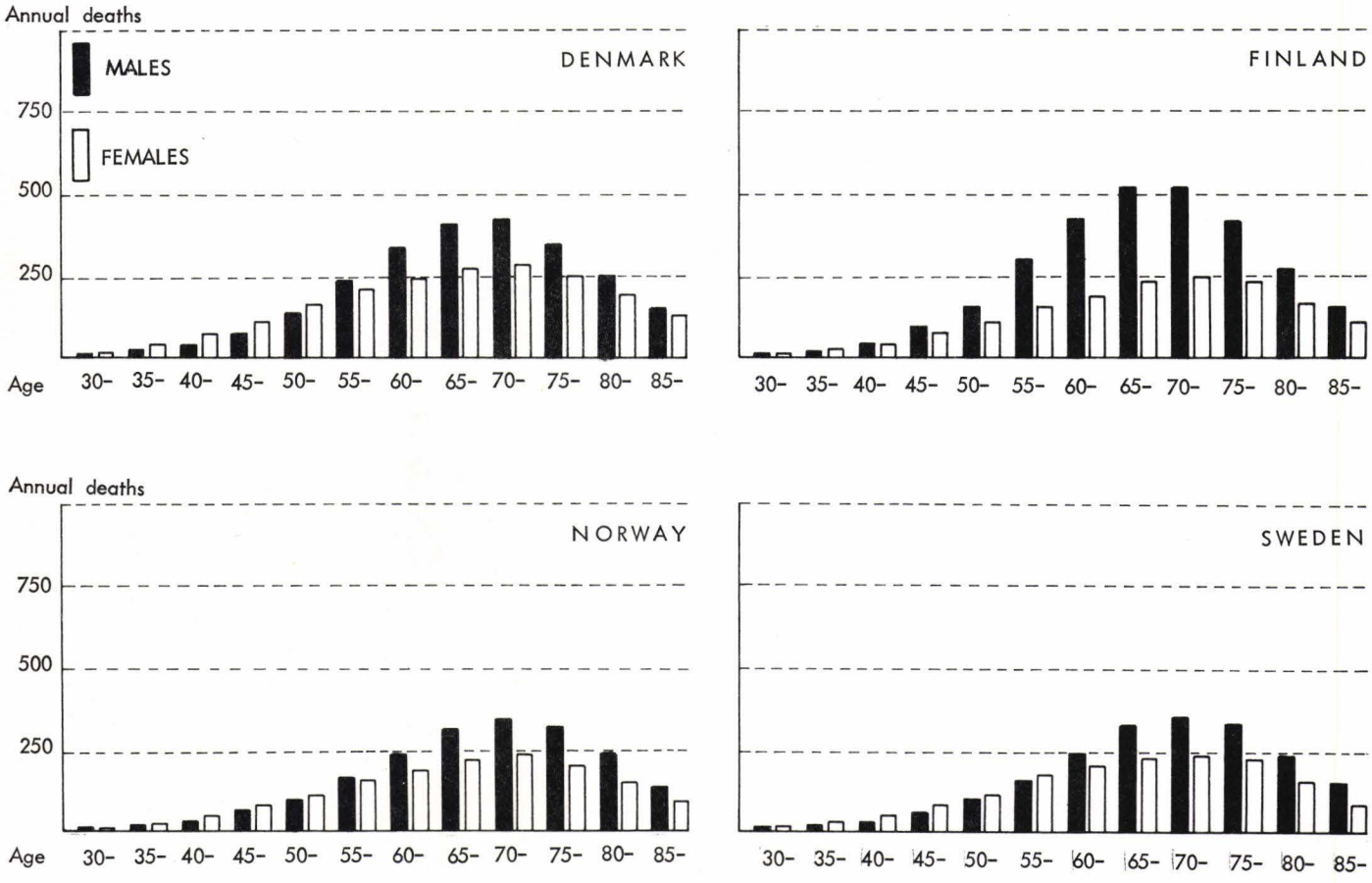


Fig. VII COMPARATIVE DISTRIBUTIONS OF DEATHS FROM NEOPLASMS BY SEX, AGE, AND COUNTRY, 1966-1968

The number of deaths to be compared are obtained by applying the respective death rates, differentiated according to cause, sex, age, and country, to a standard population calculated from the age distribution of the mean population for all countries, 1966-1968, and made up to an arbitrary size of 1 million.

4.3 Mortality from neoplasms

A comparison of the mortality from neoplasms in the four Nordic countries would evidently be of great epidemiological interest. It would, however, require a thorough knowledge of diagnostic differences and of the reliability and coverage of incidence data. The neoplasms are therefore considered very briefly in this study. Comparable data can be obtained preferably from the respective cancer registers supplemented by site-specific tumour death rates.

Though this report deals mainly with mortality by large cause groupings, the information concerning neoplasms available in tables and graphs is nevertheless brought to light. The total neoplasm death rates are presented graphically in fig. C, supplemented by the different rates in table c. The male excess mortality (fig. M) is for this cause of death not so consistent as for other causes. But this change to female excess rates prevails only in a short interval of the age scale. Its quantitative importance is illustrated by the set of bar charts, one for each country (fig. VII), which show the number of male and female deaths from neoplasms in the different sex and age groups, obtained by application of the national death rates to a standard population of 1 million people. The procedure is described on page 32. These graphs stress the excess of male over female mortality, expressed in number of deaths, when differences in age structure both between sexes and between countries have been eliminated. It is only at an age at which deaths are relatively few that the female death rate exceeds the male.

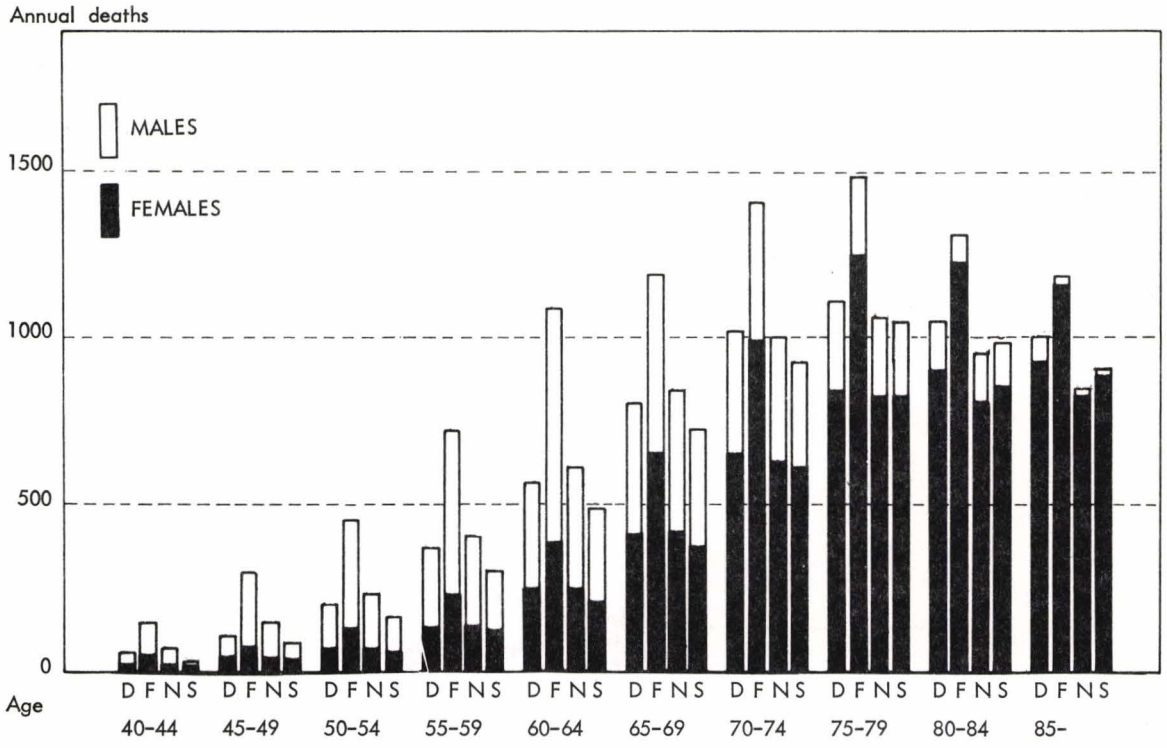


Fig. VIII COMPARATIVE DISTRIBUTIONS OF MALE AND FEMALE DEATHS FROM CARDIOVASCULAR DISEASES BY AGE AND COUNTRY, 1966-1968. Cf. fig. VII

4.4 Mortality from cardiovascular diseases

The same graphic method as for cancer has been used to illustrate the differences in cardiovascular mortality between the sexes (fig. VIII) as well as between the countries (figs. IX and X). To the cardiovascular group, made up of diseases of the circulatory system of the brain, heart and other blood vessels, with the ischaemic heart disease as a specific group, are added - for comparative purposes - the deaths of section XVI, Symptoms, senility, and ill-defined conditions. The reasons for this procedure are given in chapter 3.3.

The excess of male CVD deaths over female is illustrated by white and black bars. The differences are important up to a fairly advanced age, and the Finnish male and female bars stand out in relief against the more similar pattern of the Danish, Norwegian and Swedish bars.

In the discussion of primary prevention in the struggle against the increasing rates of cardiovascular incidence and mortality, ischaemic heart disease is often emphasized and the interest is focused on the so-called infarct epidemic. Figs. VII and VIII manifest clearly the size of the problem when looked upon from the aspect of saving lives or postponing deaths in the four countries among men and women. A look at the cause pattern in figs. VI a-d completes the picture of the cerebrovascular proportion of the entire CVD group, given per thousand in table 4 a-d.

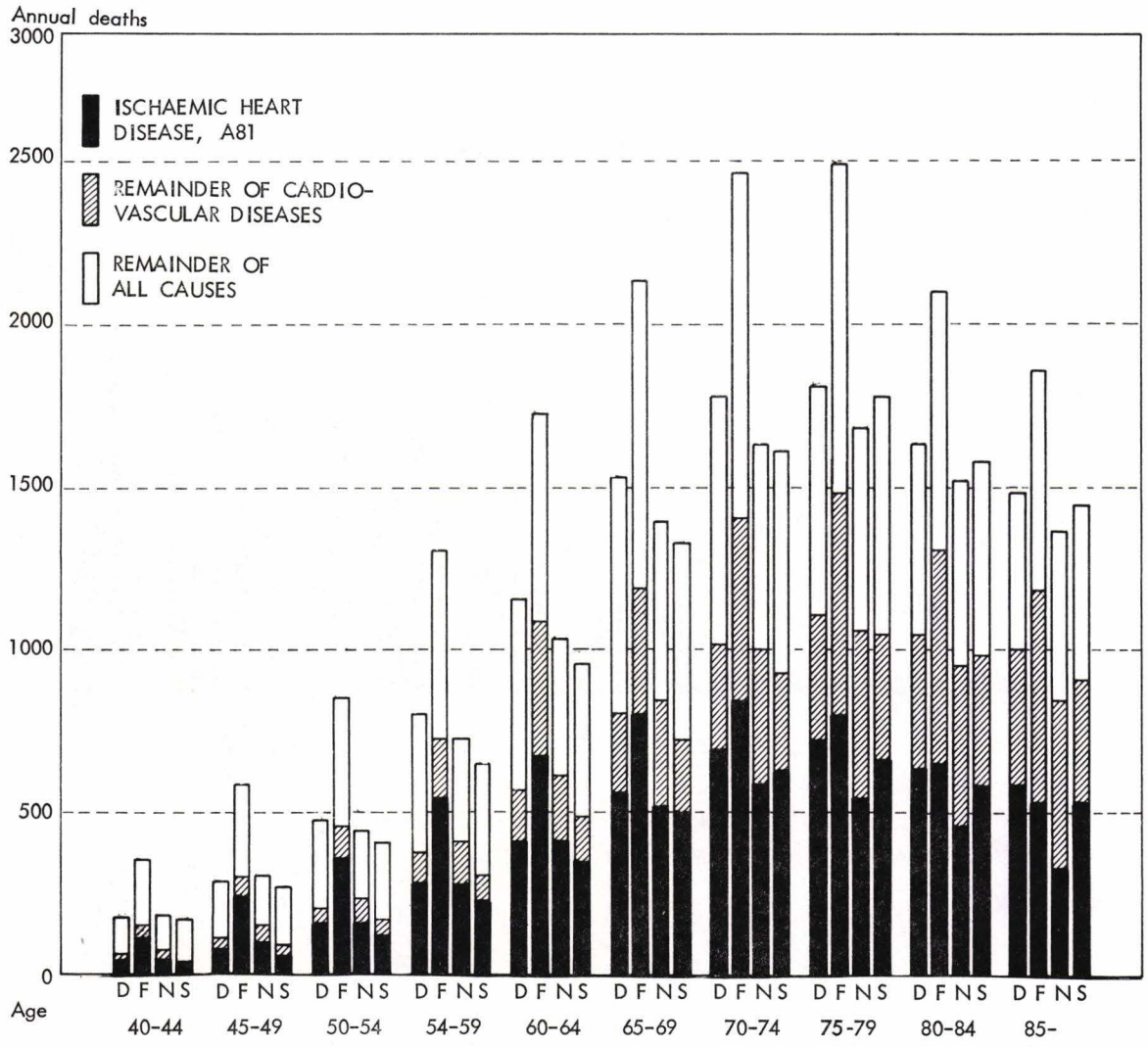


Fig. IX. COMPARATIVE DISTRIBUTIONS OF MALE DEATHS FROM ALL CAUSES, CARDIOVASCULAR DISEASES, AND ISCHAEMIC HEART DISEASE (A81) BY AGE AND COUNTRY, 1966-1968 Cf. fig. VII

The way of demonstrating the male excess mortality by measuring the age gap between the male and female death curves, earlier described in chapter 4.1, is applied to the rates of ischaemic heart disease in fig. V. The horizontal distance between the male and female death curves can evidently be measured at any point of the curves, but it is easier to compare values when proceeding from fixed ages, such as 45, 50 etc., advancing by even multiples of five. The IHD death rate at the age of 45 for men is reached by women only at the age of 55 1/2 years in Denmark, at 60 in Finland, between 57 and 58 in Norway, and at 55 years of age in Sweden. The gap between the curves decreases successively, but for men of 75 there is still a gap of at least 4 years in all the countries. The gap between the death curves of total mortality is considerably smaller (fig. T).

The country-, sex-, and age-specific death rates, to be considered in a more detailed study of the CVD mortality pattern, will be found in tables e, f, j, and k and are graphically illustrated in figs. E and F.

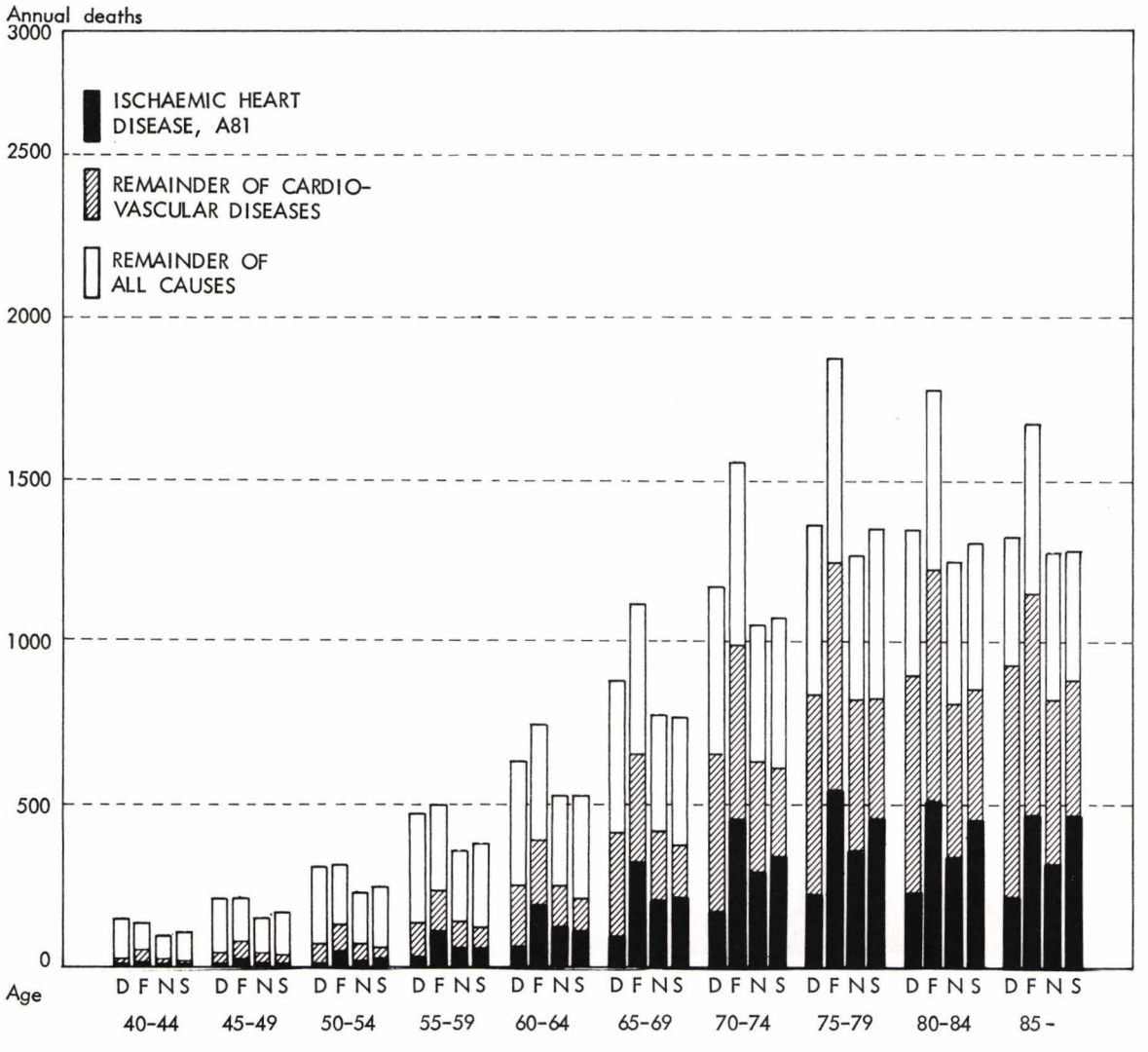


Fig. X COMPARATIVE DISTRIBUTIONS OF FEMALE DEATHS FROM ALL CAUSES, CARDIOVASCULAR DISEASES, AND ISCHAEMIC HEART DISEASE (A81) BY AGE AND COUNTRY, 1966-1968 Cf. fig. VII

5 SOME COMMENTS ON THE MEASUREMENTS OF MALE EXCESS MORTALITY

5.1 The sex ratio as a measure of male to female death rate

The ordinary measure of the excess of the male over the female rate, whether for mortality, incidence or other central rate, is the sex ratio (SR), the male rate often being expressed as a percentage of the female rate. Usually the male rate is the higher of the two and therefore taken as the numerator, but in case of female excess rates the reverse procedure can be followed. This is not possible in the same set of comparisons, however, and consequently the ratio may fall below the value of 1 or 100.

The sex ratio expressed as

$$(SR) = r_x = m_x^M / m_x^F$$

can take the limit values of 0 and infinity. m_x^M and m_x^F stand for the male and female (death) rates, respectively, with M and F denoting the sexes and x the age group.

Among the most obvious disadvantages of this procedure may be mentioned its high sensitivity to random variations when approaching the limit values. There is also the problem of adapting the ratios to a graphic form of illustration, i.e. the construction of a scale of the diagram, which will reflect a true picture of the relations to be compared.

5.2 The standardized male or female proportion as a measure of excess death rates

Another way of expressing the male (or female) excess in any set of age- and cause-specific comparative rates is what is here denoted "the Standardized Male (or Female) Proportion", abbreviated SMP. In some American contexts this measure is somewhat inadequately called "Sex Ratio", as is the one described above. The derivation of the method of measurement explains why the name "Standardized Male Proportion" (SMP) has been chosen.

Starting from m_x^M and m_x^F, as defined above, the proportion of male deaths out of total deaths is computed by applying these sex- and age-specific rates to any standard population of equal size of males and females and forming the fraction of expected male to total deaths. In accordance with the "Standardized Death Rate" this proportion has been denominated the "Standardized Male Proportion". By emphasizing the standardization procedure the addition of the male and female rates in the following formulas is justified.

Standardized Male Proportion (SMP):

$$SMP = p_x^M = \frac{m_x^M P}{m_x^M P + m_x^F P} = \frac{m_x^M}{m_x^M + m_x^F} \quad \text{with the limits } 0 < p < 1$$

and similarly Standardized Female Proportion (SFP):

$$SFP = p_x^F = \frac{m_x^F P}{m_x^M P + m_x^F P} = \frac{m_x^F}{m_x^M + m_x^F} \quad \text{with the limits } 0 < p < 1$$

The relation between this measure and the sex ratio is

$$p_x^M = \frac{r_x^M}{1 + r_x^M} \quad \text{and} \quad r_x^M = \frac{p_x^M}{1 - p_x^M}$$

The formulas are homologous for the female measurements. Thus every sex ratio is convertible into a corresponding male or female standardized proportion of deaths.

The relation is not linear, however, even with a logarithmic transformation. It is represented by a hyperbola passing origo with the only significant asymptote at a p-value of +1. With increasing values of p, r rises very rapidly and reaches + infinity for p = 1.

Another advantage of expressing excess mortality, excess incidence etc. as a male (female) proportion of expected deaths instead of as a sex ratio, consists in the capacity of the measure to embrace broader age groups by consolidating data derived form age-specific rates of five-year age groups. An aggregative index of this kind is easily comprehended and is meaningful so long as the age- and sex-specific groups remain relatively equal in size. At higher ages, however, the size of the age groups becomes smaller, and too much weight will thus be given to their specific death rates.

The aggregative index is expressed as follows:

$$\frac{\sum_x m_x^M \cdot P}{\sum_x (m_x^M + m_x^F) \cdot P} = \frac{\sum_x m_x^M}{\sum_x (m_x^M + m_x^F)}$$

An example of the application of the formula above is given in table 8, in which an assembly of SMPs for broad age groups is reproduced, facilitating the comparison of male excess mortality in the Nordic countries from the cause groupings dealt with in this study.

5.3 Simultaneous application of the two kinds of measure of excess mortality

In the present comparative study of mortality by cause in the four Nordic countries the two methods of measuring male excess mortality, outlined above, have been applied in detail to serve as an illustration of the advantages and disadvantages of the respective measures.

Table 8

STANDARDIZED MALE PROPORTIONS (SMP) OF MORTALITY FROM SELECTED CAUSE GROUPINGS BY BROAD AGE GROUPS IN DENMARK (Dk), FINLAND (Fi), NORWAY (No), AND SWEDEN (Sw), 1966-1968

ALL CAUSES (I-XVII)

Age	Dk	Fi	No	Sw
1 - 14	.598	.592	.618	.588
15 - 24	.710	.721	.738	.695
25 - 34	.636	.722	.711	.666
35 - 44	.544	.724	.652	.623
25 - 44	.571	.724	.671	.638
45 - 64	.630	.717	.664	.635
65 - 74	.615	.630	.621	.611

ALL NATURAL CAUSES (I-XVII)

Age	Dk	Fi	No	Sw
1 - 14	.540	.520	.583	.543
15 - 24	.557	.556	.586	.580
25 - 34	.529	.597	.586	.550
35 - 44	.492	.671	.588	.543
25 - 44	.501	.654	.587	.545
45 - 64	.623	.706	.653	.620
65 - 74	.614	.626	.620	.609

LUNG CANCER (A50)

Age	Dk	Fi	No	Sw
45 - 64	.863	.946	.841	.813
65 - 74	.868	.947	.865	.855

CEREBROVASCULAR DISEASES (A70)

Age	Dk	Fi	No	Sw
45 - 64	.571	.556	.562	.562
65 - 74	.556	.526	.552	.527

ISCHAEMIC HEART DISEASE (A81)

Age	Dk	Fi	No	Sw
45 - 64	.783	.826	.817	.787
65 - 74	.664	.679	.689	.669

ACCIDENTS (XVII)

Age	Dk	Fi	No	Sw
1 - 14	.637	.662	.661	.661
15 - 24	.795	.807	.847	.754
25 - 34	.763	.830	.889	.771
35 - 44	.716	.841	.857	.790
25 - 44	.737	.837	.872	.781
45 - 64	.701	.824	.805	.761
65 - 74	.654	.744	.648	.697

NEOPLASMS (II)

Age	Dk	Fi	No	Sw
1 - 14	.600	.568	.588	.548
15 - 24	.589	.588	.564	.584
25 - 34	.473	.532	.578	.475
35 - 44	.382	.503	.415	.385
25 - 44	.403	.510	.455	.408
45 - 64	.523	.651	.516	.496
65 - 74	.600	.684	.591	.595

MOTOR VEHICLE ACCIDENTS (AE138)

Age	Dk	Fi	No	Sw
1 - 14	.620	.627	.577	.584
15 - 24	.803	.788	.782	.752
25 - 34	.821	.788	.824	.763
35 - 44	.735	.782	.826	.768
25 - 44	.778	.785	.825	.765
45 - 64	.740	.782	.733	.722
65 - 74	.744	.737	.680	.722

SUICIDES (AE 148)

Age	Dk	Fi	No	Sw
15 - 24	.644	.751	.834	.663
25 - 34	.684	.775	.807	.713
35 - 44	.670	.794	.651	.740
25 - 44	.676	.786	.715	.728
45 - 64	.652	.792	.736	.738
65 - 74	.671	.832	.753	.762

Among the disadvantages of the sex ratio method was mentioned the difficulties in its adaptation to graphic illustration. Proceeding from the relation between the SRs and the SMPs expressed in the formula above, it is very easy to give the SMP values on a parallel scale to the SR values, whatever kind of measure is chosen on the graph. Which of these procedures is the more efficient and easier to interpret is not difficult to tell. But a well established habit is also a factor to consider. The double scaling, applied to each diagram of the two kinds in this report, is here given in further detail (fig.XI). It might also be of help as a tool for grasping the meaning of a very high or a very low value of a sex ratio, when appearing in texts and tables.

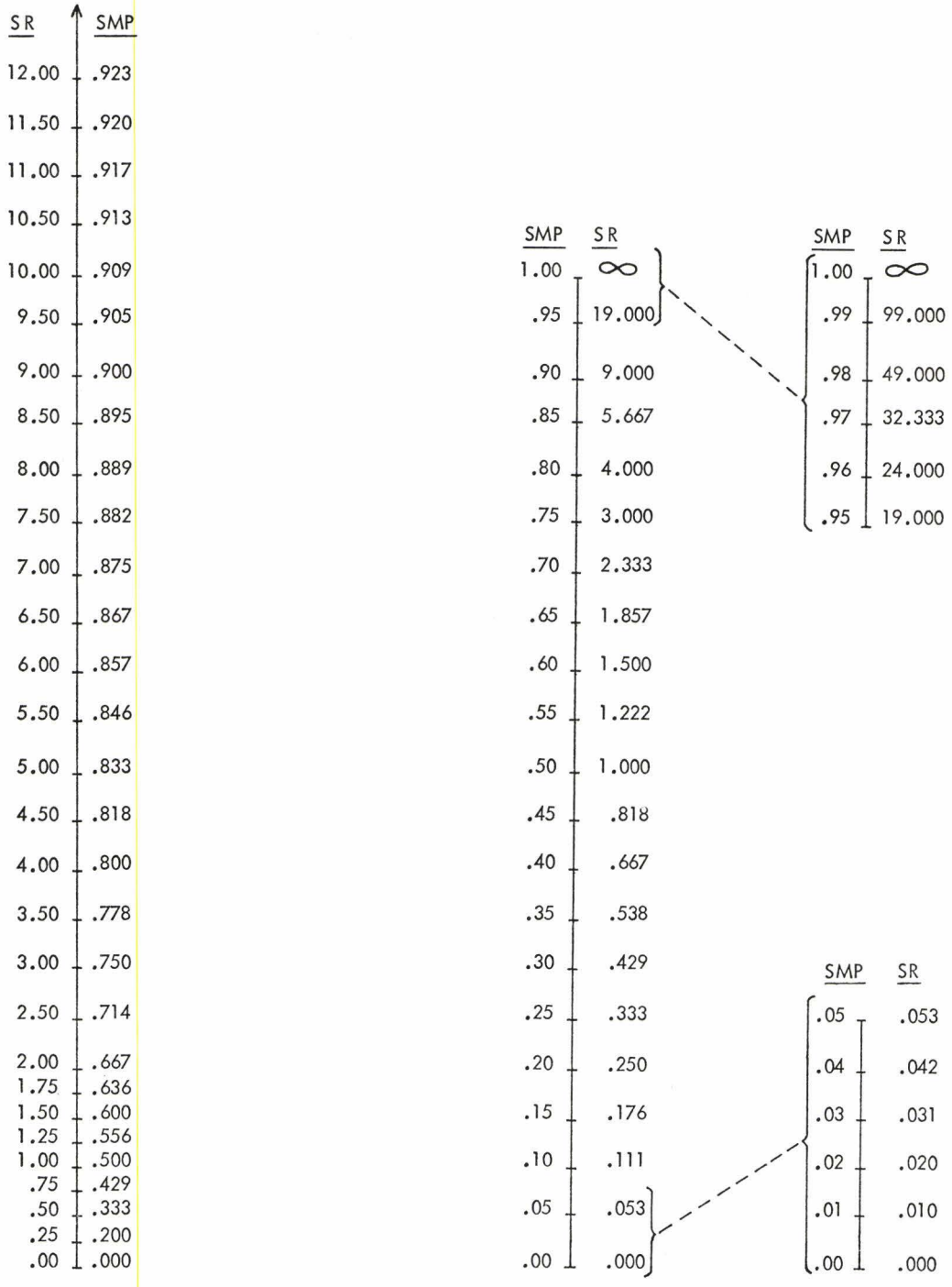


Fig. XI LINEAR SCALE VALUES OF SEX RATIOS (SR), AND CORRESPONDING VALUES OF STANDARDIZED MALE PROPORTIONS (SMP) AND VICE VERSA

APPENDIX

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Table a

MORTALITY FROM ALL CAUSES IN DENMARK (Dk), FINLAND (Fi), NORWAY (No) AND SWEDEN (Sw), 1966-1968

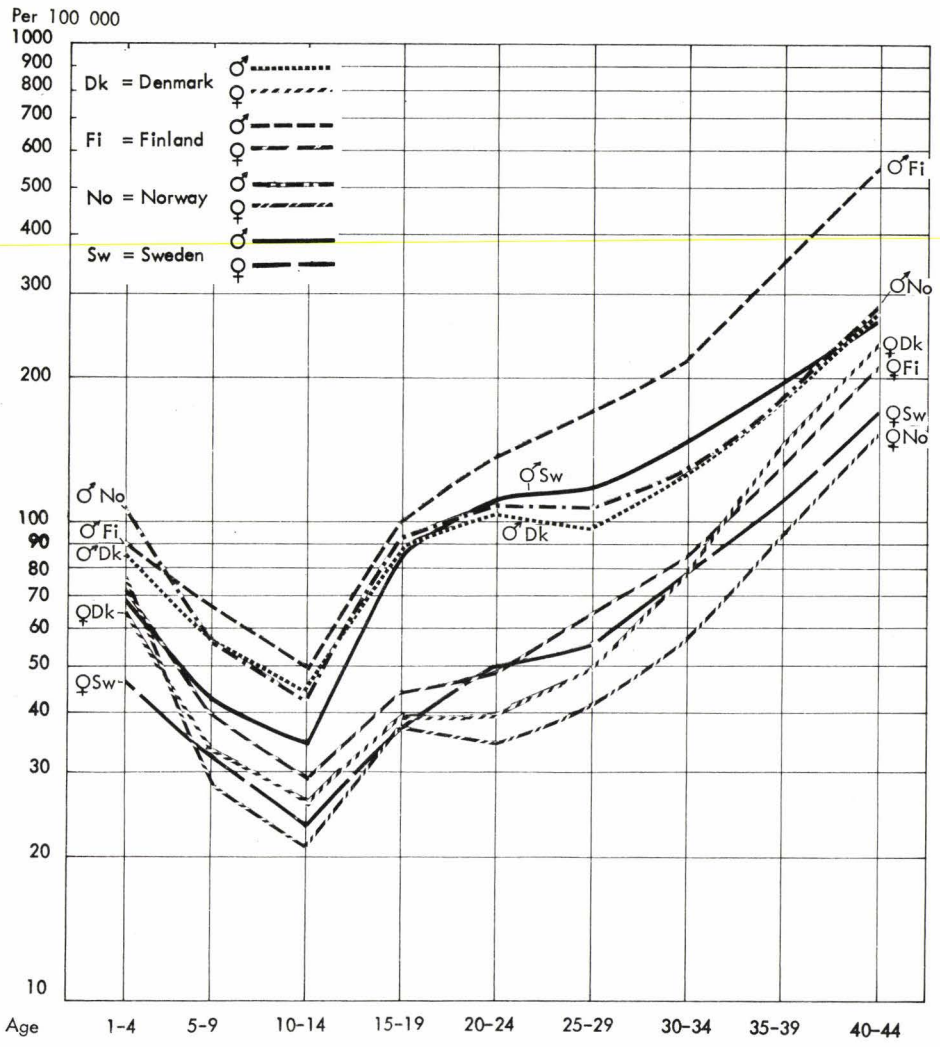
Male and female death rates per 100 000 mean population, sex ratios (SR) and standardized male proportions (SMP)

	Male death rates				Female death rates			
	Dk	Fi	No	Sw	Dk	Fi	No	Sw
Age								
0	1 905	1 627	1 592	1 451	1 357	1 318	1 265	1 099
1 - 4	85	90	104	68	65	73	76	46
5 - 9	56	66	56	42	33	39	28	32
10 - 14	44	49	42	34	26	29	21	23
15 - 19	89	101	93	86	39	44	37	37
20 - 24	103	136	107	112	39	48	34	50
25 - 29	96	168	106	115	49	63	41	54
30 - 34	126	214	135	146	77	84	57	78
35 - 39	177	348	180	193	145	131	94	110
40 - 44	274	547	282	266	233	210	152	168
45 - 49	440	894	463	416	327	324	232	262
50 - 54	761	1 371	710	660	496	502	369	391
55 - 59	1 307	2 148	1 177	1 058	743	806	588	617
60 - 64	2 181	3 247	1 949	1 801	1 191	1 394	991	993
65 - 69	3 481	4 861	3 172	2 997	2 009	2 532	1 763	1 751
70 - 74	5 394	7 445	4 938	4 892	3 547	4 695	3 196	3 262
75 - 79	8 238	11 311	7 654	8 097	6 174	8 505	5 767	6 130
80 - 84	13 237	16 971	12 287	12 802	10 925	14 339	10 111	10 562
85 -	23 223	29 062	21 363	22 632	20 681	26 086	19 918	20 027
Total	1 088	1 034	1 054	1 100	905	863	882	941

	Sex ratio (SR)				Stand. male prop. (SMP)			
	Dk	Fi	No	Sw	Dk	Fi	No	Sw
Age								
0	1.40	1.23	1.26	1.32	.584	.552	.557	.569
1 - 4	1.31	1.23	1.37	1.47	.567	.551	.579	.595
5 - 9	1.68	1.70	2.00	1.32	.628	.629	.667	.569
10 - 14	1.69	1.69	1.99	1.49	.628	.628	.666	.598
15 - 19	2.27	2.29	2.53	2.32	.694	.696	.717	.699
20 - 24	2.64	2.86	3.12	2.25	.726	.741	.756	.692
25 - 29	1.94	2.67	2.58	2.15	.661	.728	.720	.682
30 - 34	1.63	2.54	2.38	1.88	.620	.719	.704	.653
35 - 39	1.22	2.66	1.90	1.76	.550	.727	.656	.637
40 - 44	1.18	2.60	1.86	1.59	.541	.723	.650	.613
45 - 49	1.34	2.76	1.99	1.58	.574	.734	.666	.614
50 - 54	1.53	2.73	1.93	1.69	.605	.732	.658	.628
55 - 59	1.76	2.66	2.00	1.71	.638	.727	.667	.632
60 - 64	1.83	2.33	1.97	1.81	.647	.700	.663	.645
65 - 69	1.73	1.92	1.80	1.71	.634	.658	.643	.631
70 - 74	1.52	1.59	1.55	1.50	.603	.613	.607	.600
75 - 79	1.33	1.33	1.33	1.32	.572	.571	.571	.569
80 - 84	1.21	1.18	1.22	1.21	.548	.542	.549	.548
85 -	1.12	1.11	1.07	1.13	.529	.527	.518	.531
Total	1.20	1.20	1.19	1.17	.546	.545	.545	.539

Fig. A MORTALITY FROM ALL CAUSES IN DENMARK (Dk), FINLAND (Fi), NORWAY (No), AND SWEDEN (Sw), 1966-1968

Age-specific male and female death rates per 100 000 mean population



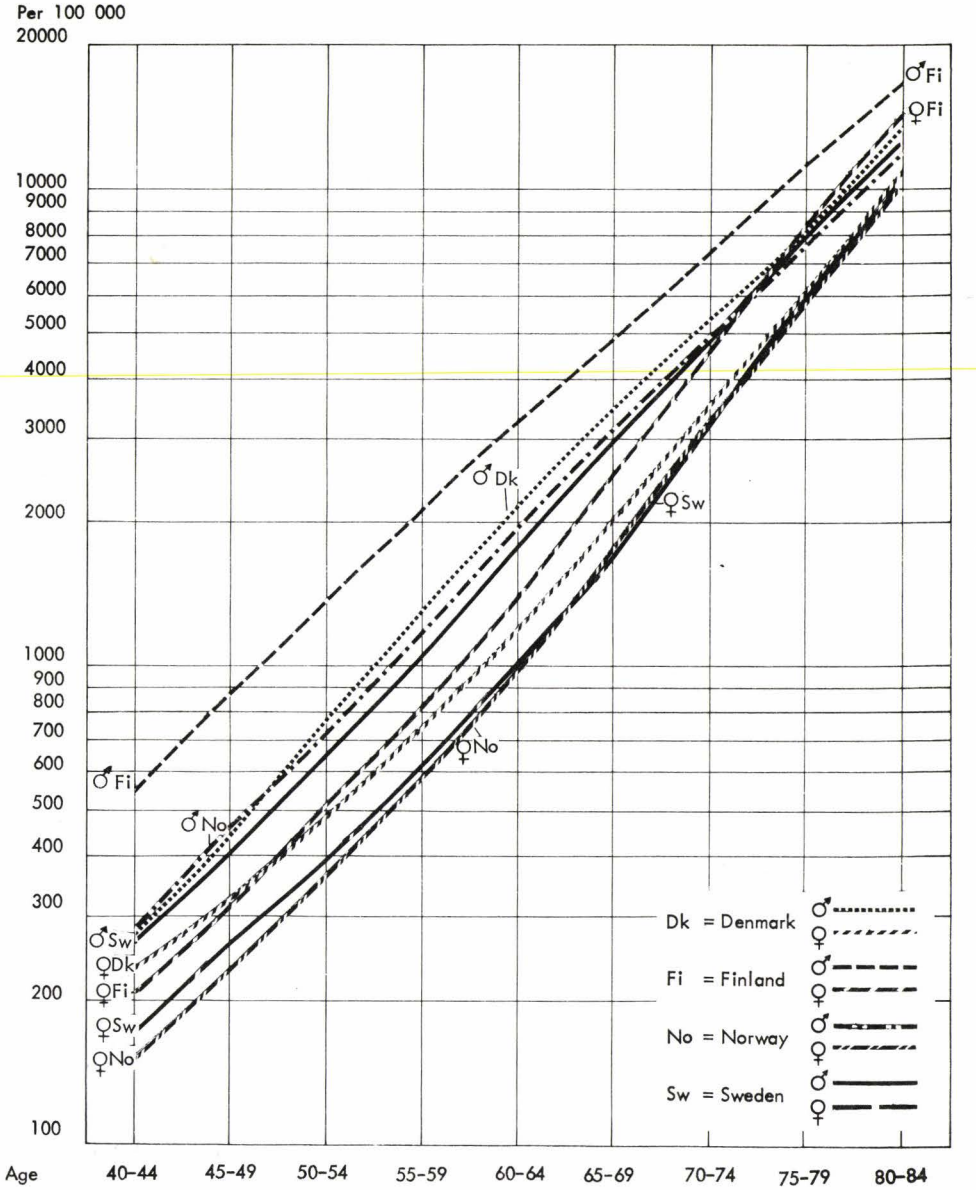


Table b

MORTALITY FROM ALL NATURAL CAUSES (I-XVI, ICD 7 REV.) IN DENMARK (Dk), FINLAND (Fi), NORWAY (No) AND SWEDEN (Sw), 1966-1968

Male and female death rates per 100 000 mean population, sex ratios (SR) and standardized male proportions (SMP)

	Male death rates				Female death rates			
	Dk	Fi	No	Sw	Dk	Fi	No	Sw
Age								
0	1 858	1 578	1 535	1 419	1 326	1 270	1 221	1 077
1 - 4	49	50	61	45	44	47	46	35
5 - 9	20	20	23	21	18	17	15	20
10 - 14	18	19	21	18	12	18	14	15
15 - 19	23	28	28	24	20	23	22	16
20 - 24	31	34	38	32	22	27	25	25
25 - 29	39	50	45	41	30	39	34	30
30 - 34	61	96	72	62	59	59	48	54
35 - 39	107	189	109	103	122	103	84	87
40 - 44	208	381	209	168	202	177	138	141
45 - 49	351	708	384	301	292	291	216	227
50 - 54	661	1 161	625	535	453	460	349	351
55 - 59	1 194	1 940	1 085	931	694	762	564	578
60 - 64	2 041	3 037	1 850	1 669	1 131	1 339	965	951
65 - 69	3 324	4 639	3 073	2 861	1 939	2 468	1 722	1 697
70 - 74	5 212	7 189	4 808	4 743	3 437	4 595	3 113	3 192
75 - 79	7 971	10 974	7 492	7 879	5 942	8 299	5 597	5 995
80 - 84	12 822	16 507	12 008	12 499	10 517	13 943	9 755	10 280
85 -	22 487	28 032	20 667	22 110	19 663	25 035	18 858	19 364
Total	1 002	911	979	1 008	856	821	844	900

	Sex ratio (SR)				Stand. male prop. (SMP)			
	Dk	Fi	No	Sw	Dk	Fi	No	Sw
Age								
0	1.40	1.24	1.26	1.32	.584	.554	.557	.569
1 - 4	1.11	1.07	1.33	1.29	.526	.516	.571	.564
5 - 9	1.09	1.14	1.51	1.01	.522	.533	.600	.504
10 - 14	1.44	1.07	1.49	1.19	.602	.517	.599	.543
15 - 19	1.12	1.24	1.30	1.51	.529	.554	.565	.602
20 - 24	1.38	1.26	1.51	1.30	.580	.559	.602	.566
25 - 29	1.29	1.27	1.32	1.35	.563	.560	.568	.575
30 - 34	1.04	1.62	1.48	1.15	.509	.618	.597	.535
35 - 39	.87	1.83	1.29	1.19	.467	.648	.565	.543
40 - 44	1.03	2.16	1.51	1.19	.508	.683	.603	.544
45 - 49	1.20	2.43	1.78	1.33	.546	.709	.640	.570
50 - 54	1.46	2.52	1.79	1.52	.593	.716	.642	.604
55 - 59	1.72	2.55	1.93	1.61	.632	.718	.658	.617
60 - 64	1.81	2.27	1.92	1.75	.643	.694	.657	.637
65 - 69	1.71	1.88	1.79	1.69	.632	.653	.641	.628
70 - 74	1.52	1.56	1.54	1.49	.603	.610	.607	.598
75 - 79	1.34	1.32	1.34	1.31	.573	.570	.573	.568
80 - 84	1.22	1.18	1.23	1.22	.550	.542	.552	.549
85 -	1.14	1.12	1.10	1.14	.534	.528	.523	.533
Total	1.17	1.11	1.16	1.12	.540	.526	.537	.529

Fig. B MORTALITY FROM ALL NATURAL CAUSES (I-XVI, ICD 7 REV.) IN DENMARK (Dk), FINLAND (Fi), NORWAY (No), AND SWEDEN (Sw), 1966-1968

Age-specific male and female death rates per 100 000 mean population

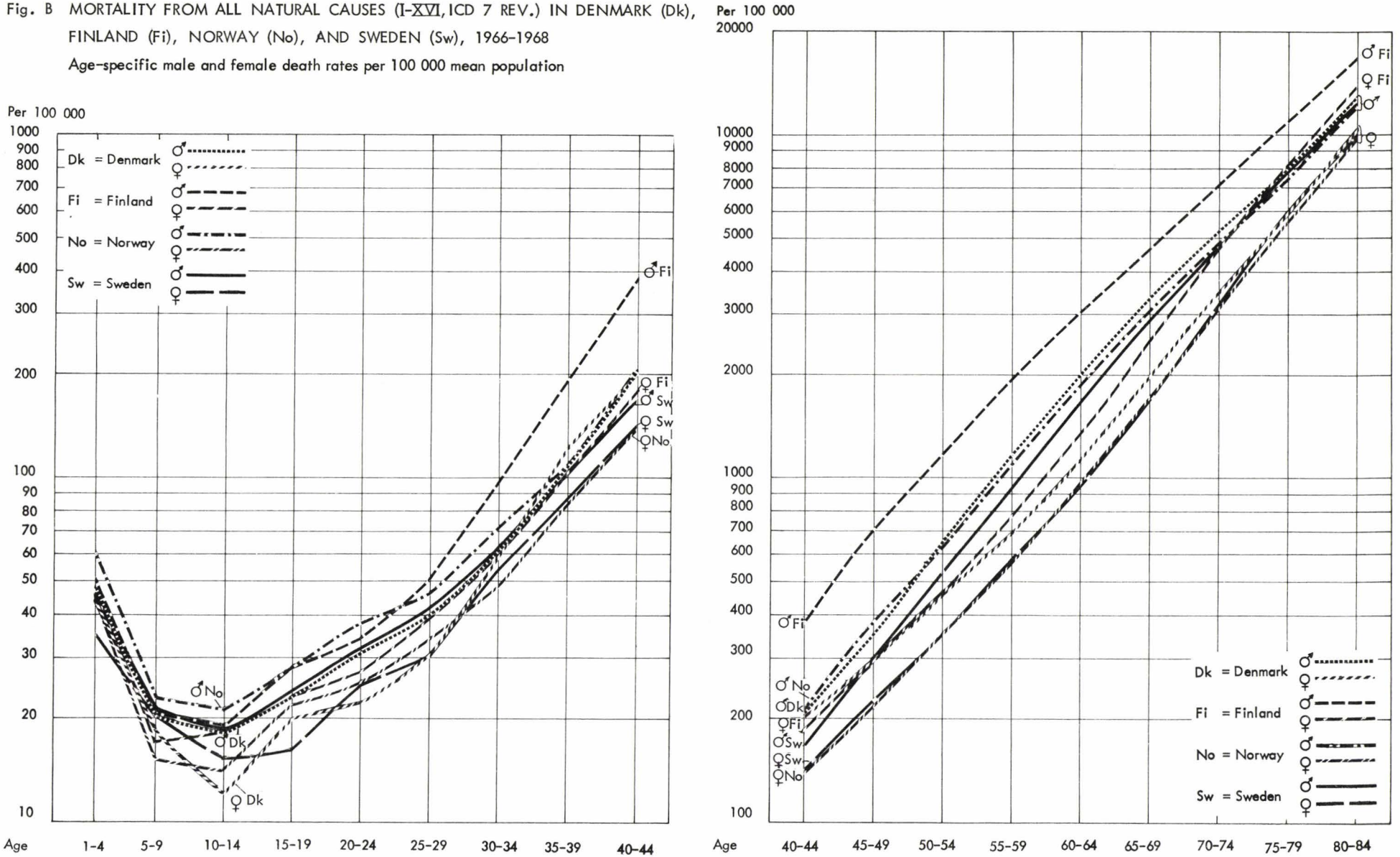


Table c

MORTALITY FROM NEOPLASMS (II, ICD 7 REV.) IN DENMARK (Dk), FINLAND (Fi), NORWAY (No), AND SWEDEN (Sw), 1966-1968

Male and female death rates per 100 000 mean population, sex ratios (SR) and standardized male proportions (SMP)

	Male death rates				Female death rates			
	Dk	Fi	No	Sw	Dk	Fi	No	Sw
Age								
0	17.5	9.4	5.8	11.4	15.2	7.2	12.3	10.4
1 - 4	13.8	13.8	13.5	12.3	9.8	12.0	8.4	8.9
5 - 9	9.0	9.5	9.8	8.8	5.9	5.5	7.6	9.0
10 - 14	7.2	7.2	8.1	6.9	4.2	5.7	6.0	5.1
15 - 19	9.2	7.9	8.3	7.8	9.7	5.9	7.6	5.3
20 - 24	14.1	9.8	11.9	11.2	6.6	6.5	8.0	8.2
25 - 29	16.0	11.4	15.1	13.1	13.2	8.0	9.4	12.0
30 - 34	22.9	21.0	22.7	18.8	30.3	20.5	18.1	23.3
35 - 39	43.7	32.0	32.9	30.2	62.3	38.6	43.6	44.4
40 - 44	64.3	67.1	52.7	44.9	112.4	59.4	76.9	75.5
45 - 49	114.0	139.9	95.7	85.1	173.0	118.2	122.0	127.4
50 - 54	214.0	247.8	153.2	154.9	261.6	175.5	177.2	186.2
55 - 59	388.1	482.4	268.0	256.6	338.5	247.8	255.2	278.5
60 - 64	631.7	797.2	445.7	452.9	455.1	354.1	346.9	372.3
65 - 69	922.6	1 181.1	709.1	739.7	622.1	527.8	501.2	512.4
70 - 74	1 279.6	1 572.2	1 052.3	1 073.5	846.5	745.2	719.3	720.2
75 - 79	1 584.1	1 895.5	1 457.5	1 508.2	1 122.5	1 072.6	921.5	1 015.0
80 - 84	2 056.6	2 203.1	1 958.6	1 927.1	1 555.2	1 327.8	1 218.7	1 266.0
85 -	2 399.0	2 455.5	2 114.0	2 339.9	2 045.0	1 756.6	1 467.4	1 557.4
Total	227.9	186.9	191.8	207.1	211.7	141.6	173.5	191.1

	Sex ratio (SR)				Stand. male prop. (SMP)			
	Dk	Fi	No	Sw	Dk	Fi	No	Sw
Age								
0	..	..	..	..	..	..	..	..
1 - 4	1.40	1.15	1.61	1.38	.584	.535	.618	.580
5 - 9	1.53	1.74	1.29	.97	.604	.636	.563	.494
10 - 14	1.69	1.26	1.34	1.35	.629	.557	.574	.574
15 - 19	.95	1.34	1.08	1.48	.489	.572	.520	.596
20 - 24	2.14	1.51	1.49	1.36	.681	.601	.599	.577
25 - 29	1.22	1.43	1.60	1.09	.548	.589	.615	.522
30 - 34	.76	1.03	1.25	.81	.431	.506	.557	.447
35 - 39	.70	.83	.75	.68	.413	.454	.430	.405
40 - 44	.57	1.13	.69	.59	.364	.531	.407	.373
45 - 49	.66	1.18	.78	.67	.397	.542	.440	.400
50 - 54	.82	1.41	.86	.83	.450	.585	.464	.454
55 - 59	1.15	1.95	1.05	.92	.534	.661	.512	.480
60 - 64	1.39	2.25	1.28	1.22	.581	.692	.562	.549
65 - 69	1.48	2.24	1.41	1.44	.597	.691	.586	.591
70 - 74	1.51	2.11	1.46	1.49	.602	.678	.594	.598
75 - 79	1.41	1.77	1.58	1.49	.586	.639	.618	.598
80 - 84	1.32	1.66	1.61	1.52	.570	.624	.617	.604
85 -	1.17	1.40	1.44	1.50	.540	.583	.591	.601
Total	1.08	1.32	1.11	1.08	.519	.569	.525	.520

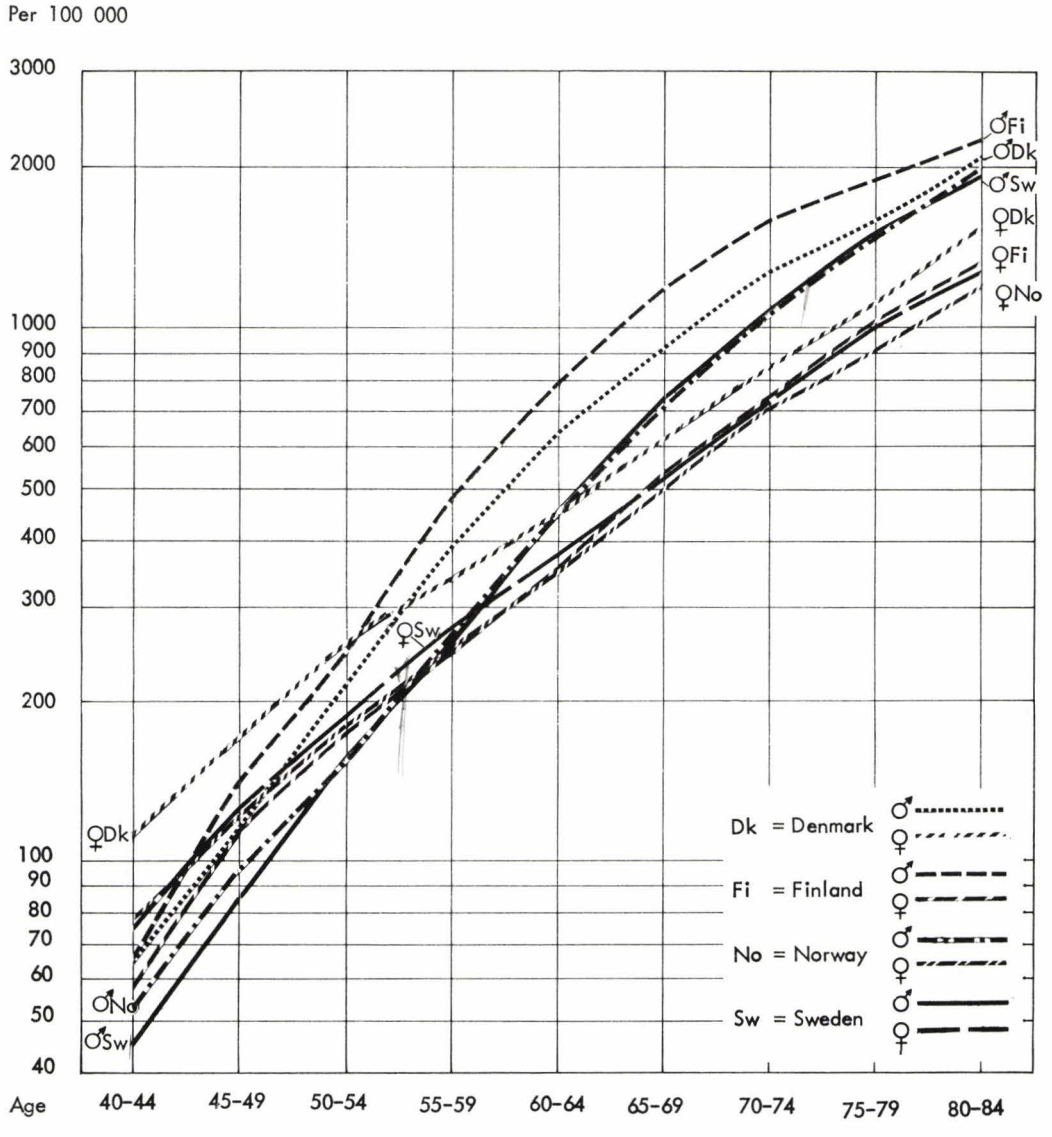


Fig. C MORTALITY FROM NEOPLASMS (II, ICD 7 Rev.) IN DENMARK (Dk), FINLAND (Fi), NORWAY (No), AND SWEDEN (Sw), 1966-1968

Age-specific male and female death rates per 100 000 mean population

Table d

MORTALITY FROM LUNG CANCER (A50, ICD 7 REV.) IN DENMARK (Dk), FINLAND (Fi), NORWAY (No) AND SWEDEN (Sw), 1966-1968

Male and female death rates per 100 000 mean population, sex ratios (SR) and standardized male proportions (SMP)

	Male death rates				Female death rates			
	Dk	Fi	No	Sw	Dk	Fi	No	Sw
Age								
40 - 44	10.4	16.8	6.5	5.1	4.9	1.3	2.5	2.5
45 - 49	26.3	49.4	14.5	10.3	9.9	5.2	4.1	3.2
50 - 54	61.1	96.9	29.6	24.5	13.0	7.7	7.4	7.6
55 - 59	134.8	216.1	51.3	44.9	22.4	11.0	10.6	12.1
60 - 64	226.4	353.6	82.0	92.4	26.0	16.8	11.3	16.7
65 - 69	292.8	456.9	130.2	142.2	39.5	24.4	16.0	26.9
70 - 74	310.0	496.9	121.6	169.0	52.4	28.8	23.5	34.4
75 - 79	243.4	489.7	107.1	149.5	54.3	34.9	23.5	40.4
80 - 84	223.7	426.3	78.6	111.2	68.8	37.7	32.9	47.2
85 -	160.6	263.7	55.9	86.5	71.3	46.0	15.1	49.3
Total	54.2	64.2	23.1	27.9	11.4	5.4	5.1	7.9

	Sex ratio (SR)				Stand. male prop. (SMP)			
	Dk	Fi	No	Sw	Dk	Fi	No	Sw
Age								
40 - 44	2.14	12.71	2.60	2.03	.682	.927	.722	.670
45 - 49	2.65	9.50	3.51	3.19	.727	.905	.780	.763
50 - 54	4.68	12.62	3.98	3.21	.825	.926	.800	.763
55 - 59	6.02	19.58	4.87	3.71	.858	.952	.829	.788
60 - 64	8.70	21.07	7.25	5.52	.897	.955	.879	.847
65 - 69	7.42	18.70	8.15	5.28	.881	.949	.891	.841
70 - 74	5.92	17.28	5.18	4.91	.855	.945	.838	.831
75 - 79	4.48	14.03	4.55	3.70	.818	.933	.820	.787
80 - 84	3.25	11.31	2.39	2.36	.765	.919	.705	.702
85 -	2.25	5.73	3.69	1.76	.693	.851	.787	.637
Total	4.73	11.90	4.49	3.54	.826	.923	.818	.780

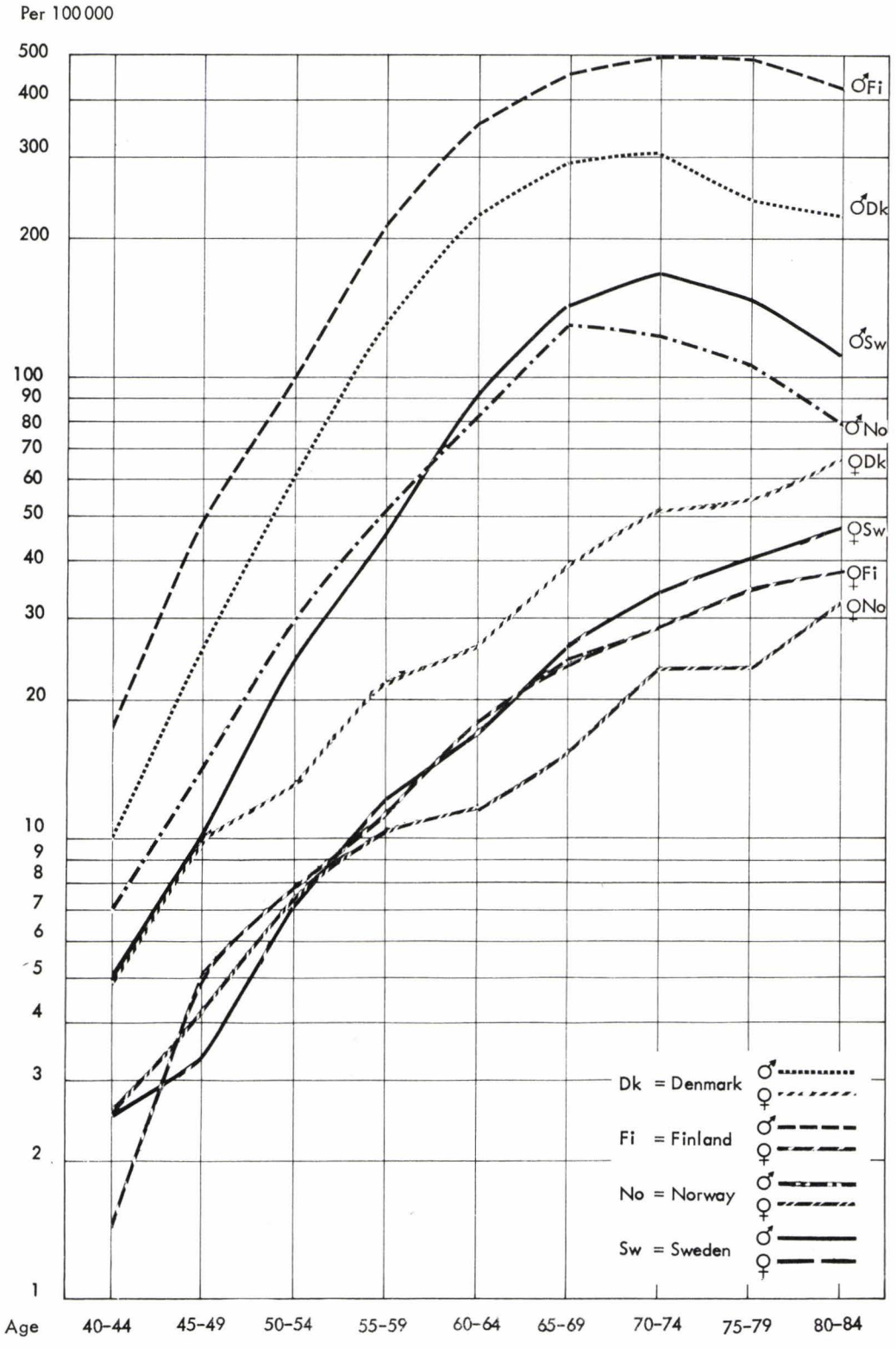


Fig. D MORTALITY FROM LUNG CANCER (A50, ICD 7 Rev.) IN DENMARK (Dk), FINLAND (Fi), NORWAY (No), AND SWEDEN (Sw), 1966-1968

Age-specific male and female death rates per 100 000 mean population

Table e

MORTALITY FROM CEREBROVASCULAR DISEASES (A70, ICD 7 REV.) IN DENMARK (Dk), FINLAND (Fi), NORWAY (No) AND SWEDEN (Sw), 1966-1968

Male and female death rates per 100 000 mean population, sex ratios (SR) and standardized male proportions (SMP)

	Male death rates				Female death rates			
	Dk	Fi	No	Sw	Dk	Fi	No	Sw
Age								
40 - 44	8.6	39.2	13.6	11.9	8.4	30.0	9.7	10.4
45 - 49	12.8	57.3	22.5	22.0	12.9	47.8	22.7	17.8
50 - 54	32.1	87.6	35.7	34.4	22.3	83.5	37.2	32.8
55 - 59	60.8	169.4	73.5	66.1	44.1	115.4	53.6	55.9
60 - 64	143.3	280.7	169.8	140.2	107.4	227.5	121.8	98.0
65 - 69	293.9	535.1	367.5	259.9	207.2	450.0	293.2	215.6
70 - 74	584.4	1 031.6	728.7	514.4	493.6	961.2	652.0	478.4
75 - 79	1 120.3	1 809.4	1 497.4	967.2	1 005.0	1 802.4	1 351.7	980.3
80 - 84	1 937.0	2 996.5	2 555.4	1 732.5	1 867.3	3 078.9	2 354.4	1 747.4
85 -	3 393.8	4 944.0	4 384.7	2 893.4	3 392.1	4 982.8	4 262.0	3 005.8
Total	104.9	109.6	142.6	106.4	115.2	156.8	165.2	127.7

	Sex ratio (SR)				Stand. male prop. (SMP)			
	Dk	Fi	No	Sw	Dk	Fi	No	Sw
Age								
40 - 44	1.03	1.31	1.39	1.14	.506	.567	.582	.532
45 - 49	.99	1.20	.99	1.24	.498	.545	.498	.553
50 - 54	1.44	1.05	.96	1.05	.590	.512	.490	.512
55 - 59	1.38	1.47	1.37	1.18	.580	.595	.578	.542
60 - 64	1.34	1.23	1.39	1.43	.572	.552	.582	.589
65 - 69	1.42	1.19	1.25	1.21	.587	.543	.556	.547
70 - 74	1.18	1.07	1.12	1.08	.542	.518	.528	.518
75 - 79	1.12	1.00	1.11	.99	.527	.501	.526	.497
80 - 84	1.04	.97	1.09	.99	.509	.493	.520	.498
85 -	1.00	.99	1.03	.96	.500	.498	.507	.491
Total	.91	.70	.86	.83	.476	.411	.463	.454

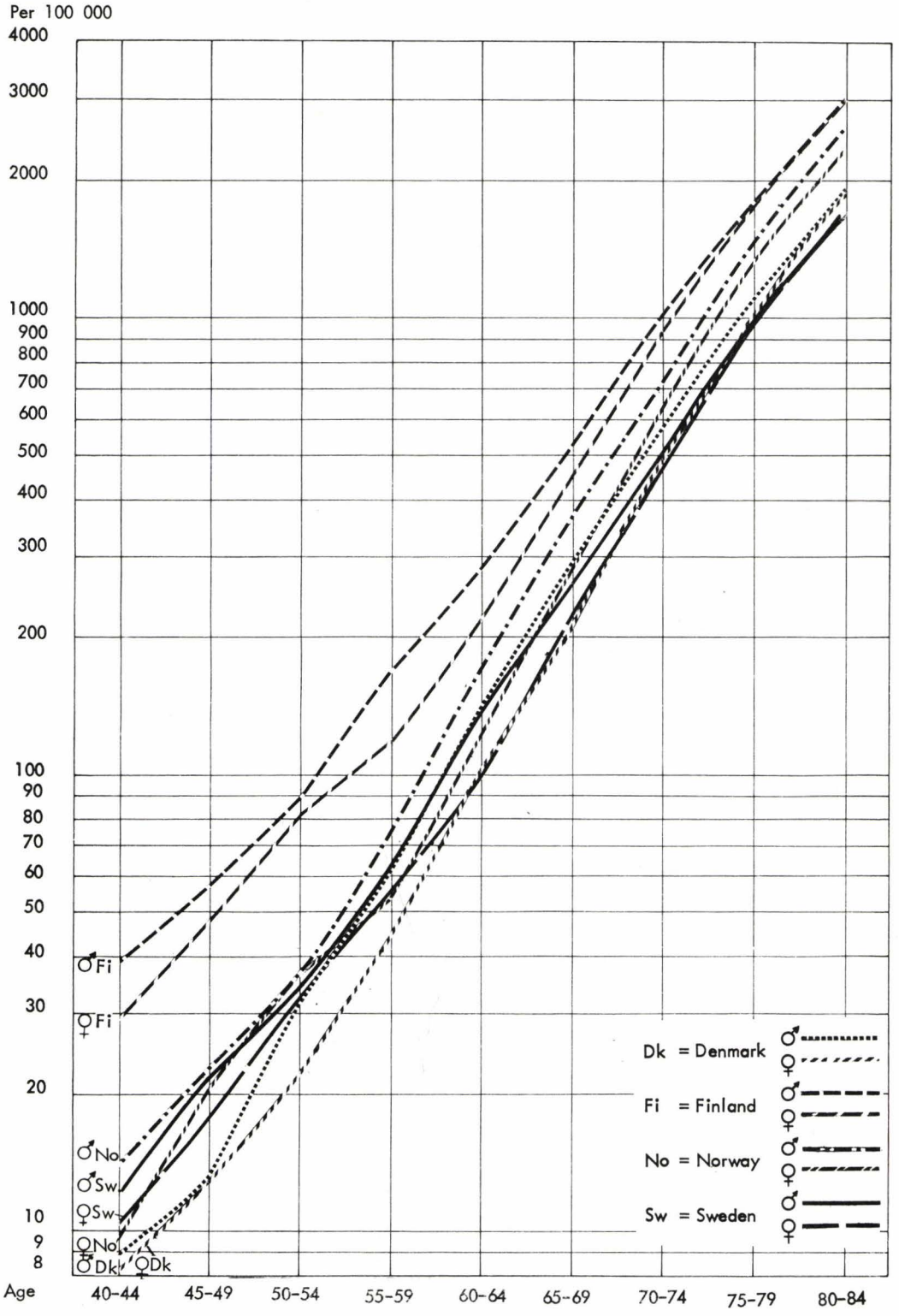


Fig. E MORTALITY FROM CEREBROVASCULAR DISEASES (A70, ICD 7 Rev.) IN DENMARK (Dk), FINLAND (Fi), NORWAY (No), AND SWEDEN (Sw), 1966-1968

Age-specific male and female death rates per 100 000 mean population

Table f

MORTALITY FROM ISCHAEMIC HEART DISEASE, (A81, ICD 7 REV.) IN DENMARK (Dk), FINLAND (Fi), NORWAY (No) AND SWEDEN (Sw), 1966-1968

Male and female death rates per 100 000 mean population, sex ratios (SR) and standardized male proportions (SMP)

	Male death rates				Female death rates			
	Dk	Fi	No	Sw	Dk	Fi	No	Sw
Age								
35 - 39	19.6	68.4	20.9	13.0	6.1	6.1	3.2	2.2
40 - 44	55.9	171.6	66.6	37.6	14.1	18.1	7.0	7.4
45 - 49	115.6	347.1	145.9	89.4	25.7	36.4	14.2	16.1
50 - 54	237.7	567.0	250.9	180.6	48.1	77.3	35.5	38.4
55 - 59	450.8	879.4	436.6	352.2	110.5	177.2	95.5	84.2
60 - 64	772.2	1 269.2	774.1	656.7	252.5	352.2	214.5	208.1
65 - 69	1 272.2	1 818.4	1 183.0	1 153.9	546.4	724.6	454.0	487.9
70 - 74	2 099.4	2 561.8	1 759.7	1 898.2	1 160.6	1 347.7	877.2	1 025.5
75 - 79	3 276.3	3 532.6	2 474.4	3 021.6	2 150.8	2 471.5	1 624.6	2 038.7
80 - 84	5 151.7	5 286.7	3 540.3	4 756.9	4 073.6	4 148.7	2 736.0	3 664.6
85 -	9 121.8	8 281.1	1 564.8	8 303.8	7 868.7	7 345.0	4 856.5	7 293.3
Total	372.4	336.0	320.7	369.9	261.3	217.2	206.4	271.0

	Sex ratio (SR)				Stand. male prop. (SMP)			
	Dk	Fi	No	Sw	Dk	Fi	No	Sw
Age								
35 - 39	..	..	..	..	..	..	..	..
40 - 44	3.96	9.08	9.57	5.09	.798	.901	.905	.836
45 - 49	4.50	9.54	10.28	5.56	.818	.905	.911	.847
50 - 54	4.94	7.34	7.06	4.70	.832	.880	.876	.825
55 - 59	4.08	4.96	4.57	4.18	.803	.832	.821	.807
60 - 64	3.06	3.60	3.61	3.16	.754	.783	.783	.759
65 - 69	2.33	2.51	2.61	2.37	.700	.715	.723	.703
70 - 74	1.81	1.90	2.01	1.85	.644	.655	.667	.649
75 - 79	1.52	1.43	1.52	1.48	.604	.588	.604	.597
80 - 84	1.26	1.27	1.29	1.30	.558	.560	.564	.565
85 -	1.16	1.13	1.06	1.14	.537	.530	.515	.532
Total	1.43	1.55	1.55	1.36	.588	.607	.608	.577

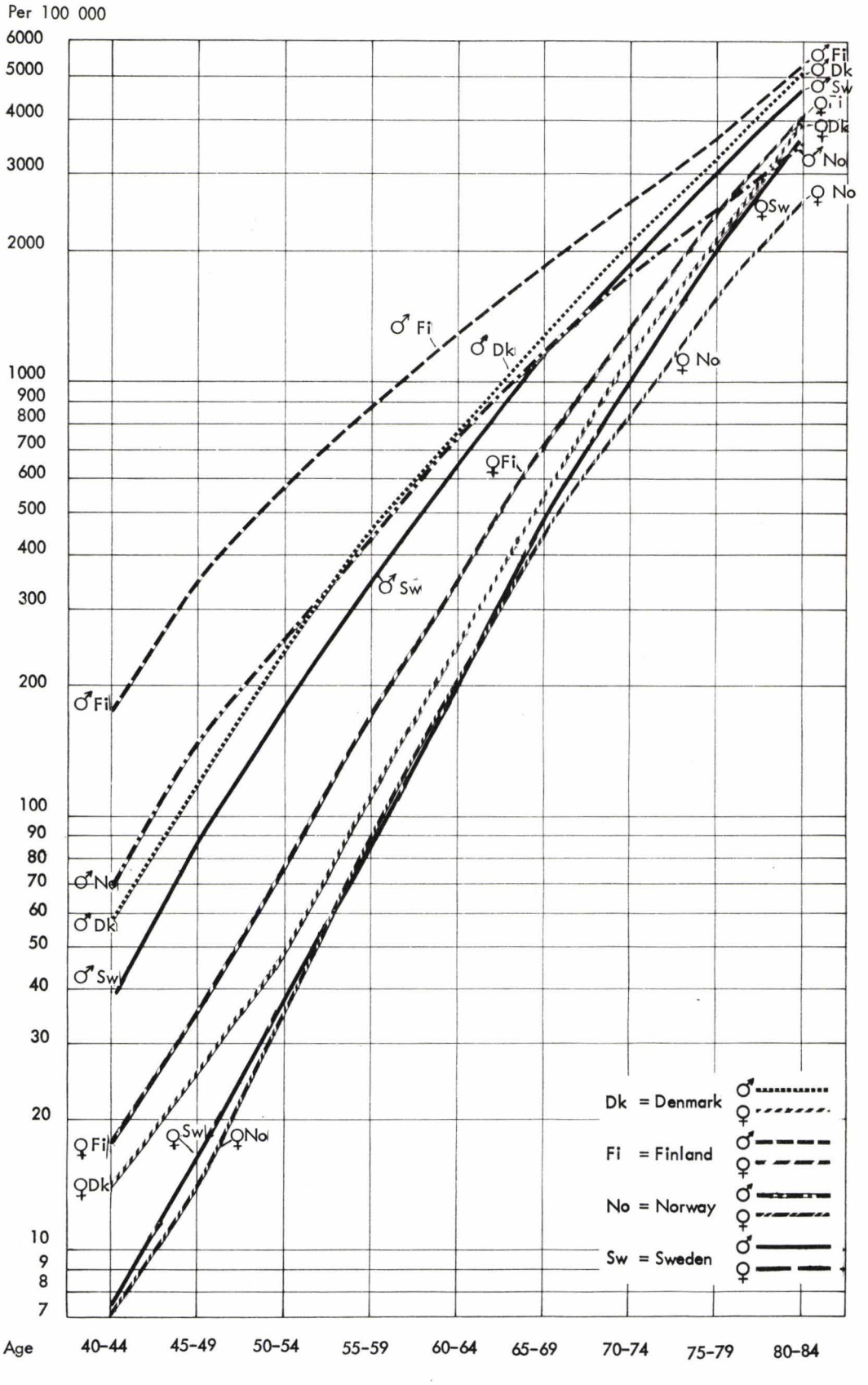


Fig. F MORTALITY FROM ISCHAEMIC HEART DISEASE, (A81, ICD 7 Rev.) IN DENMARK (Dk), FINLAND (Fi), NORWAY (No), AND SWEDEN (Sw), 1966-968

Age-specific male and female death rates per 100 000 mean population

Table g

MORTALITY FROM ACCIDENTS, POISONINGS AND VIOLENCE (XVII, ICD 7 REV.) IN DENMARK (Dk), FINLAND (Fi), NORWAY (No) AND SWEDEN (Sw), 1966-1968

Male and female death rates per 100 000 mean population, sex ratios (SR) and standardized male proportions (SMP)

	Male death rates				Female death rates			
	Dk	Fi	No	Sw	Dk	Fi	No	Sw
Age								
0	46	49	57	32	30	48	44	22
1 - 4	36	40	43	23	21	27	30	12
5 - 9	35	46	33	22	15	22	13	12
10 - 14	25	30	21	16	14	11	7	8
15 - 19	67	73	65	62	19	21	15	21
20 - 24	72	101	69	80	17	20	9	25
25 - 29	57	118	62	74	19	23	7	23
30 - 34	65	118	63	84	19	25	8	24
35 - 39	70	159	71	90	23	28	10	23
40 - 44	66	165	73	98	31	33	14	27
45 - 49	89	186	78	114	35	33	16	35
50 - 54	100	209	85	124	43	42	20	40
55 - 59	113	207	92	127	50	44	24	40
60 - 64	139	210	99	132	60	55	26	42
65 - 69	157	222	99	136	69	64	41	54
70 - 74	182	255	130	149	110	100	83	70
75 - 79	267	337	162	218	231	206	170	134
80 - 84	414	464	279	303	408	396	357	282
85 -	736	1 030	696	522	1 019	1 052	1 060	663
Total	86	123	75	92	50	42	39	42

	Sex ratio (SR)				Stand. male prop. (SMP)			
	Dk	Fi	No	Sw	Dk	Fi	No	Sw
Age								
0	1.52	1.01	1.29	1.42	.603	.503	.564	.587
1 - 4	1.71	1.51	1.44	1.99	.631	.601	.590	.665
5 - 9	2.44	2.14	2.58	1.84	.709	.683	.720	.648
10 - 14	1.84	2.68	3.02	2.06	.649	.728	.751	.674
15 - 19	3.48	3.41	4.30	2.94	.776	.774	.811	.746
20 - 24	4.35	5.00	7.57	3.17	.813	.833	.884	.760
25 - 29	2.97	5.01	8.52	3.18	.748	.834	.895	.761
30 - 34	3.46	4.76	7.56	3.54	.776	.827	.883	.780
35 - 39	3.07	5.72	6.83	3.86	.755	.851	.873	.795
40 - 44	2.12	5.04	5.36	3.67	.680	.832	.843	.786
45 - 49	2.54	5.65	4.90	3.25	.718	.849	.830	.765
50 - 54	2.33	4.98	4.16	3.12	.699	.833	.810	.756
55 - 59	2.27	4.70	3.82	3.19	.693	.825	.793	.760
60 - 64	2.30	3.84	3.89	3.16	.698	.792	.792	.759
65 - 69	2.26	3.47	2.40	2.50	.695	.776	.707	.716
70 - 74	1.66	2.54	1.56	2.13	.623	.718	.610	.680
75 - 79	1.16	1.64	.95	1.62	.536	.621	.488	.620
80 - 84	1.01	1.17	.78	1.08	.504	.540	.439	.518
85 -	.72	.98	.66	.79	.420	.495	.397	.441
Total	1.74	2.91	1.95	2.21	.635	.744	.661	.688

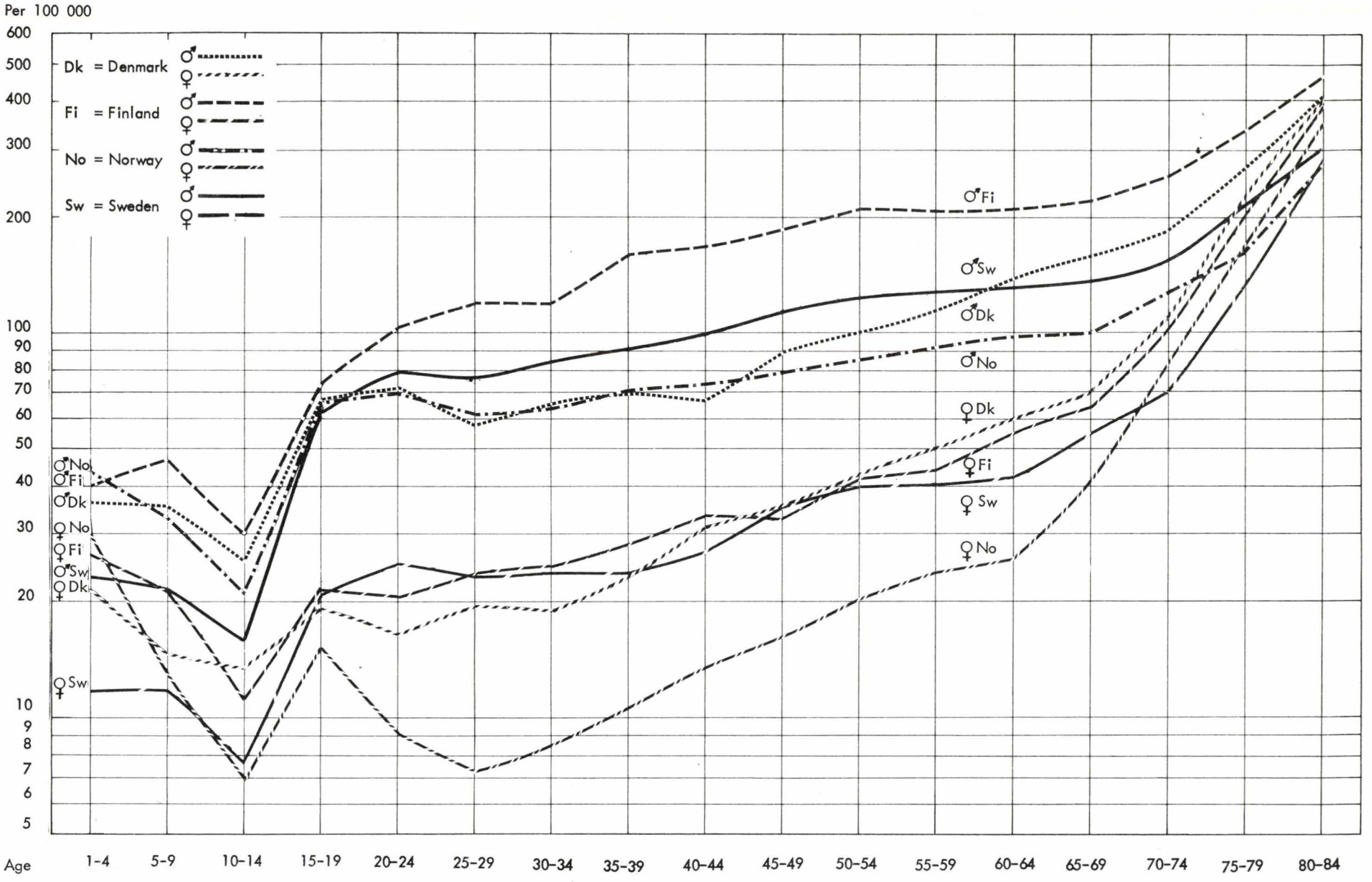


Fig. G MORTALITY FROM ACCIDENTS, POISONINGS AND VIOLENCE (XVII, ICD 7 Rev.) IN DENMARK (Dk), FINLAND (Fi), NORWAY (No), AND SWEDEN (Sw), 1966-1968

Age-specific male and female death rates per 100 000 mean population

Table h

MORTALITY FROM MOTOR VEHICLE ACCIDENTS (AE 138, ICD 7 REV.) IN DENMARK (Dk), FINLAND (Fi), NORWAY (No) AND SWEDEN (Sw), 1966-1968

Male and female death rates per 100 000 mean population, sex ratios (SR) and standardized male proportions (SMP)

	Male death rates				Female death rates			
	Dk	Fi	No	Sw	Dk	Fi	No	Sw
Age								
1 - 4	14.5	14.6	12.2	6.6	11.3	8.5	14.5	4.7
5 - 9	24.5	23.3	15.7	9.7	11.6	14.7	8.5	6.9
10 - 14	15.8	11.9	8.1	7.5	10.7	6.5	3.3	5.4
15 - 19	47.5	39.3	29.1	35.8	14.8	13.0	10.3	12.9
20 - 24	41.2	36.2	24.9	33.8	6.9	7.3	4.7	10.0
25 - 29	22.2	31.9	15.7	18.8	5.1	7.8	3.1	6.6
30 - 34	21.5	26.0	16.9	17.5	4.5	7.9	3.8	4.7
35 - 39	21.5	33.1	17.2	18.3	5.9	8.1	2.8	5.5
40 - 44	17.0	31.4	12.2	14.8	8.0	9.9	3.3	4.5
45 - 49	26.1	39.7	16.8	19.6	8.0	9.7	3.4	8.7
50 - 54	29.0	48.6	13.4	23.1	9.0	10.3	4.4	8.8
55 - 59	35.4	46.2	17.3	27.5	16.3	14.3	8.5	9.5
60 - 64	55.5	56.1	23.7	34.1	18.1	19.0	9.7	13.3
65 - 69	75.3	68.6	26.9	42.2	22.3	22.4	12.7	15.0
70 - 74	83.5	79.9	37.1	44.5	32.4	30.7	17.5	18.5
75 - 79	112.4	113.4	31.0	61.8	43.8	29.6	21.5	19.5
80 - 84	109.3	102.7	46.5	63.2	48.4	37.7	14.8	12.3
85 -	124.4	140.1	28.0	42.6	33.8	17.7	9.5	18.0
Total	34.6	34.6	18.6	23.9	12.8	11.9	7.5	9.2

	Sex ratio (SR)				Stand. male prop. (SMP)			
	Dk	Fi	No	Sw	Dk	Fi	No	Sw
Age								
1 - 4	1.29	1.72	.84	1.42	.562	.632	.457	.587
5 - 9	2.11	1.59	1.85	1.39	.679	.613	.649	.583
10 - 14	1.48	1.83	2.42	1.40	.596	.647	.573	.583
15 - 19	3.22	3.03	2.81	2.77	.763	.752	.739	.735
20 - 24	5.95	4.95	5.31	3.39	.856	.832	.842	.772
25 - 29	4.36	4.12	4.99	2.86	.814	.805	.833	.740
30 - 34	4.82	3.31	4.42	3.71	.828	.768	.815	.787
35 - 39	3.65	4.10	6.06	3.32	.785	.804	.859	.769
40 - 44	2.14	3.17	3.66	3.29	.682	.760	.785	.767
45 - 49	3.27	4.10	5.02	2.26	.765	.804	.832	.693
50 - 54	3.23	4.71	3.04	2.62	.763	.825	.753	.724
55 - 59	2.17	3.23	2.04	2.91	.685	.764	.671	.743
60 - 64	3.06	2.96	2.45	2.57	.754	.747	.710	.719
65 - 69	3.38	3.07	2.12	2.82	.772	.754	.679	.738
70 - 74	2.57	2.60	2.12	2.41	.720	.722	.679	.706
75 - 79	2.57	3.84	1.44	3.18	.720	.793	.591	.760
80 - 84	2.25	2.72	3.15	5.14	.693	.732	.759	.837
85 -	3.68	7.91	2.95	2.37	.787	.888	.748	.703
Total	2.71	2.90	2.47	2.61	.730	.744	.712	.723

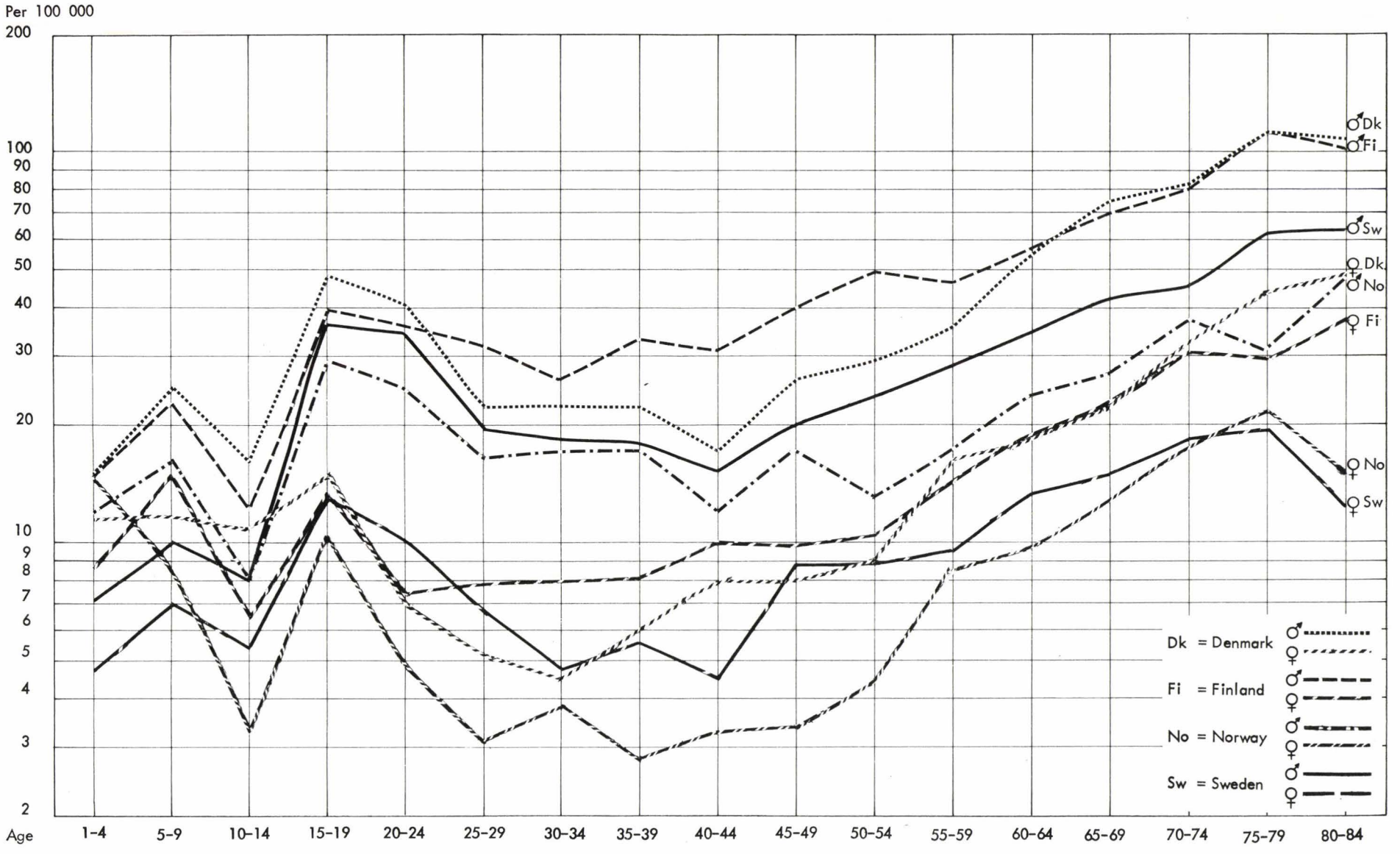


Fig. H MORTALITY FROM MOTOR VEHICLE ACCIDENTS (AE 138, ICD 7 Rev.) IN DENMARK (Dk), FINLAND (Fi), NORWAY (No), AND SWEDEN (Sw), 1966-1968

Age-specific male and female death rates per 100 000 mean population

Table i

MORTALITY FROM SUICIDE (AE 148, ICD 7 REV.) IN DENMARK (Dk), FINLAND (Fi), NORWAY (No) AND SWEDEN (Sw), 1966-1968

Male and female death rates per 100 000 mean population, sex ratios (SR) and standardized male proportions (SMP)

	Male death rates				Female death rates			
	Dk	Fi	No	Sw	Dk	Fi	No	Sw
Age								
15 - 19	4.9	10.5	5.3	7.6	3.0	4.8	1.3	4.5
20 - 24	14.9	26.9	8.6	21.6	7.9	7.6	1.4	10.3
25 - 29	18.1	36.4	5.7	27.8	12.1	9.4	2.2	12.1
30 - 34	29.5	37.1	12.2	37.2	9.8	11.9	2.1	14.0
35 - 39	32.3	49.2	16.3	39.2	15.1	12.1	5.1	13.7
40 - 44	34.7	51.8	19.0	46.0	17.9	14.1	5.8	16.2
45 - 49	42.2	60.7	18.1	51.8	22.0	16.6	7.7	18.9
50 - 54	49.0	73.2	23.7	53.7	27.2	19.7	8.3	21.9
55 - 59	50.8	71.0	19.1	54.8	25.8	17.6	8.2	19.6
60 - 64	49.3	62.0	20.9	50.8	27.0	16.2	5.2	14.7
65 - 69	41.7	66.6	16.2	47.5	22.3	14.8	5.8	15.7
70 - 74	44.6	62.6	22.5	42.9	20.0	11.2	6.9	12.5
75 - 79	41.5	48.8	14.2	52.8	20.0	6.1	6.0	11.1
80 - 84	57.8	65.4	11.2	52.8	16.5	2.9	2.3	9.2
85 -	59.6	74.2	11.2	41.2	9.4	-	5.7	8.5
Total	24.5	32.3	11.1	30.9	12.8	9.0	3.7	11.3

	Sex ratio (SR)				Stand. male prop. (SMP)			
	Dk	Fi	No	Sw	Dk	Fi	No	Sw
Age								
15 - 19	1.63	2.21	3.93	1.69	.620	.689	.798	.629
20 - 24	1.88	3.52	6.09	2.09	.653	.779	.859	.677
25 - 29	1.49	3.86	2.60	2.29	.600	.794	.723	.697
30 - 34	2.99	3.12	5.82	2.66	.750	.757	.854	.727
35 - 39	2.14	4.06	3.22	2.87	.682	.803	.763	.741
40 - 44	1.94	3.67	3.52	2.83	.660	.786	.765	.740
45 - 49	1.92	3.67	2.34	2.74	.657	.785	.702	.733
50 - 54	1.80	3.72	2.87	2.45	.643	.788	.741	.710
55 - 59	1.97	4.03	2.33	2.80	.663	.801	.700	.737
60 - 64	1.82	3.82	4.04	3.45	.646	.793	.801	.776
65 - 69	1.87	4.50	2.79	3.04	.652	.818	.736	.752
70 - 74	2.23	5.59	3.26	3.43	.690	.848	.765	.774
75 - 79	2.08	8.04	2.34	4.77	.675	.890	.701	.827
80 - 84	3.51	22.53	4.95	5.72	.778	.958	.832	.851
85 -	6.35	..	1.97	4.83	.864	1.000	.664	.829
Total	1.91	3.58	3.00	2.74	.657	.782	.750	.732

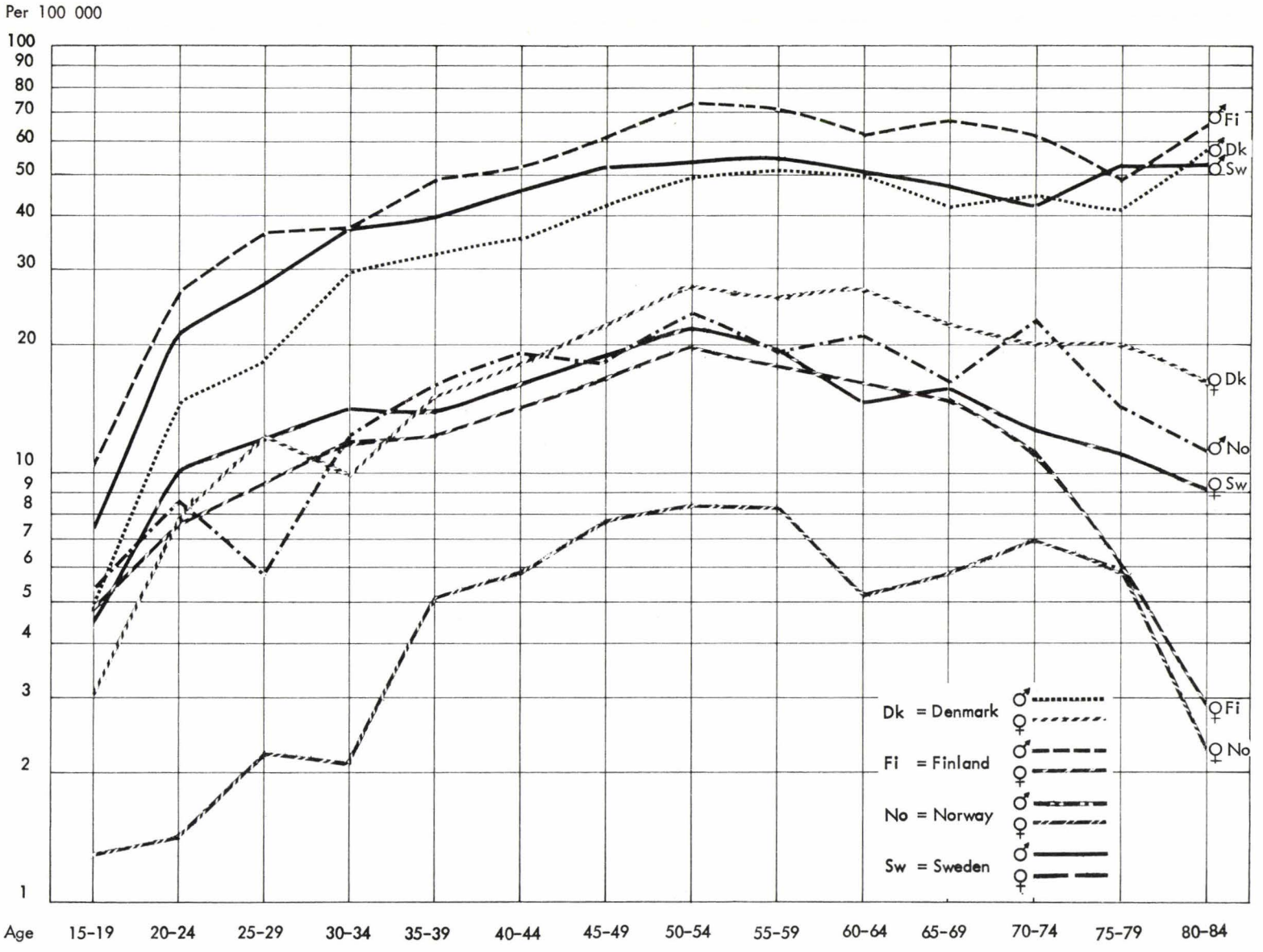


Fig. 1 MORTALITY FROM SUICIDE (AE 148, ICD 7 Rev.) IN DENMARK (Dk), FINLAND (Fi), NORWAY (No), AND SWEDEN (Sw), 1966-1968

Age-specific male and female death rates per 100 000 mean population

Table j

MORTALITY FROM SENILITY, SYMPTOMS AND ILL-DEFINED CONDITIONS (XVI, ICD 7 REV.) IN DENMARK (Dk), FINLAND (Fi), NORWAY (No) AND SWEDEN (Sw), 1966-1968

Male and female death rates per 100 000 mean population, sex ratios (SR) and standardized male proportions (SMP)

	Male death rates				Female death rates			
	Dk	Fi	No	Sw	Dk	Fi	No	Sw
Age								
0	64.4	6.0	78.1	3.8	32.0	3.6	88.2	4.6
1 - 4	1.2	-	3.0	.6	1.3	.2	3.8	.7
5 - 9	.4	.2	2.6	-	-	.2	.4	-
10 - 14	.4	.2	1.1	.4	.4	-	.7	-
15 - 19	1.0	-	2.1	.7	.2	-	.9	.1
20 - 24	.8	1.4	3.5	1.1	.3	.7	2.3	.2
25 - 29	1.2	1.8	7.9	1.1	.2	.8	1.3	.1
30 - 34	1.9	1.1	11.5	1.3	.9	.7	4.2	.6
35 - 39	2.2	2.4	12.0	2.2	1.7	1.3	6.3	.7
40 - 44	7.0	3.1	22.6	2.6	2.7	1.1	5.0	.8
45 - 49	6.6	3.1	38.3	2.6	4.5	.9	9.5	1.1
50 - 54	10.2	5.0	58.6	3.4	4.7	1.0	14.3	1.0
55 - 59	10.4	6.3	89.9	5.2	6.6	1.4	24.6	1.4
60 - 64	12.4	6.2	113.7	6.5	12.5	2.8	46.8	2.3
65 - 69	33.3	11.2	195.5	10.3	18.4	6.5	65.3	4.9
70 - 74	48.3	23.9	253.2	21.1	24.9	12.2	109.1	10.2
75 - 79	79.5	77.5	389.4	48.1	57.1	43.2	276.2	31.8
80 - 84	151.7	152.5	702.6	109.8	112.4	162.4	544.0	100.0
85 -	386.0	881.7	2 014.7	631.7	412.8	772.1	1 919.9	538.1
Total	13.2	5.7	68.1	9.2	10.4	6.7	51.1	8.7

	Sex ratio (SR)				Stand. male prop. (SMP)			
	Dk	Fi	No	Sw	Dk	Fi	No	Sw
Age								
65 - 69	1.81	1.71	2.99	2.10	.644	.631	.750	.677
70 - 74	1.94	1.96	2.32	2.07	.660	.662	.699	.674
75 - 79	1.39	1.79	1.41	1.52	.582	.642	.585	.603
80 - 84	1.35	.94	1.29	1.10	.574	.484	.564	.523
85 -	.94	1.14	1.05	1.17	.483	.533	.512	.540
Total	1.27	.85	1.33	1.06	.559	.459	.571	.516

Table k

MORTALITY FROM ACCIDENTAL FALLS (AE 141, ICD 7 REV.) IN DENMARK (Dk), FINLAND (Fi), NORWAY (No) AND SWEDEN (Sw), 1966-1968

Male and female death rates per 100 000 mean population, sex ratios (SR) and standardized male proportions (SMP)

	Male death rates				Female death rates			
	Dk	Fi	No	Sw	Dk	Fi	No	Sw
Age								
60 - 64	13.2	16.0	14.4	11.7	8.4	6.1	4.5	5.8
65 - 69	20.3	19.8	20.5	13.7	13.4	14.8	16.0	13.1
70 - 74	29.6	42.0	33.8	29.8	43.7	40.9	52.0	30.0
75 - 79	77.3	96.2	84.1	61.0	144.1	140.3	127.7	91.1
80 - 84	194.1	233.4	182.9	144.5	312.0	311.7	323.7	235.9
85 -	471.5	700.4	598.4	390.0	911.8	938.5	1 016.7	595.9
Total	10.4	8.6	13.6	10.6	17.8	11.8	21.4	14.5

	Sex ratio (SR)				Stand. male prop. (SMP)			
	Dk	Fi	No	Sw	Dk	Fi	No	Sw
Age								
60 - 64	1.57	2.65	3.18	2.03	.611	.726	.761	.670
65 - 69	1.52	1.34	1.28	1.04	.603	.573	.562	.512
70 - 74	.68	1.03	.65	1.00	.403	.506	.394	.499
75 - 79	.54	.69	.66	.67	.349	.407	.397	.401
80 - 84	.62	.75	.56	.61	.383	.428	.361	.380
85 -	.52	.75	.59	.65	.341	.427	.371	.395
Total	.59	.73	.64	.73	.369	.421	.389	.423

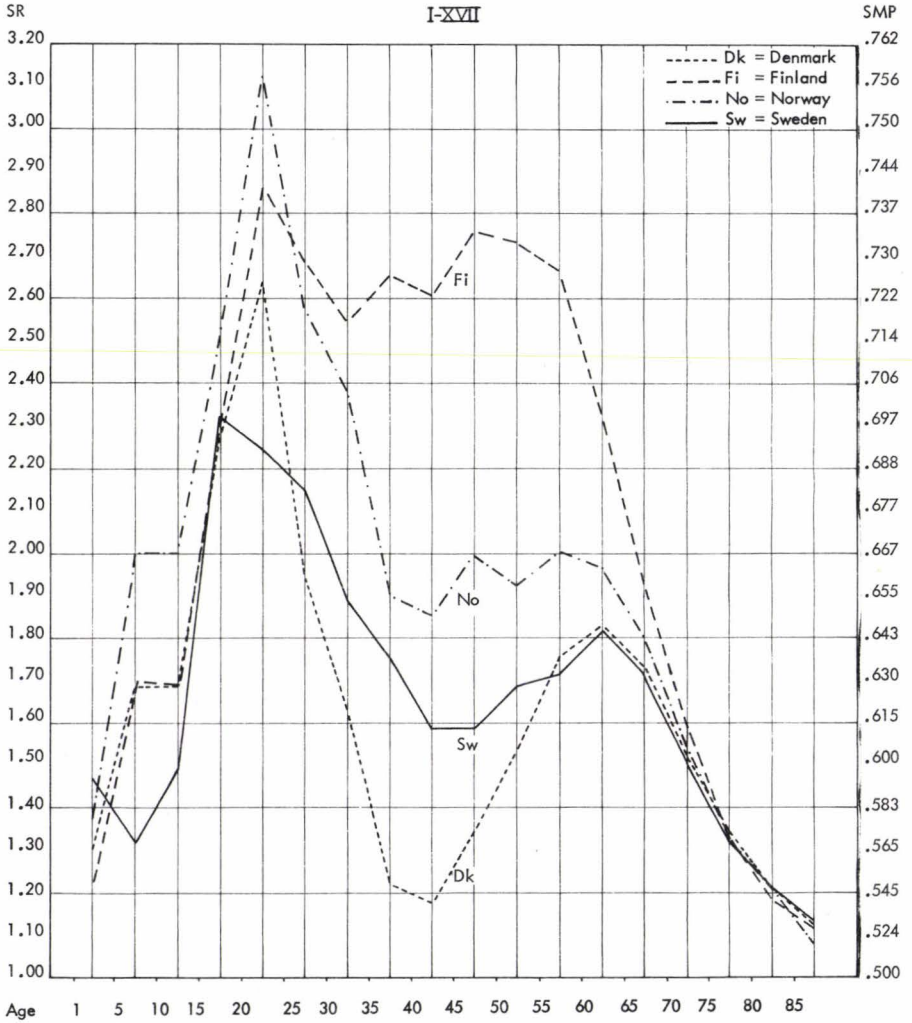


Fig. K:1 SEX RATIO (SR) OF TOTAL MORTALITY (I-XVII) BY AGE AND COUNTRY, 1966-1968
Male death rate when female death rate = 1 (left hand scale) and standardized male proportion, SMP, (right hand scale)

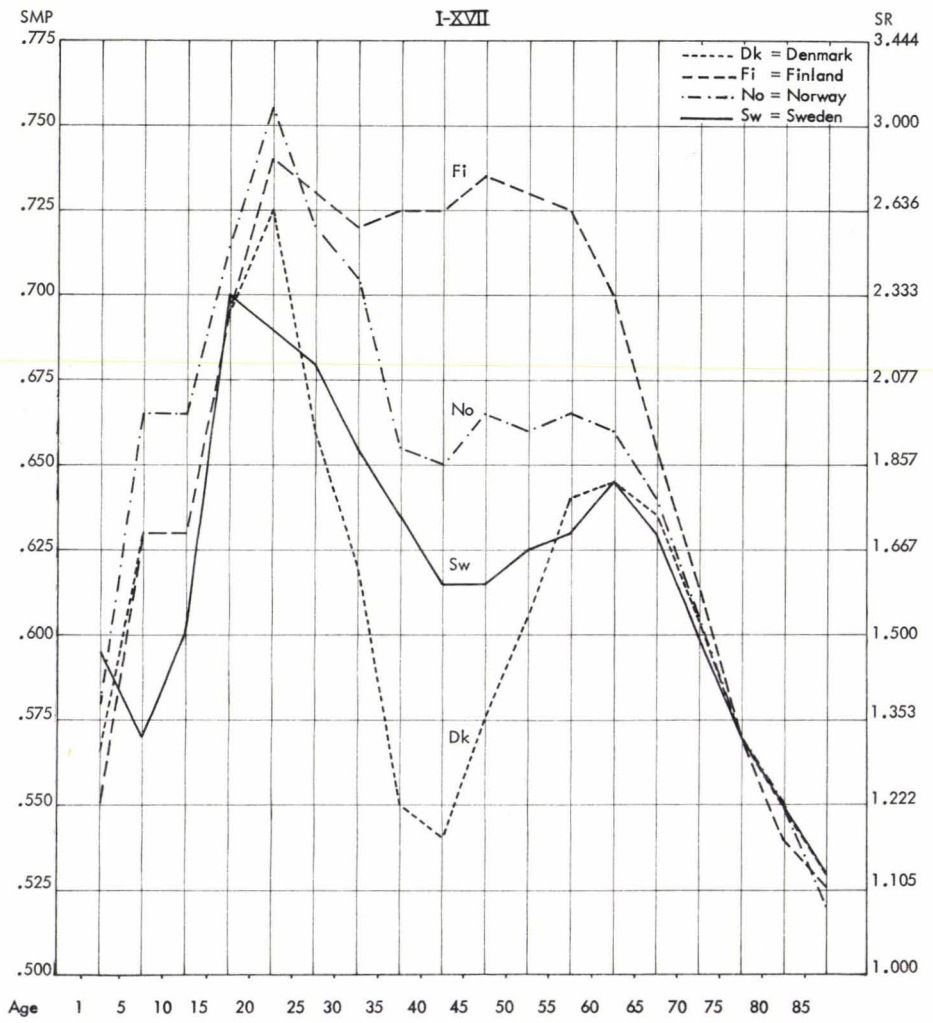


Fig. K:2 STANDARDIZED MALE PROPORTION (SMP) OF TOTAL MORTALITY (I-XVII) BY AGE AND COUNTRY, 1966-1968
Proportion of male deaths when standardized to equal population size of males and females (left hand scale) and sex ratio, SR, (right hand scale)

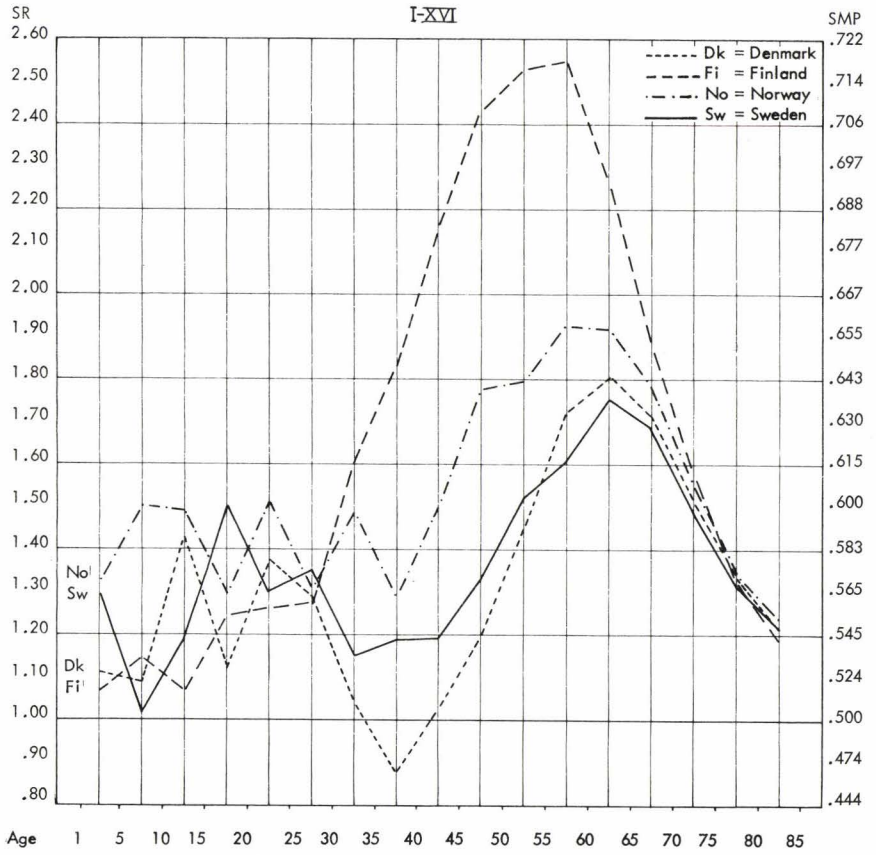


Fig. L:1 SEX RATIO (SR) OF MORTALITY FROM ALL NATURAL CAUSES (I-XVI) BY AGE AND COUNTRY, 1966-1968
Male death rate when female death rate = 1 (left hand scale) and standardized male proportion, SMP, (right hand scale)

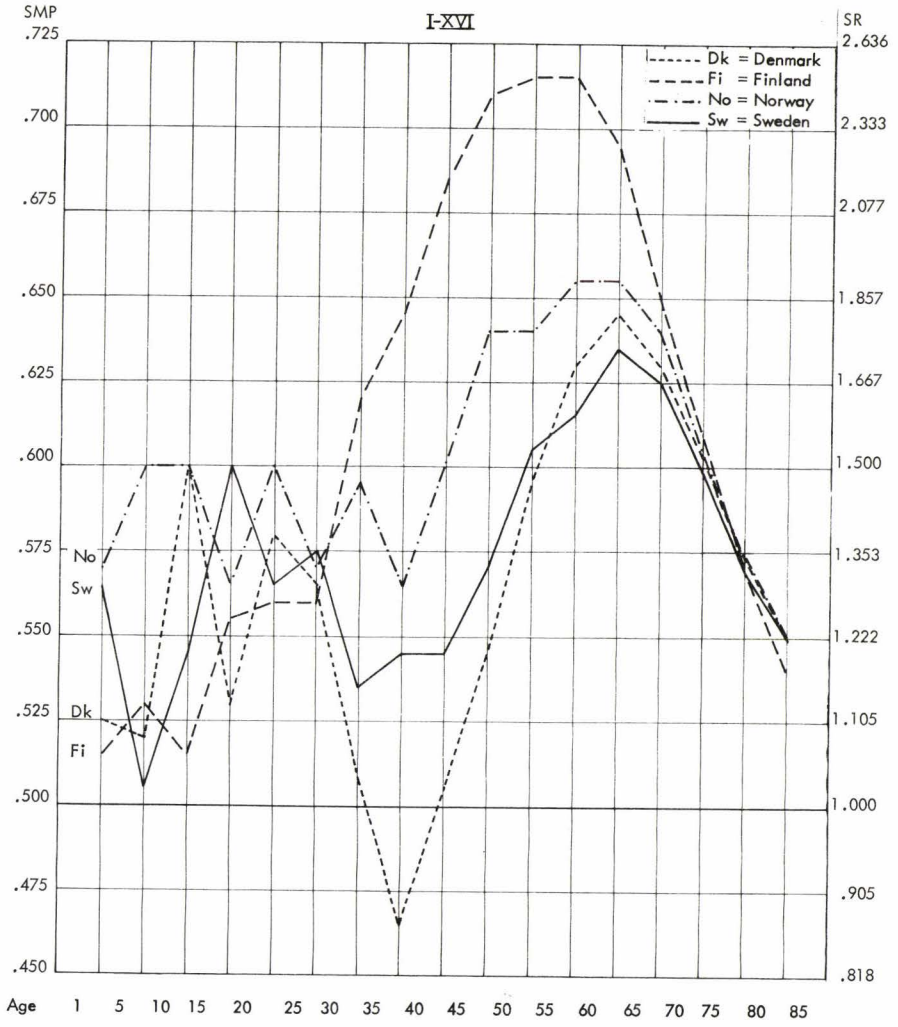


Fig. L:2 STANDARDIZED MALE PROPORTION (SMP) OF MORTALITY FROM ALL NATURAL CAUSES (I-XVI) BY AGE AND COUNTRY, 1966-1968
Proportion of male deaths when standardized to equal population size of males and females (left hand scale) and sex ratio, SR, (right hand scale)

Remark. For the sake of comparability the linear scale of the SMP graphs is throughout the same, whereas the scale of the SRs has had to be chosen for each graph separately

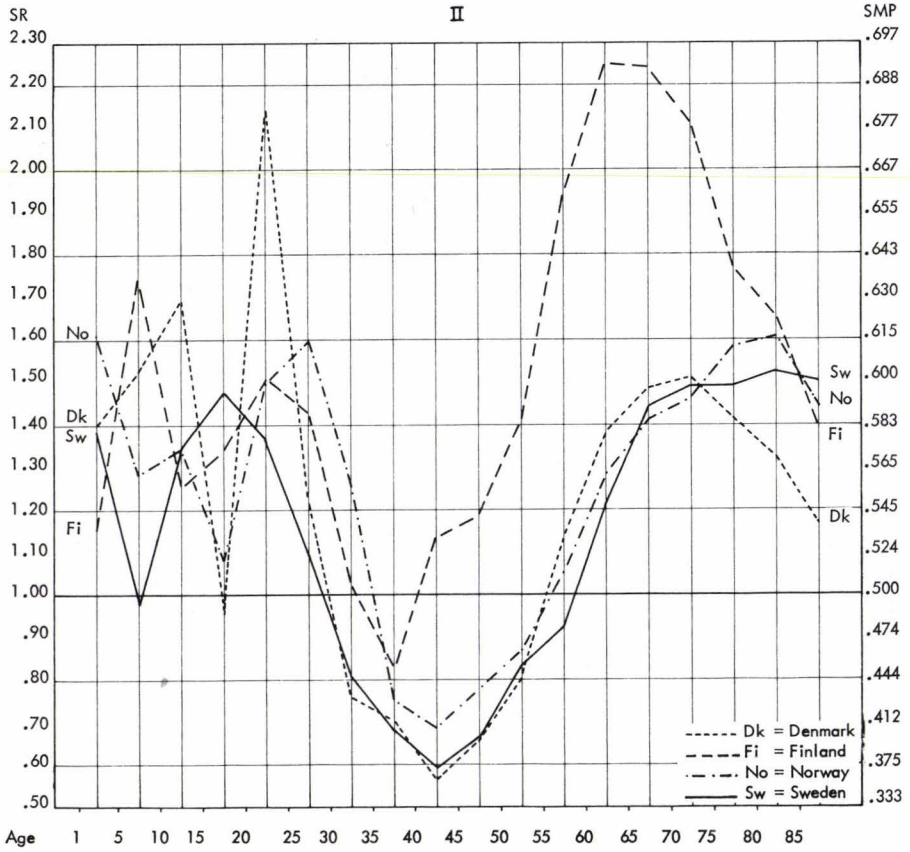


Fig. M:1 SEX RATIO (SR) OF MORTALITY FROM NEOPLASMS (II) BY AGE AND COUNTRY, 1966-1968
Male death rate when female death rate = 1 (left hand scale) and standardized male proportion, SMP, (right hand scale)

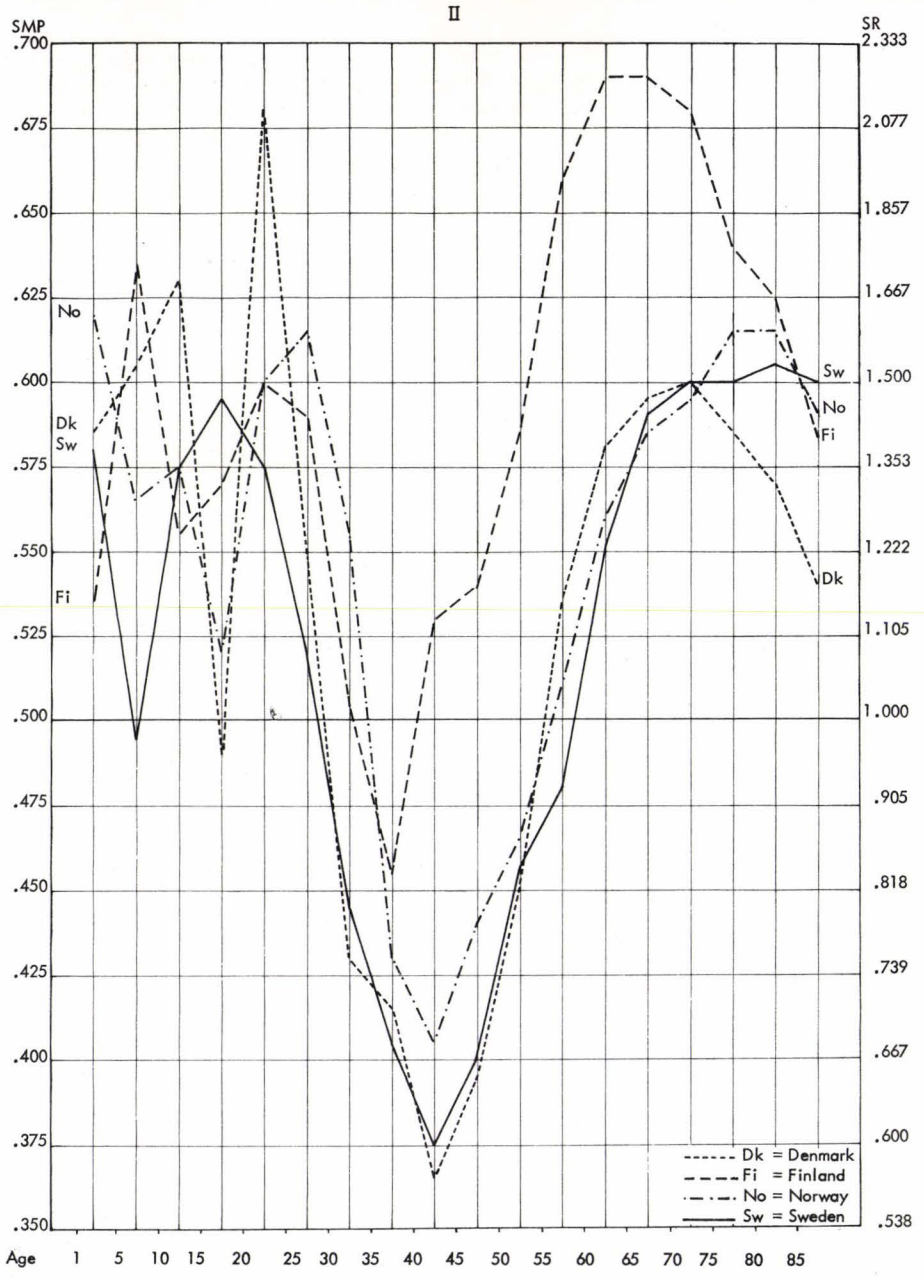


Fig. M:2 STANDARDIZED MALE PROPORTION (SMP) OF MORTALITY FROM NEOPLASMS (II) BY AGE AND COUNTRY, 1966-1968
Proportion of male deaths when standardized to equal population size of males and females (left hand scale) and sex ratio, SR, (right hand scale)

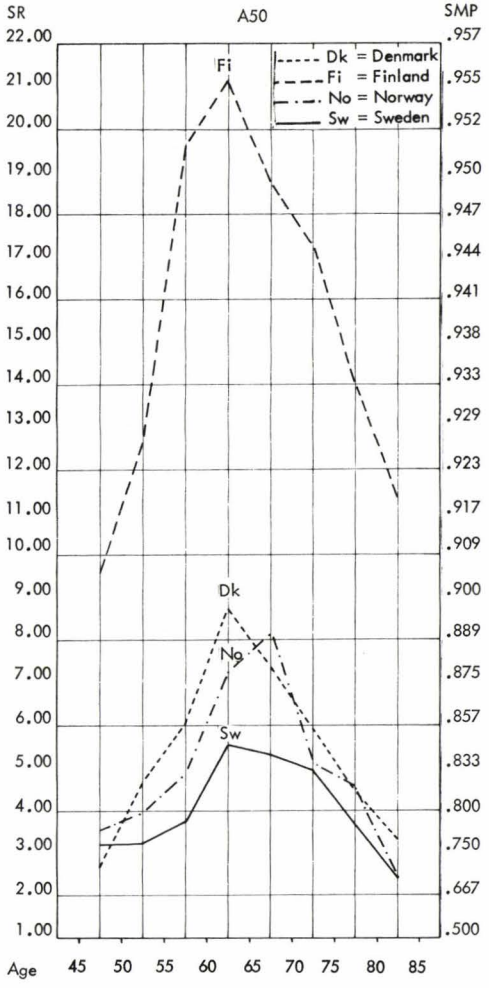


Fig.N:1 SEX RATIO (SR) OF MORTALITY FROM LUNG CANCER (A50) BY AGE AND COUNTRY, 1966-1968
Male death rate when female death rate = 1 (left hand scale) and standardized male proportion, SMP, (right hand scale)

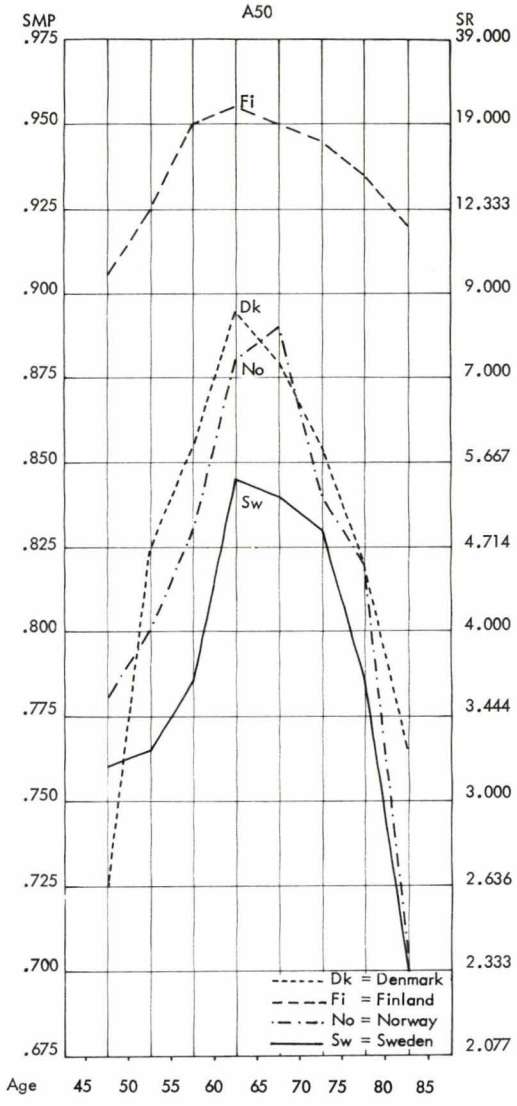


Fig.N:2 STANDARDIZED MALE PROPORTION (SMP) OF MORTALITY FROM LUNG CANCER (A50) BY AGE AND COUNTRY, 1966-1968
Proportion of male deaths when standardized to equal population size of males and females (left hand scale) and sex ratio, SR, (right hand scale)

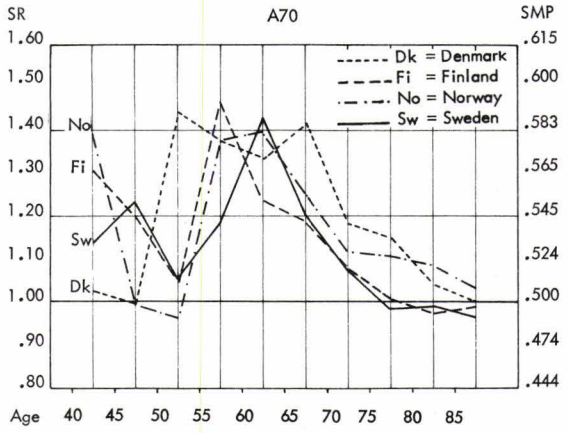


Fig. O:1 SEX RATIO (SR) OF MORTALITY FROM CEREBROVASCULAR DISEASES (A70) BY AGE AND COUNTRY, 1966-1968
Male death rate when female death rate = 1 (left hand scale) and standardized male proportion, SMP, (right hand scale)

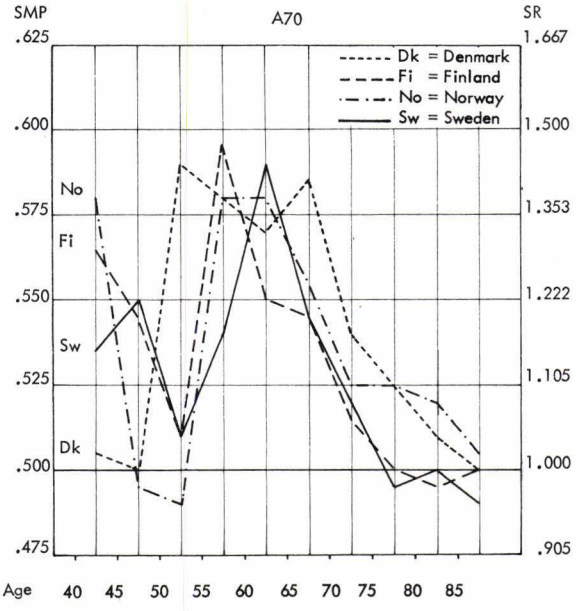


Fig. O:2 STANDARDIZED MALE PROPORTION (SMP) OF MORTALITY FROM CEREBROVASCULAR DISEASES (A70) BY AGE AND COUNTRY, 1966-1968
Proportion of male deaths when standardized to equal population size of males and females (left hand scale) and sex ratio, SR, (right hand scale)

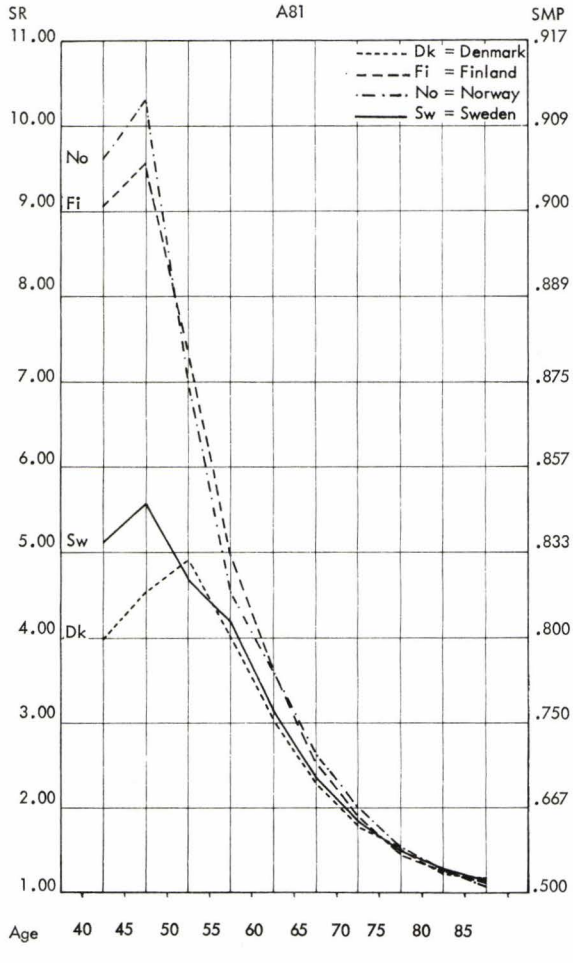


Fig. P:1 SEX RATIO (SR) OF MORTALITY FROM ISCHAEMIC HEART DISEASE (A81) BY AGE AND COUNTRY, 1966-1968
Male death rate when female death rate = 1 (left hand scale) and standardized male proportion, SMP, (right hand scale)

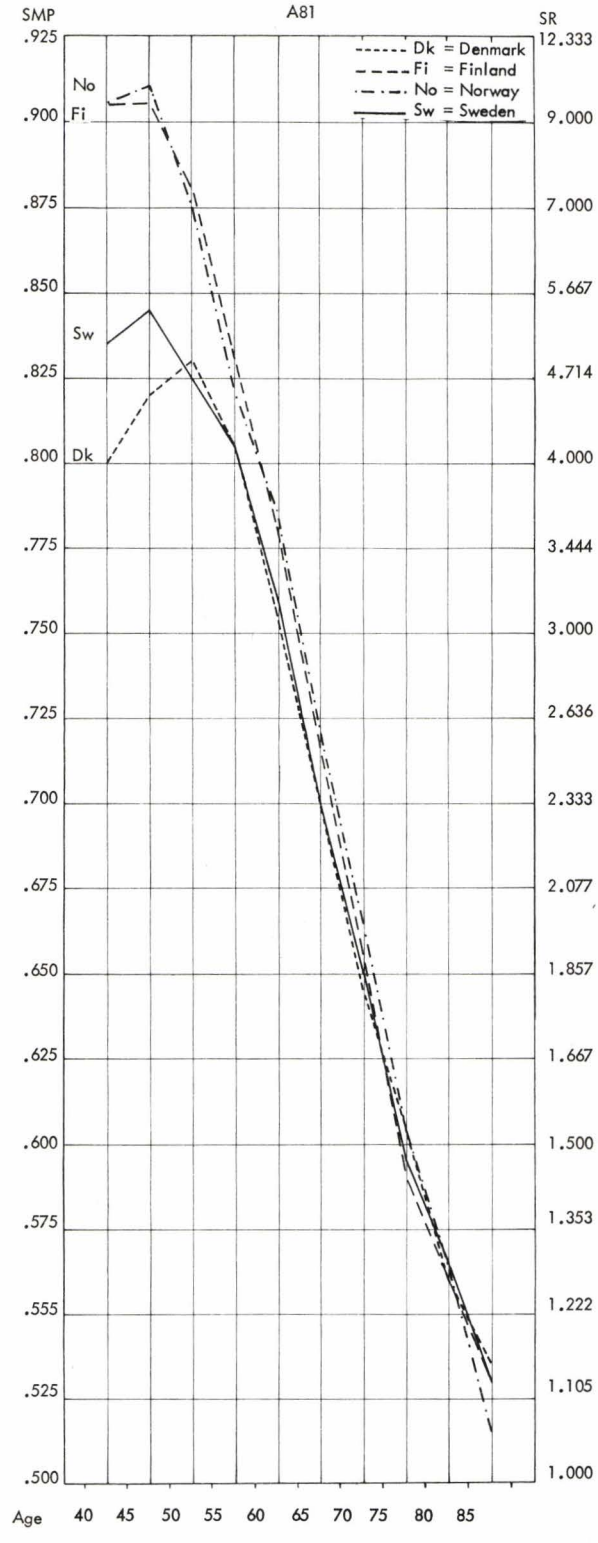


Fig. P:2 STANDARDIZED MALE PROPORTION (SMP) OF MORTALITY FROM ISCHAEMIC HEART DISEASE (A81) BY AGE AND COUNTRY, 1966-1968
Proportion of male deaths when standardized to equal population size of males and females (left hand scale) and sex ratio, SR, (right hand scale)

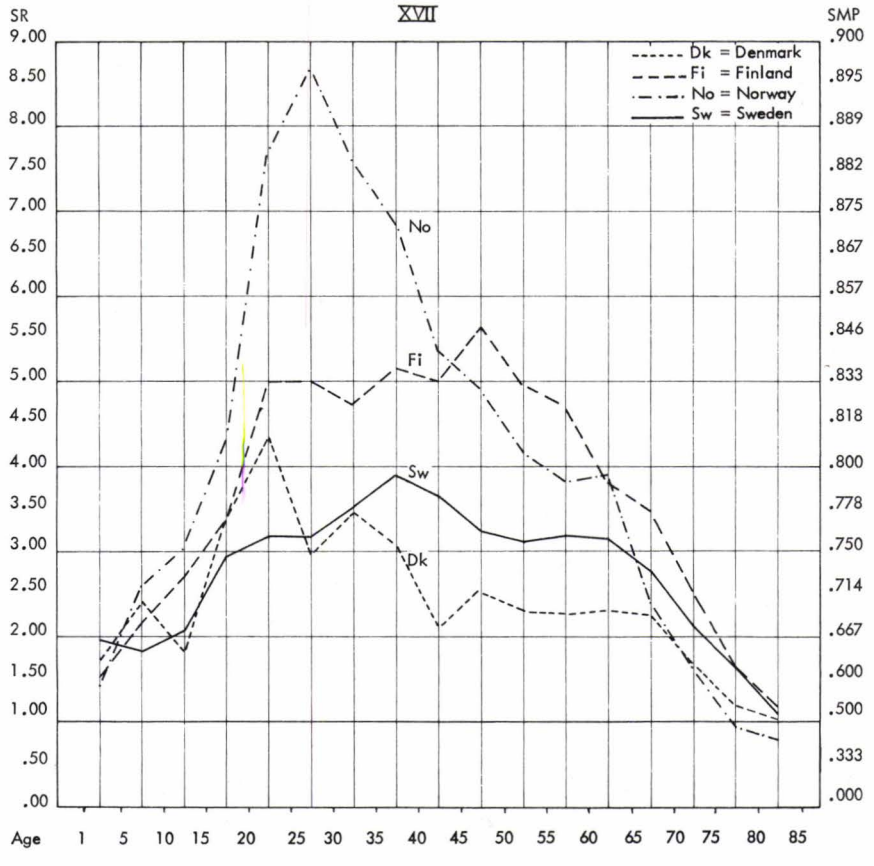


Fig. Q:1 SEX RATIO OF MORTALITY FROM ACCIDENTS, POISONINGS AND VIOLENCE (XVII) BY AGE AND COUNTRY, 1966-1968
Male death rate when female death rate = 1 (left hand scale) and standardized male proportion, SMP, (right hand scale)

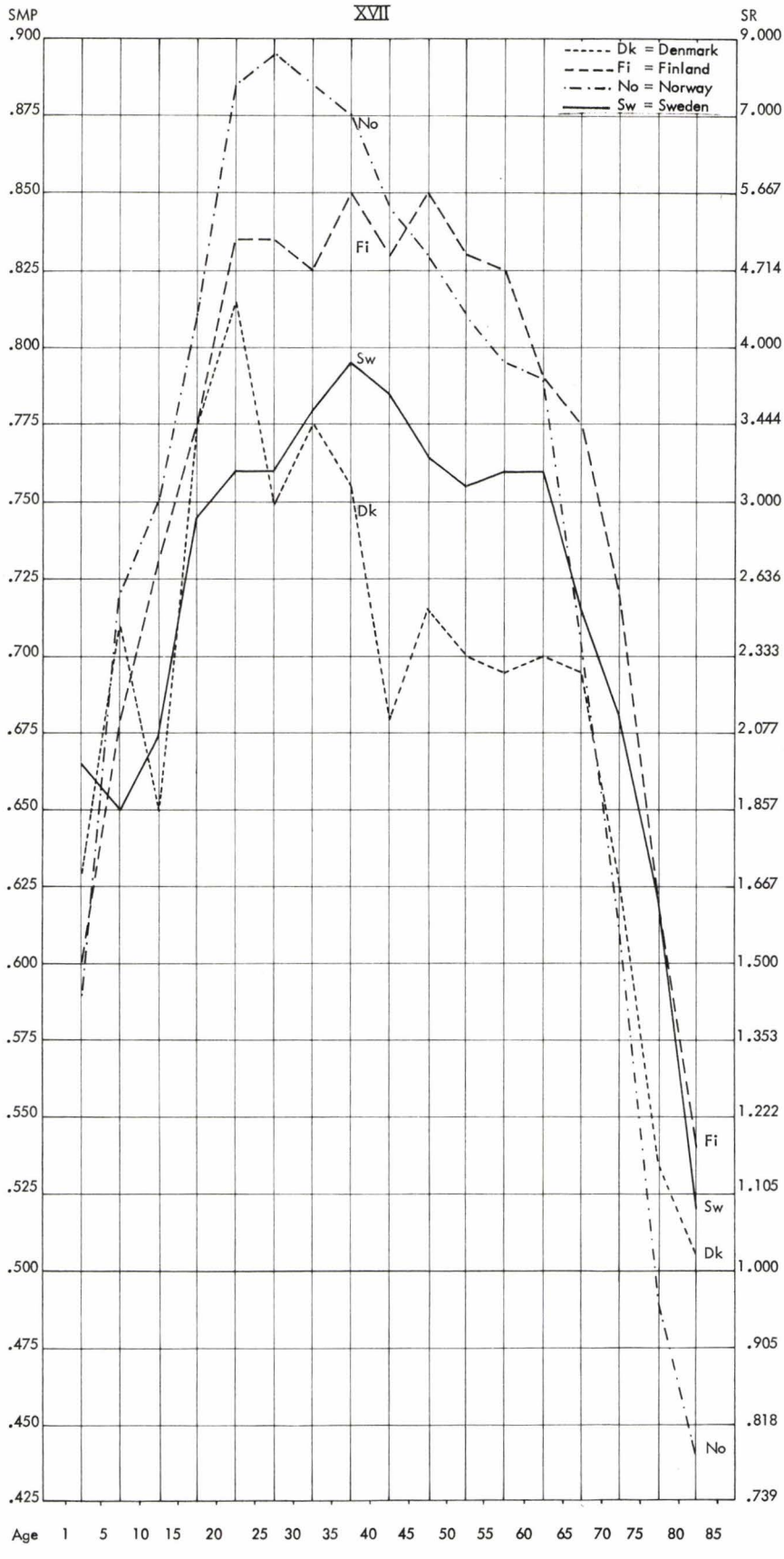


Fig.Q:2 STANDARDIZED MALE PROPOTION (SMP) OF ACCIDENTS, POISONINGS AND VIOLENCE (XVII) BY AGE AND COUNTRY, 1966-1968
Proportion of male deaths when standardized to equal population size of males and females (left hand scale) and sex ratio, SR, (right hand scale)

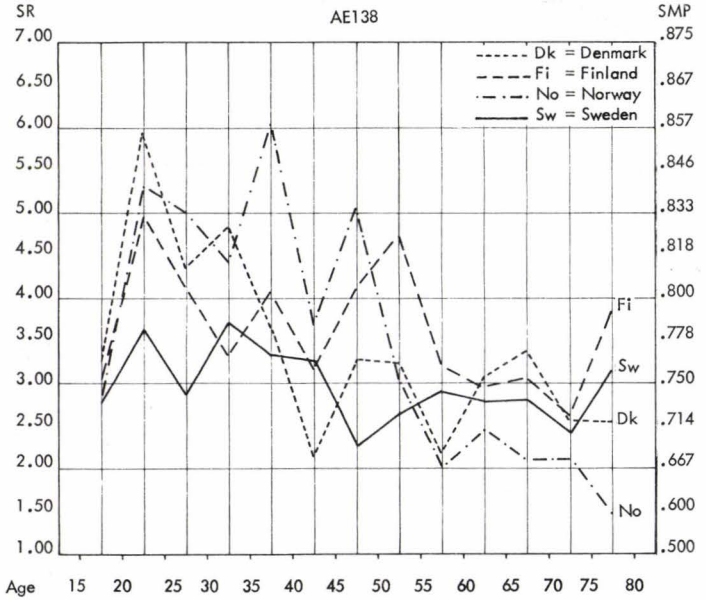


Fig.R:1 SEX RATIO OF MORTALITY FROM MOTOR VEHICLE ACCIDENTS (AE138) BY AGE AND COUNTRY, 1966-1968
Male death rate when female death rate = 1 (left hand scale) and standardized male proportion, SMP, (right hand scale)

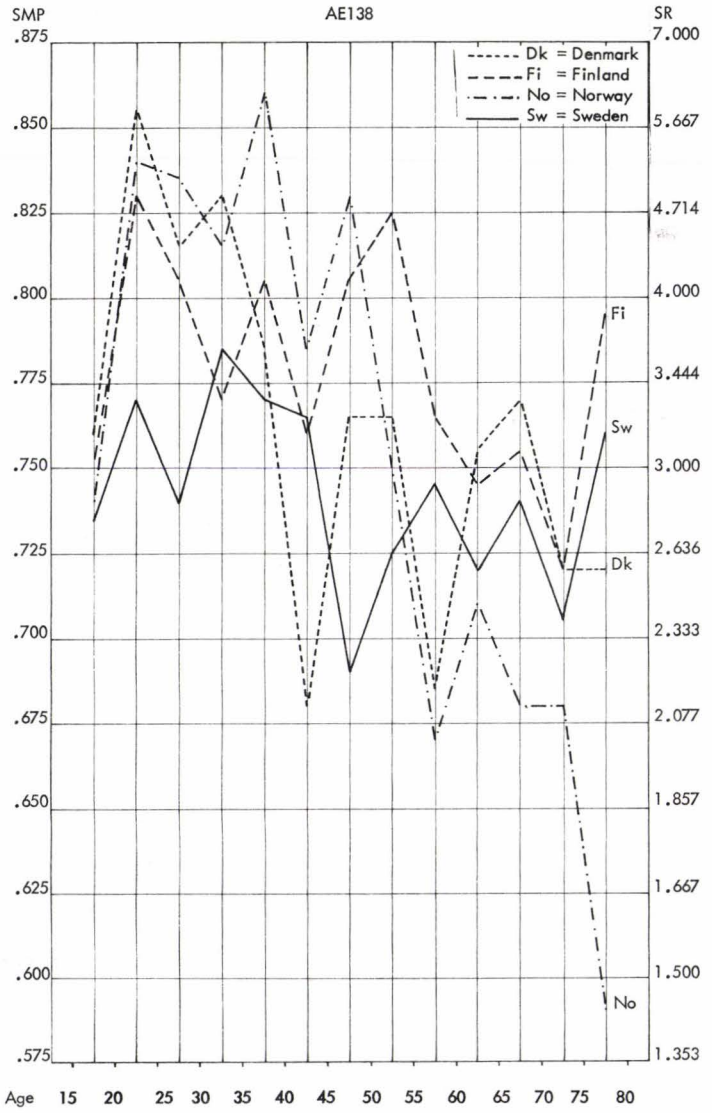


Fig.R:2 STANDARDIZED MALE PROPORTION (SMP) OF MORTALITY FROM MOTOR VEHICLE ACCIDENTS (AE138) BY AGE AND COUNTRY, 1966-1968
Proportion of male deaths when standardized to equal population size of males and females (left hand scale) and sex ratio, SR, (right hand scale)

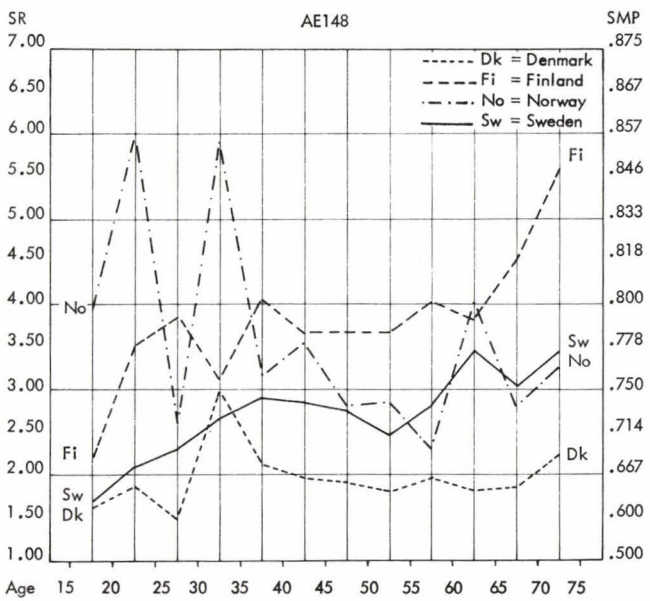


Fig.S:1 SEX RATIO OF MORTALITY FROM SUICIDE (AE148) BY AGE AND COUNTRY, 1966-1968
Male death rate when female death rate = 1 (left hand scale) and standardized male proportion, SMP, (right hand scale)

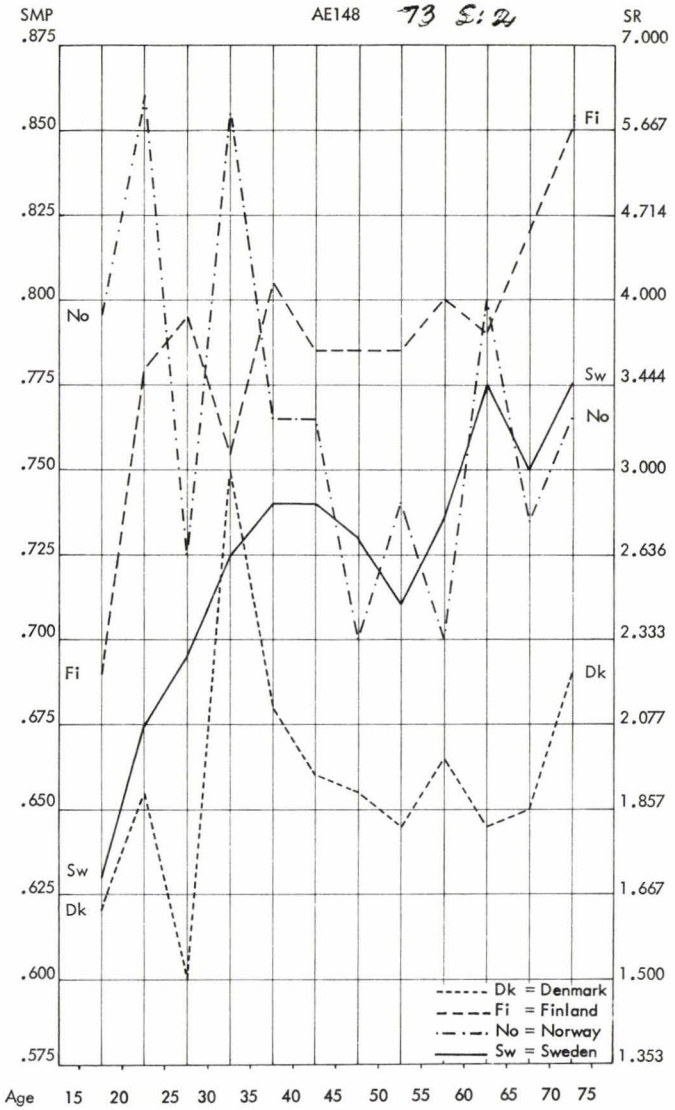


Fig.S:2 STANDARDIZED MALE PROPORTION (SMP) OF MORTALITY FROM SUICIDE (AE148) BY AGE AND COUNTRY, 1966-1968
Proportion of male deaths when standardized to equal population size of males and females (left hand scale) and sex ratio, SR, (right hand scale)

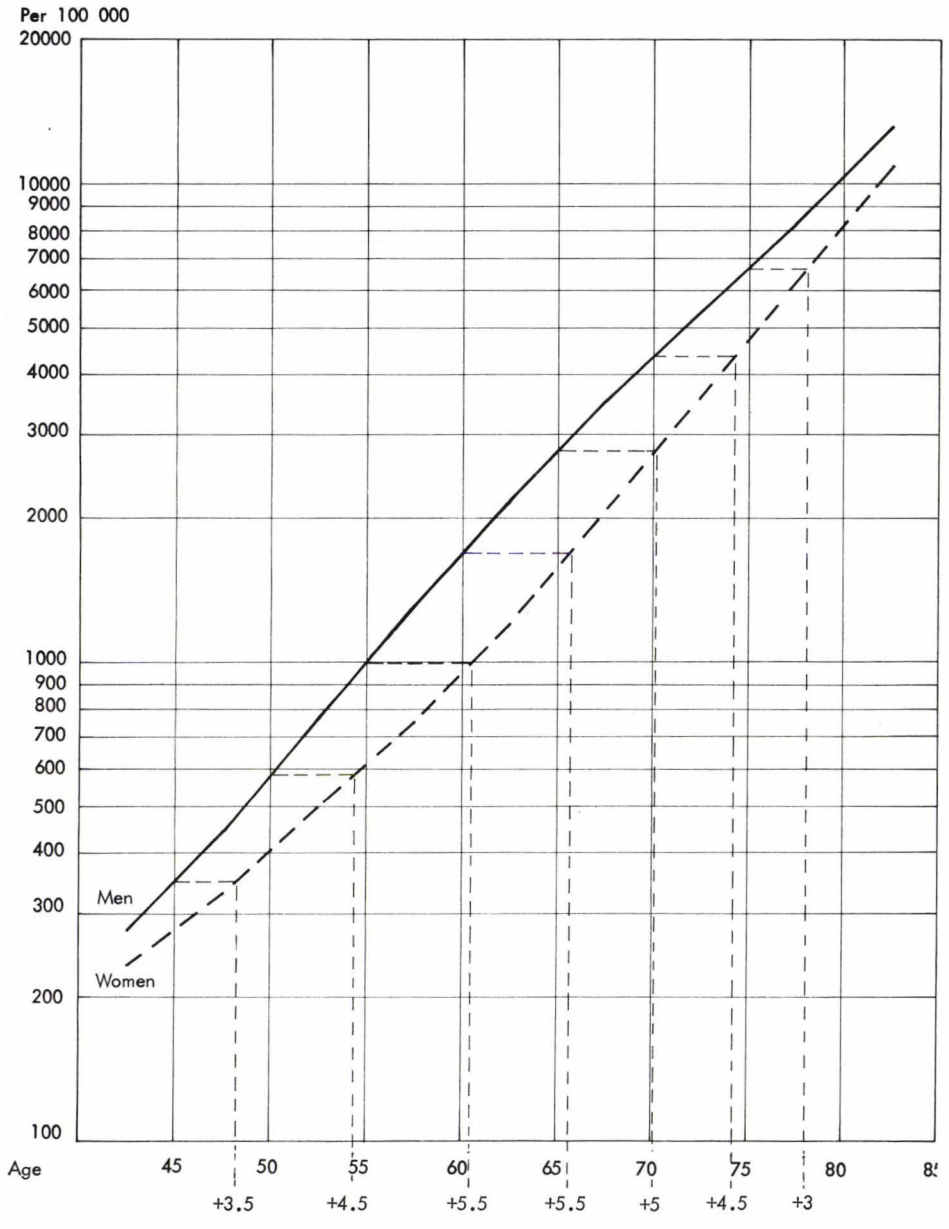


Fig. T:1
AGE-SPECIFIC MALE AND FEMALE DEATH RATES FOR ALL CAUSES IN DENMARK, 1966-1968
AGE GAP BETWEEN MALE AND FEMALE DEATH CURVES AT EQUAL LEVELS CORRESPONDING TO MALE DEATH RATES FOR AGES 45, 50, 55 ETC.

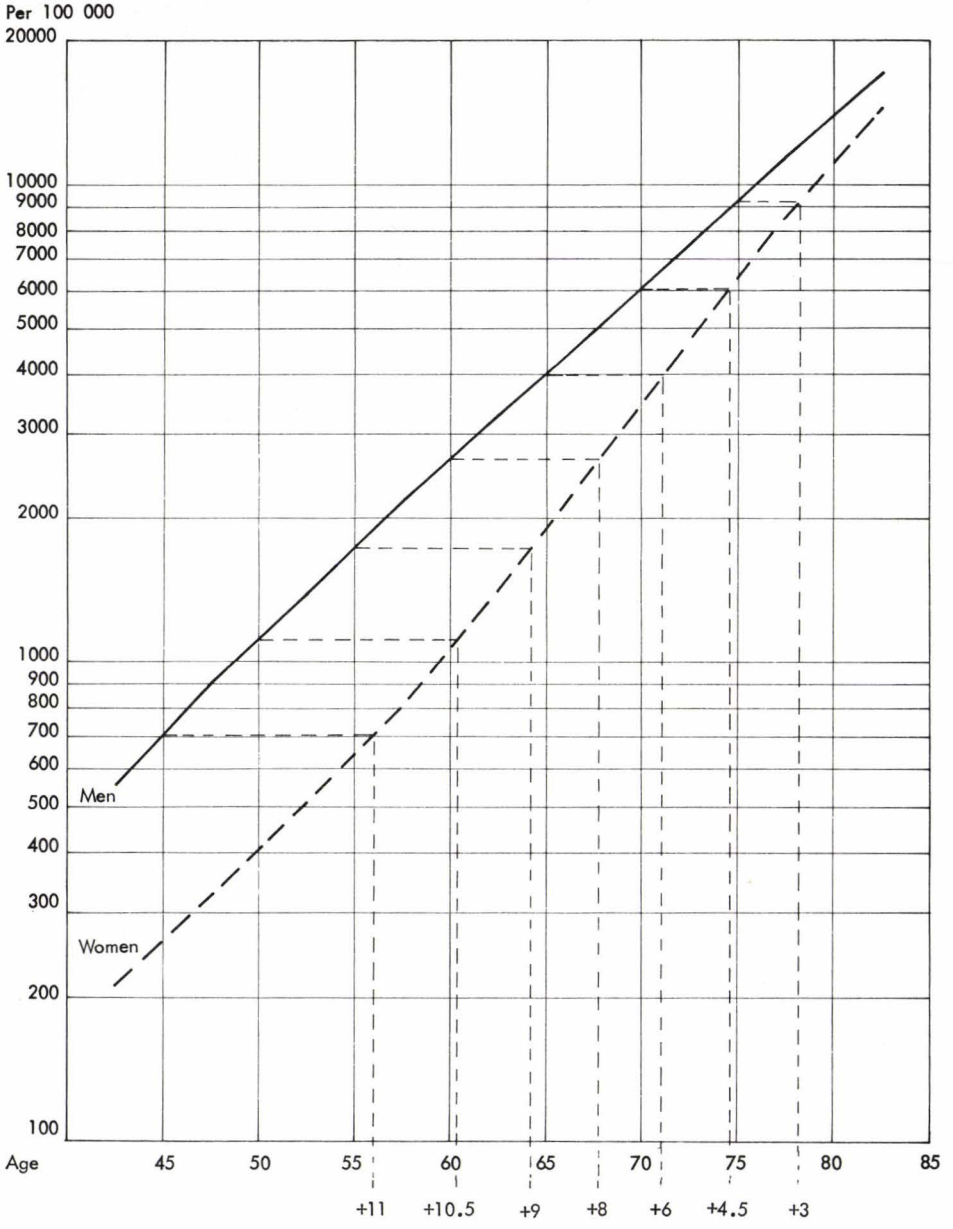


Fig. T:2
AGE-SPECIFIC MALE AND FEMALE DEATH RATES FOR ALL CAUSES IN FINLAND, 1966-1968
AGE GAP BETWEEN MALE AND FEMALE DEATH CURVES AT EQUAL LEVELS CORRESPONDING TO MALE DEATH RATES FOR AGES 45, 50, 55 ETC.

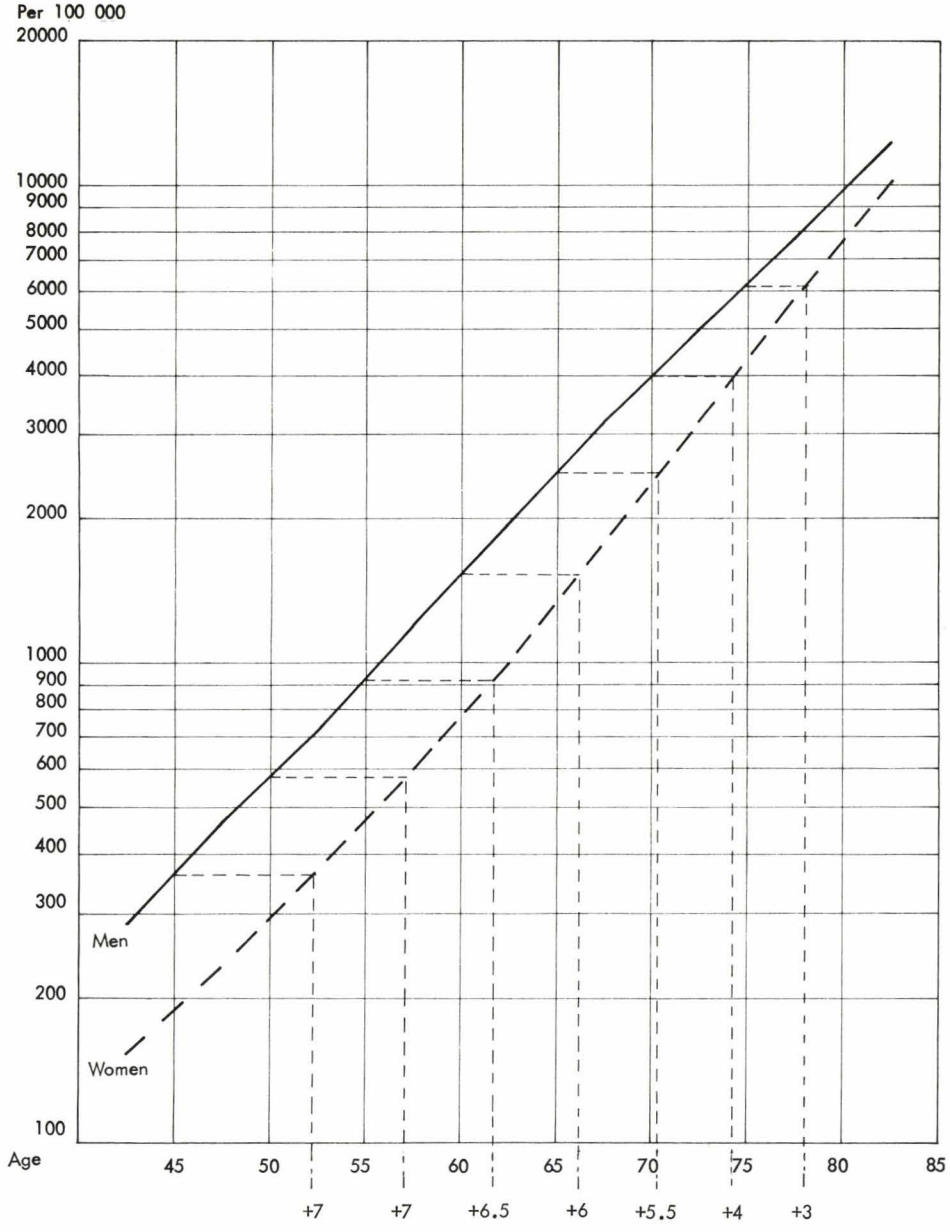


Fig. T:3
AGE-SPECIFIC MALE AND FEMALE DEATH RATES FOR ALL CAUSES IN NORWAY, 1966-1968
AGE GAP BETWEEN MALE AND FEMALE DEATH CURVES AT EQUAL LEVELS CORRESPONDING TO MALE DEATH RATES FOR AGES 45, 50, 55 ETC.

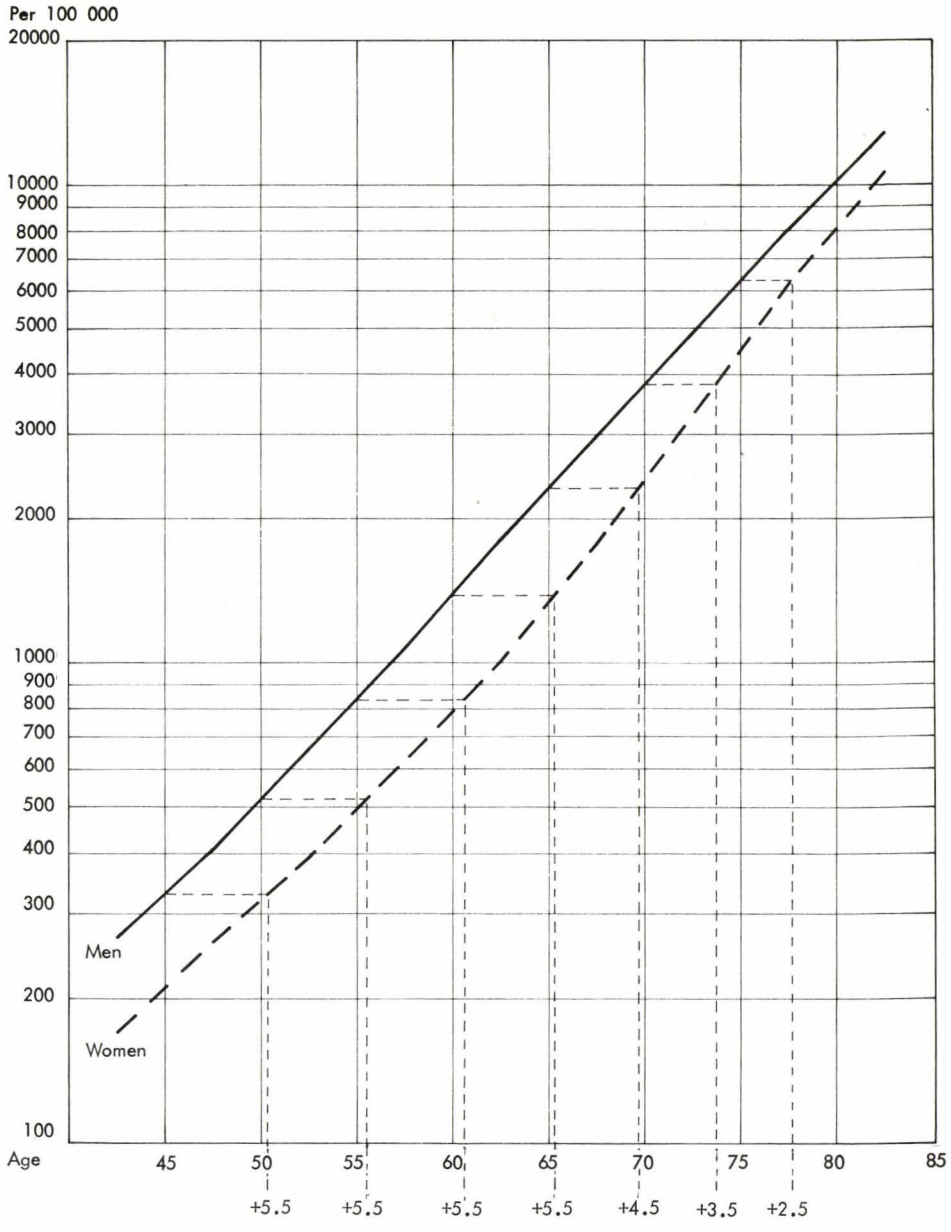


Fig. T:4
AGE-SPECIFIC MALE AND FEMALE DEATH RATES FOR ALL CAUSES IN SWEDEN, 1966-1968
AGE GAP BETWEEN MALE AND FEMALE DEATH CURVES AT EQUAL LEVELS CORRESPONDING TO MALE DEATH RATES FOR AGES 45, 50, 55 ETC.

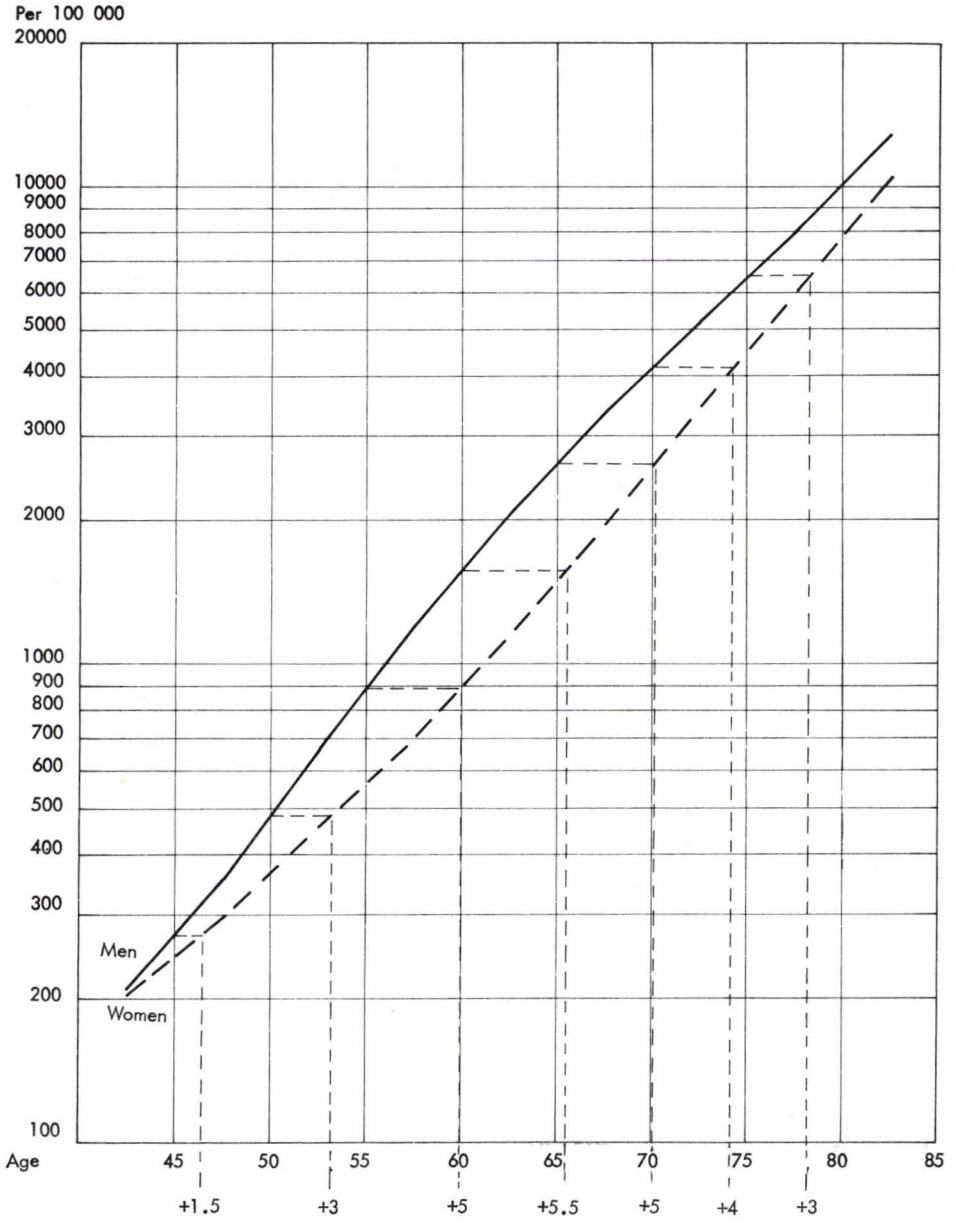


Fig. U:1
AGE-SPECIFIC MALE AND FEMALE DEATH RATES FOR ALL NATURAL CAUSES IN DENMARK, 1966-1968
AGE GAP BETWEEN MALE AND FEMALE DEATH CURVES AT EQUAL LEVELS CORRESPONDING TO MALE DEATH RATES FOR AGES 45, 50, 55 ETC.

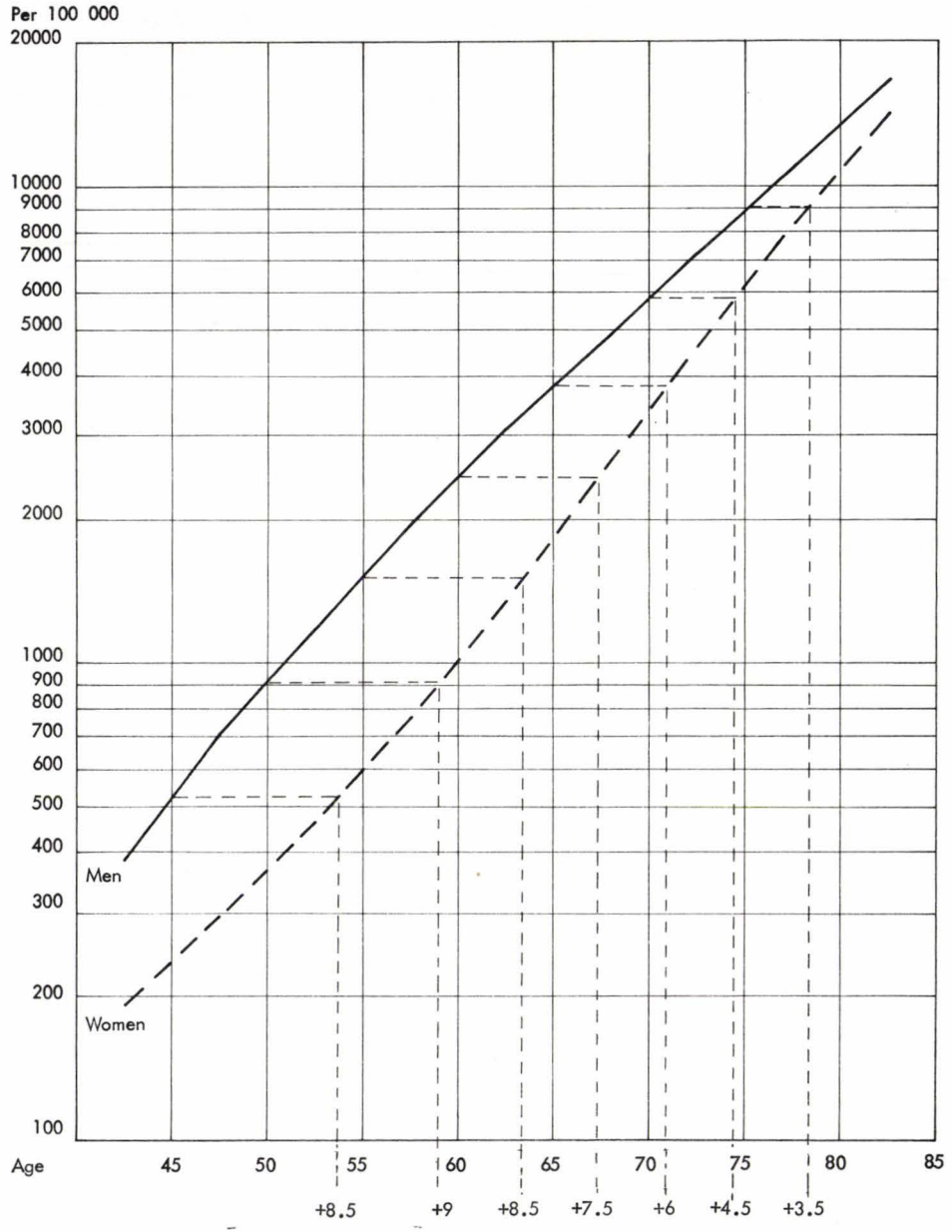


Fig. U:2
AGE-SPECIFIC MALE AND FEMALE DEATH RATES FOR ALL NATURAL CAUSES IN FINLAND, 1966-1968
AGE GAP BETWEEN MALE AND FEMALE DEATH CURVES AT EQUAL LEVELS CORRESPONDING TO MALE DEATH RATES FOR AGES 45, 50, 55 ETC.

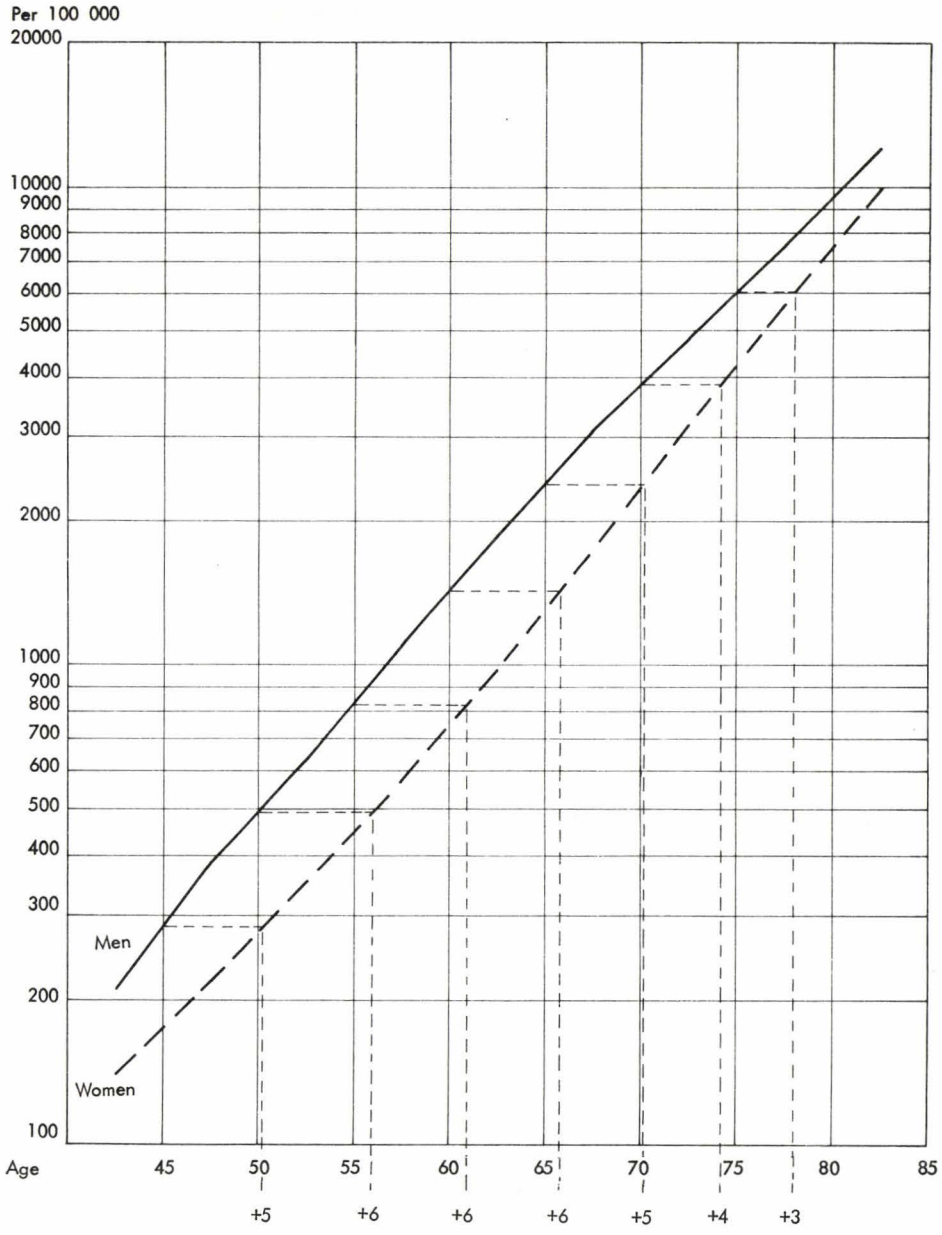


Fig. U:3
AGE-SPECIFIC MALE AND FEMALE DEATH RATES FOR ALL NATURAL CAUSES IN NORWAY, 1966-1968
AGE GAP BETWEEN MALE AND FEMALE DEATH CURVES AT EQUAL LEVELS CORRESPONDING TO MALE DEATH RATES FOR AGES 45, 50, 55 ETC.

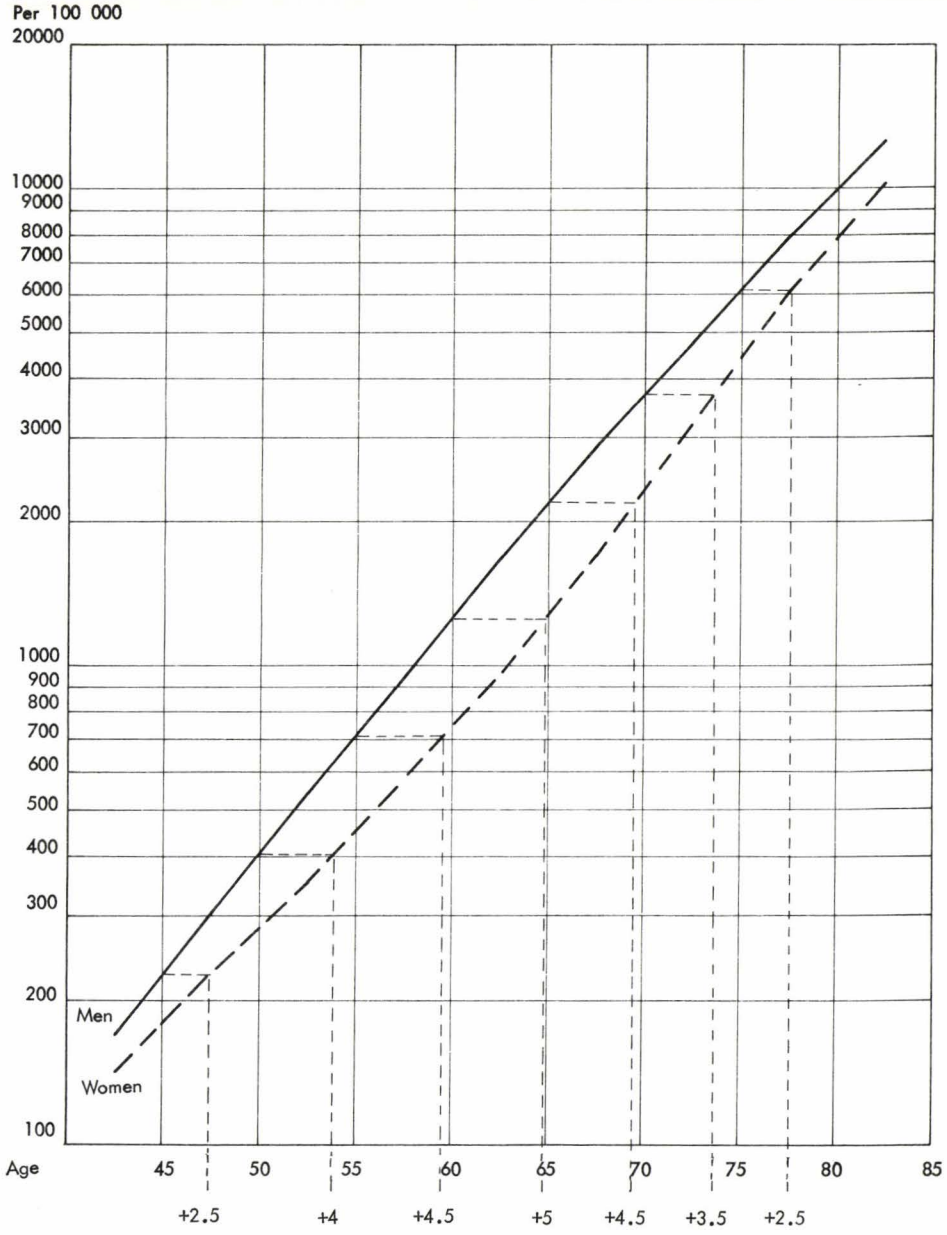


Fig. U:4
AGE-SPECIFIC MALE AND FEMALE DEATH RATES FOR ALL NATURAL CAUSES IN SWEDEN, 1966-1968
AGE GAP BETWEEN MALE AND FEMALE DEATH CURVES AT EQUAL LEVELS CORRESPONDING TO MALE DEATH RATES FOR AGES 45, 50, 55 ETC.

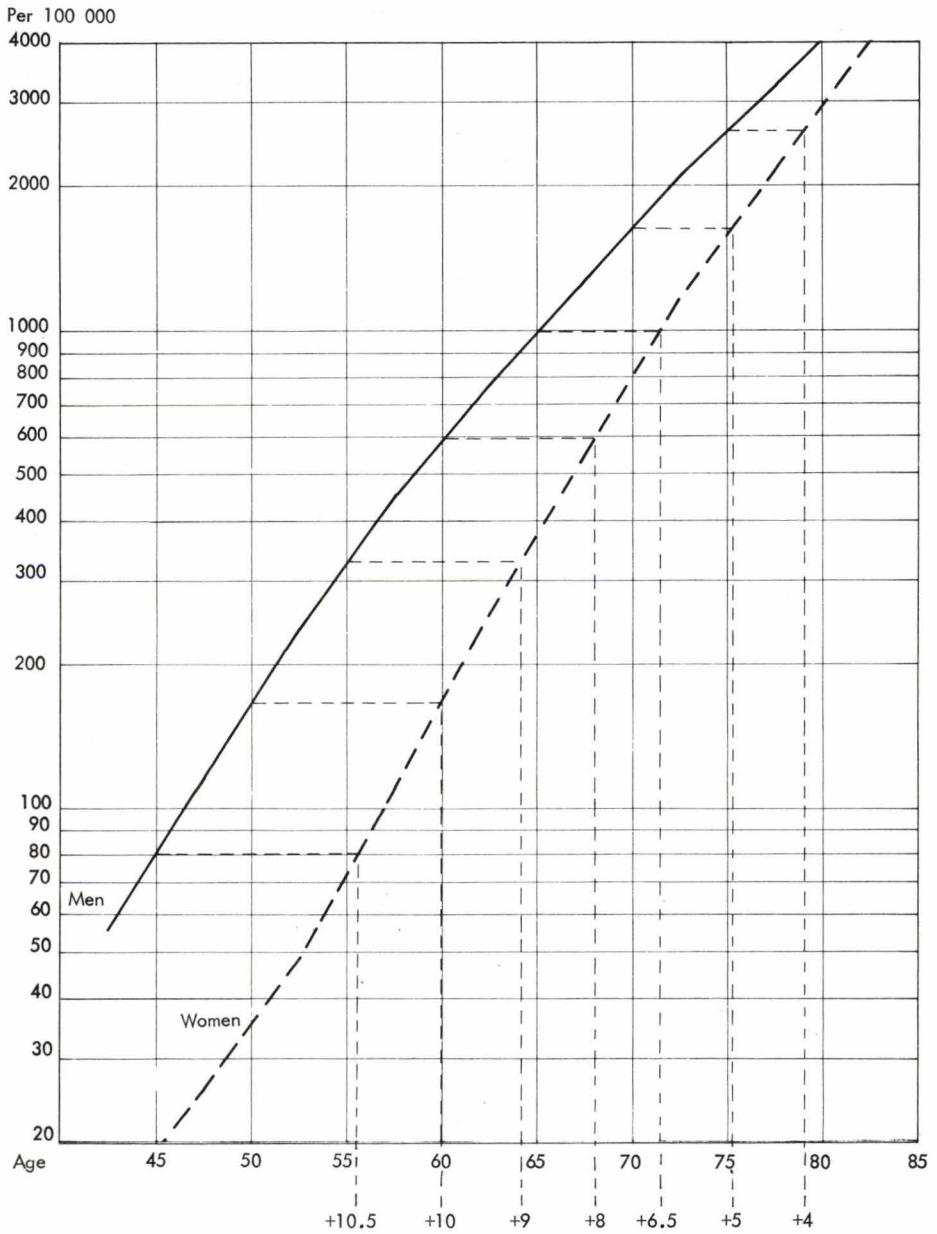


Fig. V:1
AGE-SPECIFIC MALE AND FEMALE DEATH RATES FOR ISCHAEMIC HEART DISEASE (A81) IN DENMARK, 1966-1968
AGE GAP BETWEEN MALE AND FEMALE DEATH CURVES AT EQUAL LEVELS CORRESPONDING TO MALE DEATH RATES FOR AGES 45, 50, 55 ETC.

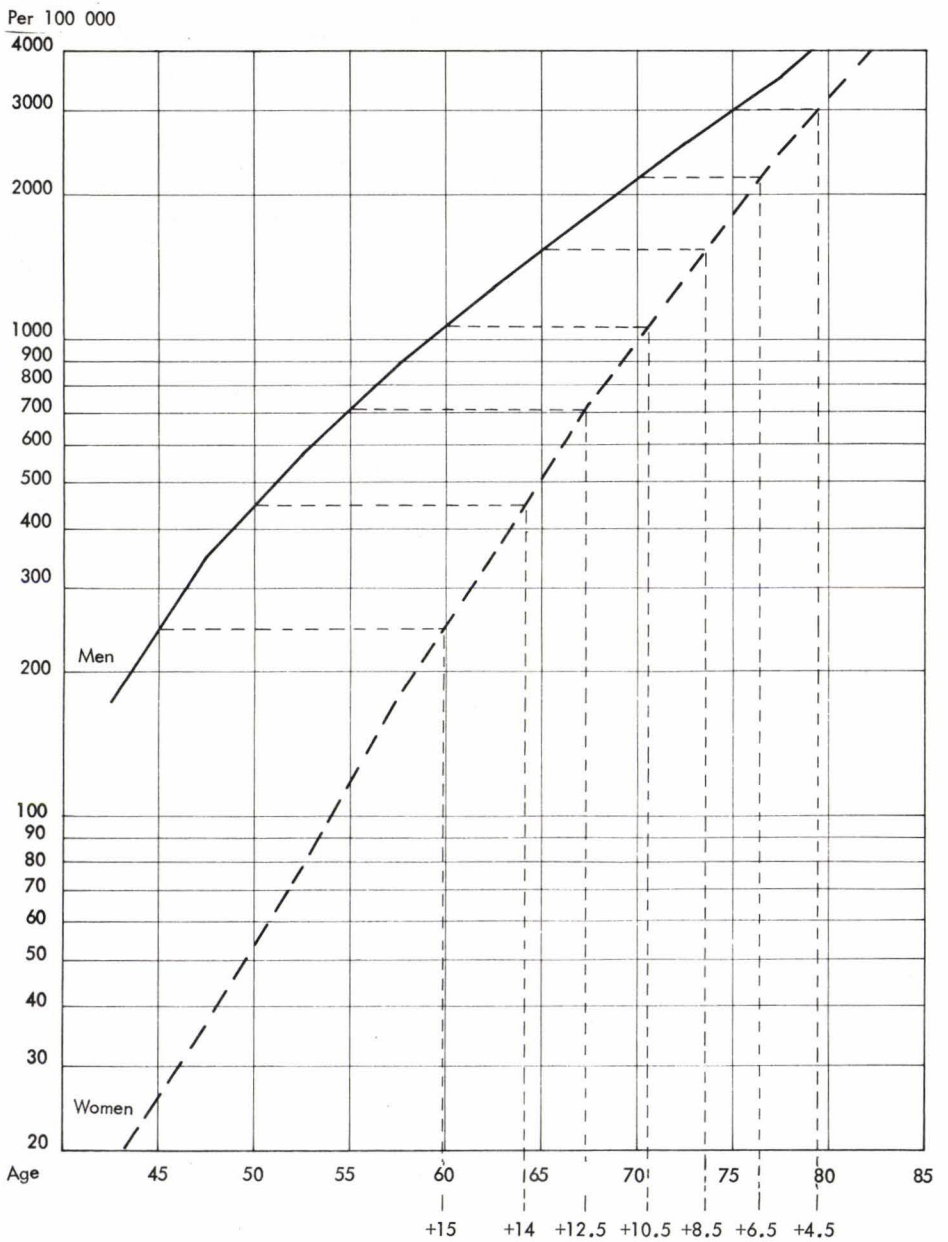


Fig. V:2
AGE-SPECIFIC MALE AND FEMALE DEATH RATES FOR ISCHAEMIC HEART DISEASE (A81) IN FINLAND, 1966-1968
AGE GAP BETWEEN MALE AND FEMALE DEATH CURVES AT EQUAL LEVELS CORRESPONDING TO MALE DEATH RATES FOR AGES 45, 50, 55 ETC.

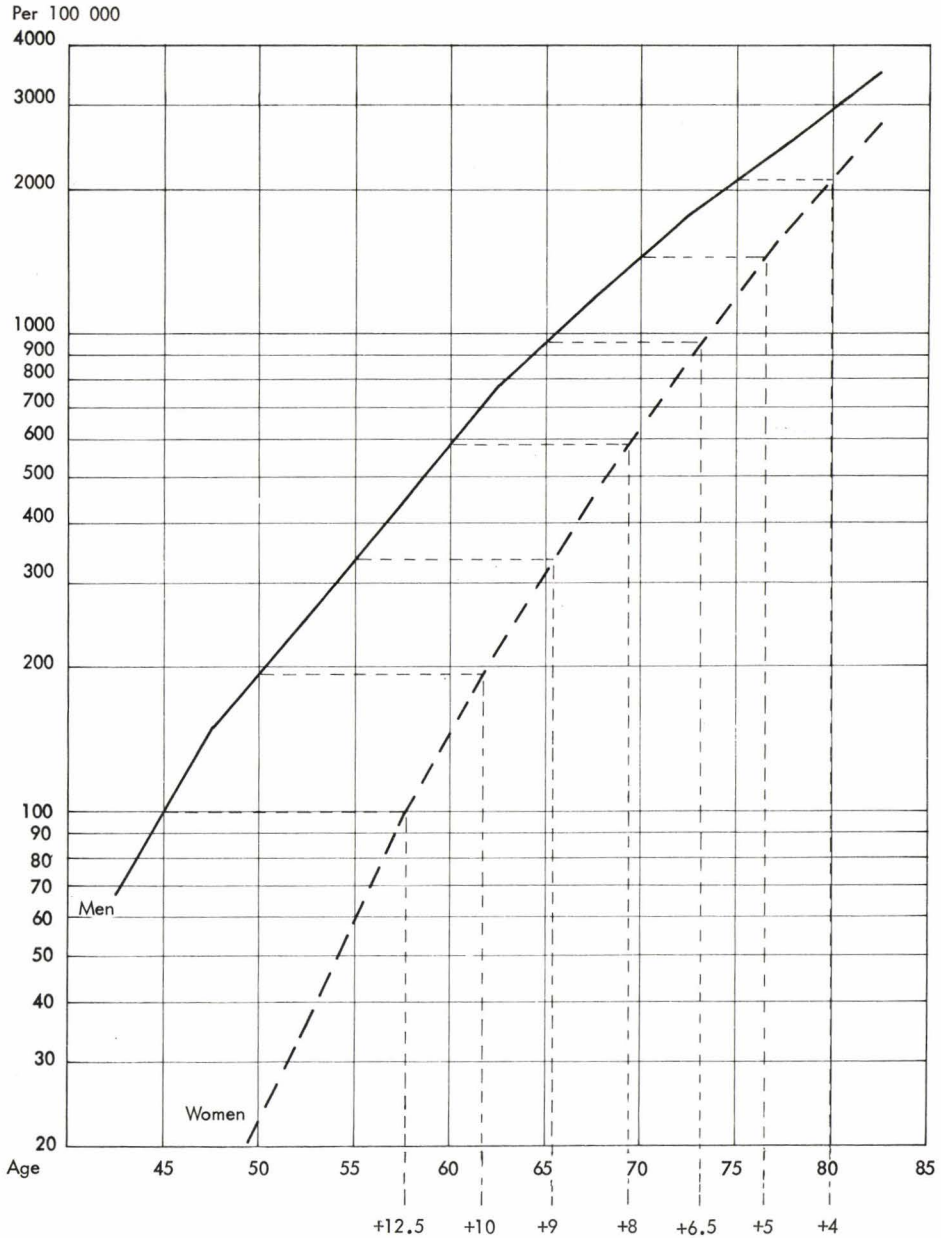


Fig. V:3
AGE-SPECIFIC MALE AND FEMALE DEATH RATES FOR ISCHAEMIC HEART DISEASE (A81) IN NORWAY, 1966-1968
AGE GAP BETWEEN MALE AND FEMALE DEATH CURVES AT EQUAL LEVELS CORRESPONDING TO MALE DEATH RATES FOR AGES 45, 50, 55 ETC.

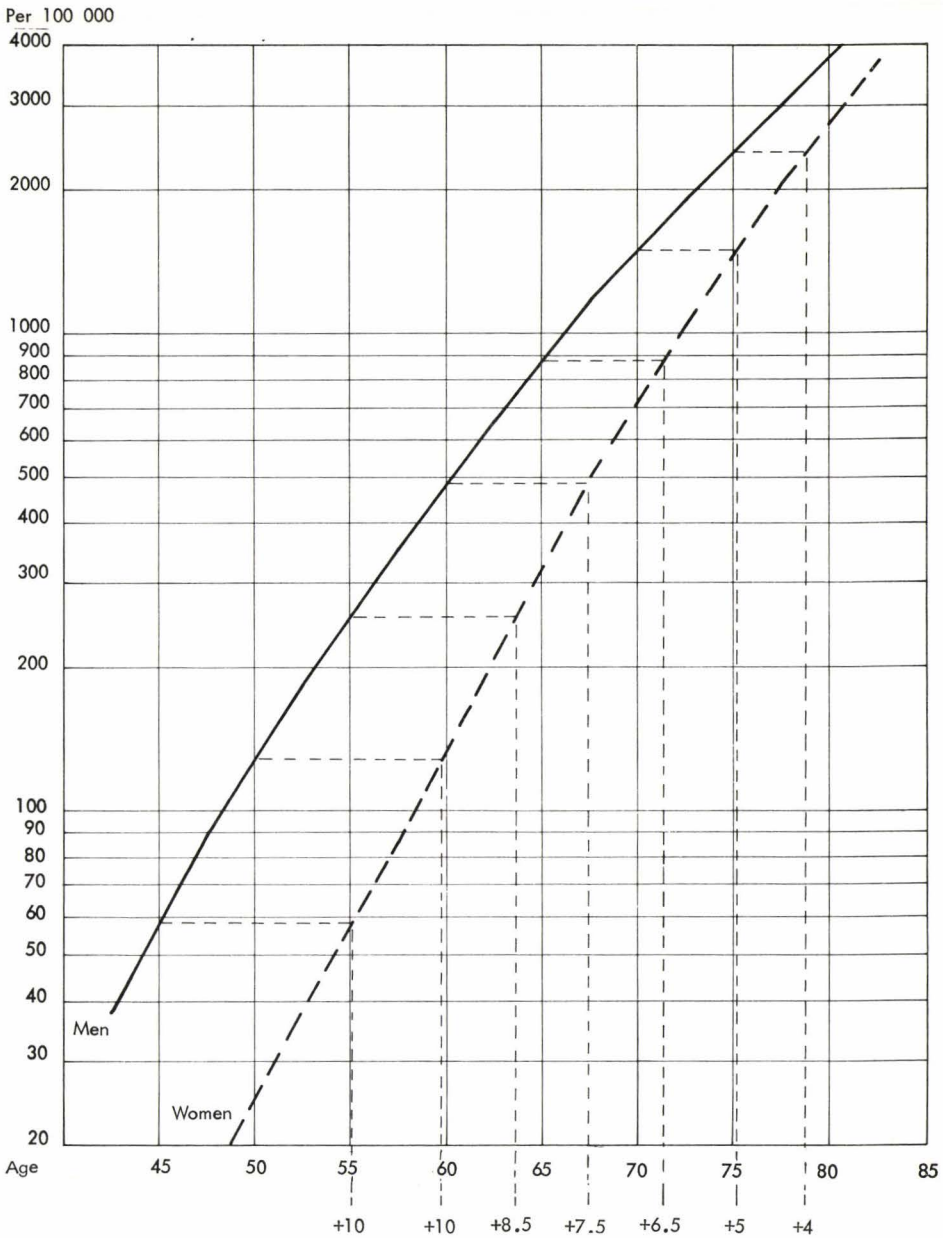


Fig. V:4
AGE-SPECIFIC MALE AND FEMALE DEATH RATES FOR ISCHAEMIC HEART DISEASE (A81) IN SWEDEN, 1966-1968
AGE GAP BETWEEN MALE AND FEMALE DEATH CURVES AT EQUAL LEVELS CORRESPONDING TO MALE DEATH RATES FOR AGES 45, 50, 55 ETC.

Table I

MORTALITY WITH SUCCESSIVE EXCLUSION OF SEPARATE CAUSES OF DEATH IN DENMARK, 1966–1968

Male and female death rates per 100 000 mean population, sex ratios (SR) and standardized male proportions (SMP) from all causes (I-XVII), all natural causes (I-XVI), natural causes excluding lung cancer (I-XVI excl. A50), natural causes excluding ischaemic heart disease (I-XVI excl. A81) and natural causes excluding both lung cancer and ischaemic heart disease (I-XVI excl. A50, A81)

	Male death rates					Female death rates				
	I-XVII	I-XVI	I-XVI excl. A50	I-XVI excl. A81	I-XVI excl. A50, A81	I-XVII	I-XVI	I-XVI excl. A50	I-XVI excl. A81	I-XVI excl. A50, A81
Age										
1 - 4	85	49	49	48	48	65	44	44	44	44
5 - 9	56	20	20	20	20	33	18	18	18	18
10 - 14	44	18	18	18	18	26	12	12	12	12
15 - 19	89	23	23	23	23	39	20	20	20	20
20 - 24	103	31	31	30	30	39	22	22	22	22
25 - 29	96	39	39	37	37	49	30	30	30	30
30 - 34	126	61	59	54	53	77	59	57	57	55
35 - 39	177	107	103	87	84	145	122	118	116	112
40 - 44	274	208	198	152	142	233	202	197	188	183
45 - 49	440	351	325	235	209	327	292	282	267	257
50 - 54	761	661	600	423	362	496	453	440	405	392
55 - 59	1 307	1 194	1 060	744	609	743	694	671	583	561
60 - 64	2 181	2 041	1 815	1 269	1 043	1 191	1 131	1 105	878	852
65 - 69	3 481	3 324	3 031	2 052	1 759	2 009	1 939	1 900	1 393	1 353
70 - 74	5 394	5 212	4 902	3 113	2 803	3 547	3 437	3 385	2 276	2 224
75 - 79	8 238	7 971	7 728	4 695	4 452	6 174	5 942	5 888	3 792	3 737
80 - 84	13 237	12 822	12 599	7 671	7 447	10 925	10 517	10 450	6 444	6 375
85 -	23 223	22 487	22 327	13 366	13 205	20 681	19 663	19 591	11 794	11 723
Total	1 088	1 002	948	630	576	905	856	844	595	583

	Sex ratio (SR)					Stand. male prop. (SMP)				
	I-XVII	I-XVI	I-XVI excl. A50	I-XVI excl. A81	I-XVI excl. A50, A81	I-XVII	I-XVI	I-XVI excl. A50	I-XVI excl. A81	I-XVI excl. A50, A81
Age										
1 - 4	1.31	1.11	1.12	1.11	1.11	.567	.526	.527	.525	.527
5 - 9	1.68	1.09	1.09	1.09	1.09	.628	.522	.522	.522	.522
10 - 14	1.69	1.44	1.51	1.48	1.48	.628	.602	.602	.597	.597
15 - 19	2.27	1.12	1.13	1.12	1.13	.694	.529	.531	.529	.531
20 - 24	2.64	1.38	1.41	1.35	1.38	.726	.580	.585	.574	.580
25 - 29	1.94	1.29	1.29	1.24	1.24	.661	.563	.563	.553	.553
30 - 34	1.63	1.04	1.04	.96	.96	.620	.509	.509	.490	.490
35 - 39	1.22	.87	.88	.75	.72	.550	.467	.467	.428	.418
40 - 44	1.18	1.03	1.00	.81	.77	.541	.508	.500	.447	.436
45 - 49	1.34	1.20	1.15	.88	.81	.574	.546	.535	.469	.449
50 - 54	1.53	1.46	1.36	1.04	.92	.605	.593	.577	.511	.480
55 - 59	1.76	1.72	1.58	1.28	1.09	.638	.632	.612	.560	.521
60 - 64	1.83	1.81	1.64	1.45	1.22	.647	.643	.622	.591	.550
65 - 69	1.73	1.71	1.60	1.47	1.30	.634	.632	.615	.596	.565
70 - 74	1.52	1.52	1.45	1.37	1.26	.603	.603	.592	.578	.558
75 - 79	1.33	1.34	1.31	1.24	1.19	.572	.573	.568	.553	.544
80 - 84	1.21	1.22	1.21	1.19	1.17	.548	.550	.547	.543	.539
85 -	1.12	1.14	1.14	1.13	1.13	.529	.534	.533	.531	.530
Total	1.20	1.17	1.12	1.06	.99	.546	.540	.529	.514	.497

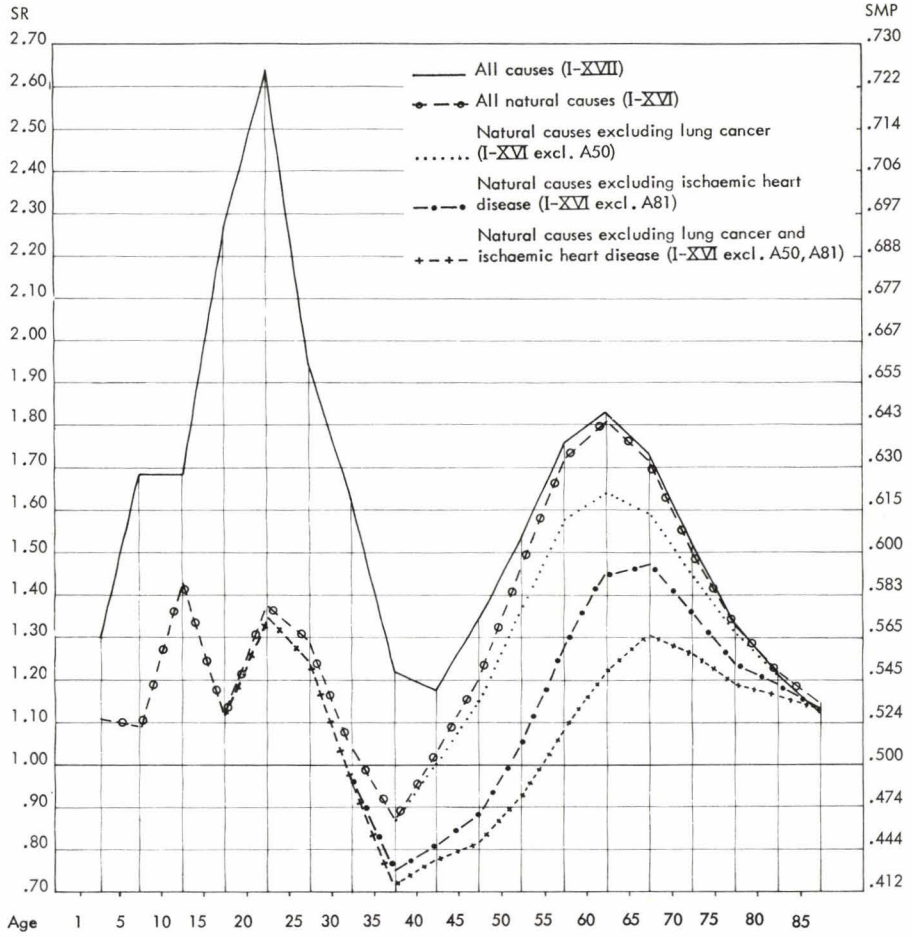


Fig. W:1 SEX RATIO (SR) OF TOTAL MORTALITY AND OF MORTALITY WITH SUCCESIVE EXCLUSION OF SEPARATE CAUSES BY AGE IN DENMARK, 1966-1968
Male death rate when female death rate = 1 (left hand scale) and standardized male proportion, SMP, (right hand scale)

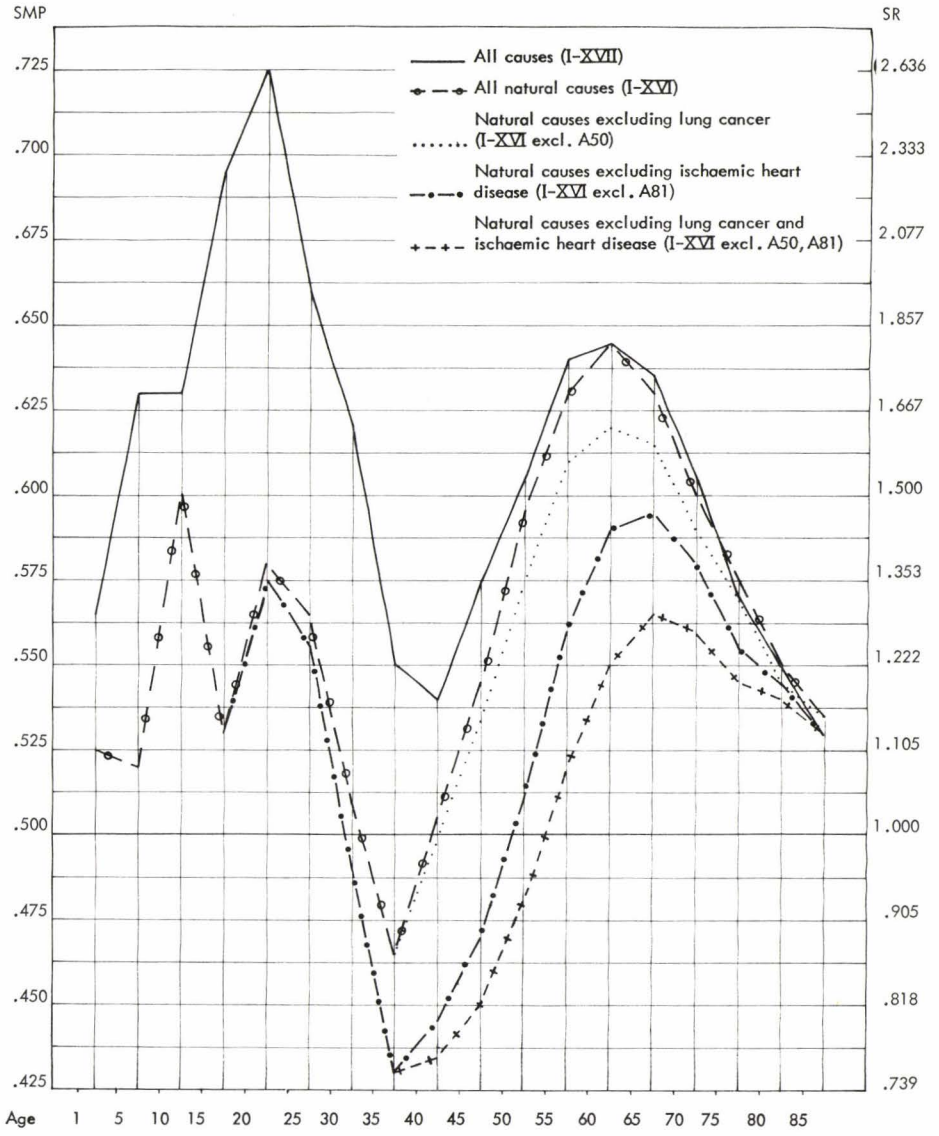


Fig. W:2 STANDARDIZED MALE PROPORTION (SMP) OF TOTAL MORTALITY AND OF MORTALITY WITH SUCCESIVE EXCLUSION OF SEPARATE CAUSES BY AGE IN DENMARK, 1966-1968
Proportion of male deaths when standardized to equal population size of males and females (left hand scale) and sex ratio, SR, (right hand scale)

Table m

MORTALITY WITH SUCCESSIVE EXCLUSION OF SEPARATE CAUSES OF DEATH IN FINLAND, 1966-1968

Male and female death rates per 100 000 mean population, sex ratios (SR) and standardized male proportions (SMP) from all causes (I-XVII), all natural causes (I-XVI), natural causes excluding lung cancer (I-XVI excl. A50), natural causes excluding ischaemic heart disease (I-XVI excl. A81) and natural causes excluding both lung cancer and ischaemic heart disease (I-XVI excl. A50, A81)

	Male death rates					Female death rates				
	I-XVII	I-XVI	I-XVI excl. A50	I-XVI excl. A81	I-XVI excl. A50, A81	I-XVII	I-XVI	I-XVI excl. A50	I-XVI excl. A81	I-XVI excl. A50, A81
Age										
1 - 4	90	50	50	50	50	73	47	47	46	46
5 - 9	66	20	20	19	19	39	17	17	17	17
10 - 14	49	19	19	19	19	29	18	18	18	18
15 - 19	101	28	28	27	27	44	23	23	22	22
20 - 24	136	34	34	32	32	48	27	27	27	27
25 - 29	168	50	49	44	43	63	39	39	38	38
30 - 34	214	96	94	77	76	84	59	59	58	57
35 - 39	348	189	185	121	117	131	103	102	97	96
40 - 44	547	381	364	210	193	210	177	175	158	157
45 - 49	894	708	659	361	312	324	291	286	255	250
50 - 54	1 371	1 161	1 064	594	497	502	460	452	383	375
55 - 59	2 148	1 940	1 724	1 061	845	806	762	751	585	574
60 - 64	3 247	3 037	2 683	1 768	1 414	1 394	1 339	1 322	987	970
65 - 69	4 861	4 639	4 182	2 821	2 364	2 532	2 468	2 444	1 743	1 719
70 - 74	7 445	7 189	6 693	4 628	4 131	4 695	4 595	4 566	3 247	3 218
75 - 79	11 311	10 974	10 484	7 441	6 952	8 505	8 299	8 264	5 827	5 793
80 - 84	16 971	16 507	16 081	11 221	10 795	14 339	13 943	13 906	9 795	9 757
85 -	29 062	28 032	27 769	19 751	19 488	26 086	25 035	24 989	17 690	17 644
Total	1 034	911	847	575	511	863	821	815	603	598

	Sex ratio (SR)					Stand. male prop. (SMP)				
	I-XVII	I-XVI	I-XVI excl. A50	I-XVI excl. A81	I-XVI excl. A50, A81	I-XVII	I-XVI	I-XVI excl. A50	I-XVI excl. A81	I-XVI excl. A50, A81
Age										
1 - 4	1.23	1.07	1.06	1.08	1.07	.551	.516	.515	.518	.517
5 - 9	1.70	1.14	1.14	1.12	1.12	.629	.533	.533	.529	.529
10 - 14	1.69	1.07	1.07	1.08	1.08	.628	.517	.516	.518	.518
15 - 19	2.29	1.24	1.24	1.25	1.25	.696	.554	.554	.556	.556
20 - 24	2.86	1.26	1.27	1.20	1.20	.741	.559	.560	.544	.546
25 - 29	2.67	1.27	1.26	1.13	1.12	.728	.560	.557	.531	.528
30 - 34	2.54	1.62	1.60	1.34	1.32	.719	.618	.615	.573	.569
35 - 39	2.66	1.83	1.81	1.24	1.21	.727	.648	.644	.534	.548
40 - 44	2.60	2.16	2.08	1.32	1.23	.723	.683	.675	.570	.551
45 - 49	2.76	2.43	2.30	1.42	1.25	.734	.709	.697	.586	.555
50 - 54	2.73	2.52	2.35	1.55	1.33	.732	.716	.702	.608	.570
55 - 59	2.66	2.55	2.30	1.81	1.47	.727	.718	.697	.645	.595
60 - 64	2.33	2.27	2.03	1.79	1.46	.700	.694	.670	.642	.593
65 - 69	1.92	1.88	1.71	1.62	1.38	.658	.653	.631	.618	.579
70 - 74	1.59	1.56	1.47	1.43	1.28	.613	.610	.594	.588	.562
75 - 79	1.33	1.32	1.27	1.28	1.20	.571	.570	.559	.561	.545
80 - 84	1.18	1.18	1.16	1.15	1.11	.542	.542	.536	.534	.525
85 -	1.11	1.12	1.11	1.12	1.10	.527	.528	.526	.528	.525
Total	1.20	1.11	1.04	.95	.85	.545	.526	.510	.488	.461

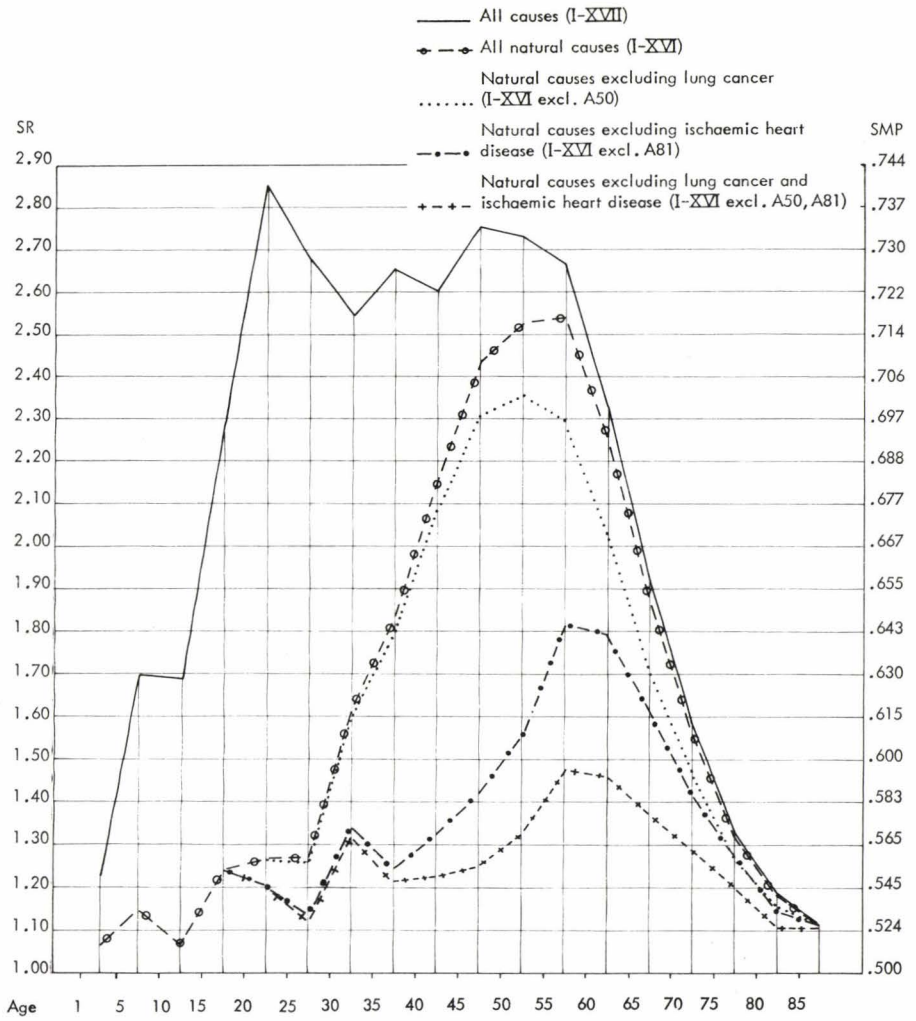


Fig. X:1 SEX RATIO (SR) OF TOTAL MORTALITY AND OF MORTALITY WITH SUCCESIVE EXCLUSION OF SEPARATE CAUSES BY AGE IN FINLAND, 1966-1968
Male death rate when female death rate = 1 (left hand scale) and standardized male proportion, SMP, (right hand scale)

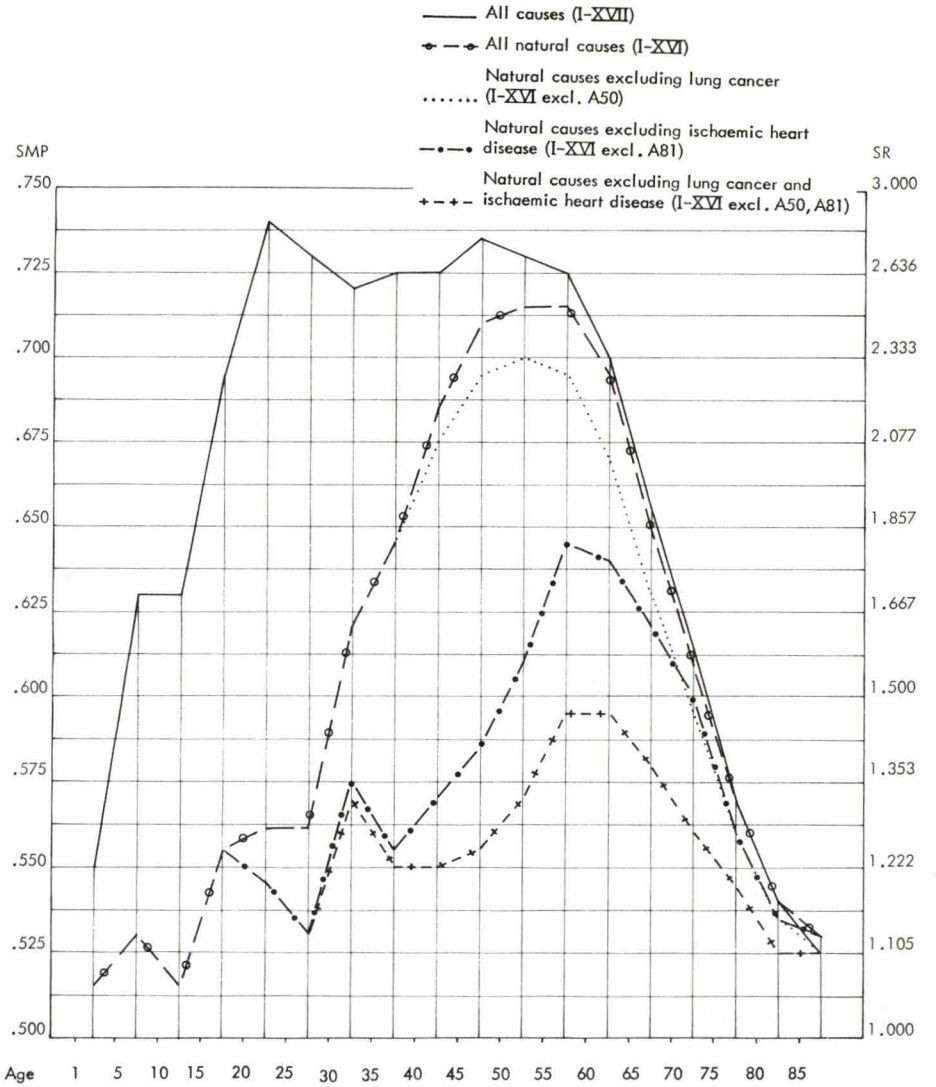


Fig. X:2 STANDARDIZED MALE PROPORTION (SMP) OF TOTAL MORTALITY AND OF MORTALITY WITH SUCCESIVE EXCLUSION OF SEPARATE CAUSES BY AGE IN FINLAND, 1966-1968
Proportion of male deaths when standardized to equal population size of males and females (left hand scale) and sex ratio, SR, (right hand scale)

Table n

MORTALITY WITH SUCCESSIVE EXCLUSION OF SEPARATE CAUSES OF DEATH IN NORWAY, 1966-1968

Male and female death rates per 100 000 mean population, sex ratios (SR) and standardized male proportions (SMP) from all causes (I-XVII), all natural causes (I-XVI), natural causes excluding lung cancer (I-XVI excl. A50), natural causes excluding ischaemic heart disease (I-XVI excl. A81) and natural causes excluding both lung cancer and ischaemic heart disease (I-XVI excl. A50, A81)

	Male death rates					Female death rates				
Age	I-XVII	I-XVI	I-XVI excl. A50	I-XVI excl. A81	I-XVI excl. A50, A81	I-XVII	I-XVI	I-XVI excl. A50	I-XVI excl. A81	I-XVI excl. A50, A81
1 - 4	104	61	61	61	61	76	46	46	46	46
5 - 9	56	23	23	23	23	28	15	15	15	15
10 - 14	42	21	21	21	21	21	14	14	14	14
15 - 19	93	28	28	28	28	37	22	22	22	22
20 - 24	107	38	38	38	38	34	25	25	25	25
25 - 29	106	45	44	43	43	41	34	34	33	32
30 - 34	135	72	71	66	65	57	48	48	47	47
35 - 39	180	109	106	88	85	94	84	84	81	81
40 - 44	282	209	202	142	135	152	138	136	131	129
45 - 49	463	384	370	238	224	232	216	212	202	198
50 - 54	710	625	596	374	345	369	349	341	313	306
55 - 59	1 177	1 085	1 034	649	598	588	564	553	468	458
60 - 64	1 949	1 850	1 768	1 076	994	991	965	954	751	740
65 - 69	3 172	3 073	2 943	1 890	1 760	1 763	1 722	1 706	1 268	1 252
70 - 74	4 938	4 808	4 687	3 048	2 927	3 196	3 113	3 089	2 236	2 212
75 - 79	7 654	7 492	7 385	5 018	4 911	5 767	5 597	5 573	3 972	3 949
80 - 84	12 287	12 008	11 930	8 468	8 389	10 111	9 755	9 722	7 019	6 986
85 -	21 363	20 667	20 612	15 503	15 447	19 918	18 858	18 843	14 001	13 986
Total	1 054	979	956	658	635	882	844	839	637	632

	Sex ratio (SR)					Stand. male prop. (SMP)				
Age	I-XVII	I-XVI	I-XVI excl. A50	I-XVI excl. A81	I-XVI excl. A50, A81	I-XVII	I-XVI	I-XVI excl. A50	I-XVI excl. A81	I-XVI excl. A50, A81
1 - 4	1.37	1.33	1.33	1.33	1.33	.579	.571	.571	.571	.571
5 - 9	2.00	1.51	1.51	1.51	1.51	.667	.600	.601	.601	.601
10 - 14	1.99	1.49	1.49	1.52	1.52	.666	.599	.599	.603	.603
15 - 19	2.53	1.30	1.30	1.28	1.28	.717	.565	.565	.561	.561
20 - 24	3.12	1.51	1.53	1.53	1.54	.756	.602	.604	.604	.607
25 - 29	2.58	1.32	1.32	1.31	1.31	.720	.568	.569	.567	.568
30 - 34	2.38	1.48	1.47	1.40	1.38	.704	.597	.595	.582	.580
35 - 39	1.90	1.29	1.27	1.09	1.06	.656	.565	.559	.521	.515
40 - 44	1.86	1.51	1.49	1.08	1.05	.650	.603	.598	.520	.513
45 - 49	1.99	1.78	1.74	1.18	1.13	.666	.640	.635	.541	.531
50 - 54	1.93	1.79	1.75	1.20	1.13	.658	.642	.636	.545	.530
55 - 59	2.00	1.93	1.87	1.39	1.31	.667	.658	.651	.581	.566
60 - 64	1.97	1.92	1.85	1.43	1.34	.663	.657	.649	.589	.573
65 - 69	1.80	1.79	1.73	1.49	1.41	.643	.641	.633	.599	.584
70 - 74	1.55	1.54	1.52	1.36	1.32	.607	.607	.603	.577	.570
75 - 79	1.33	1.34	1.33	1.26	1.24	.571	.573	.570	.558	.554
80 - 84	1.22	1.23	1.23	1.21	1.20	.549	.552	.551	.547	.546
85 -	1.07	1.10	1.09	1.11	1.10	.518	.523	.522	.525	.525
Total	1.19	1.16	1.14	1.03	1.00	.545	.537	.532	.508	.501

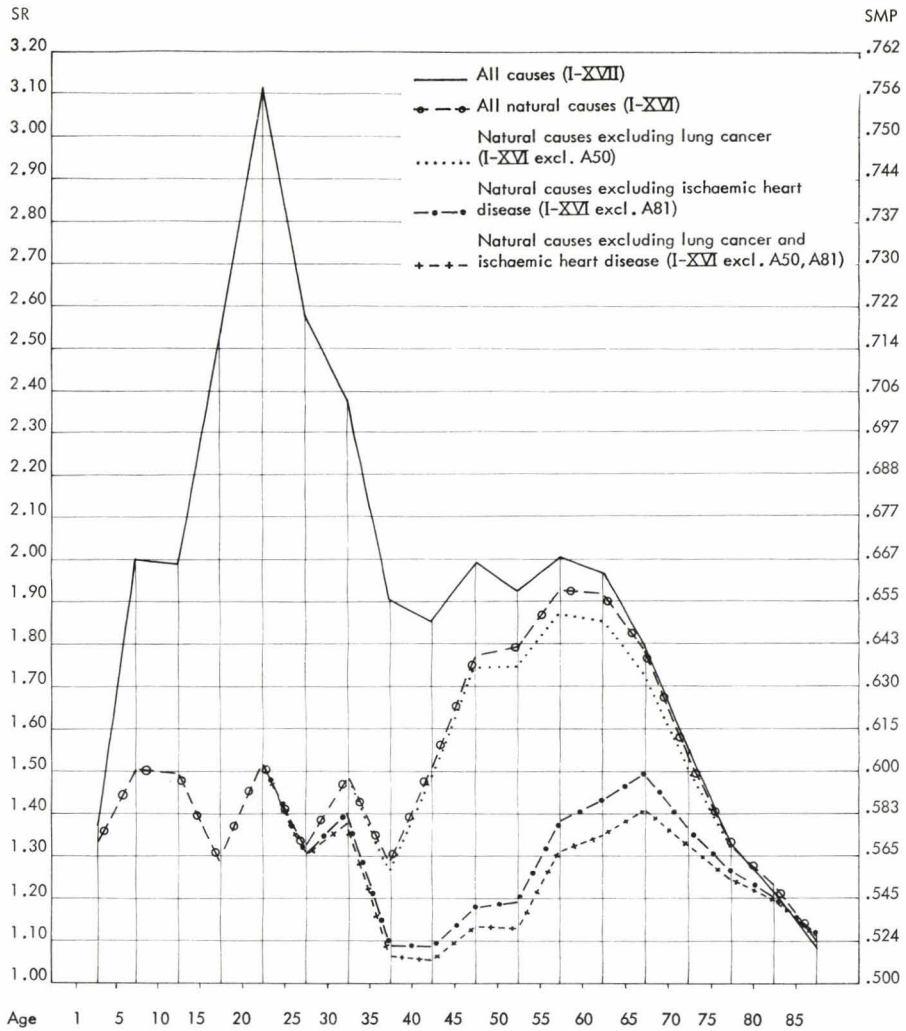


Fig. Y:1 SEX RATIO (SR) OF TOTAL MORTALITY AND OF MORTALITY WITH SUCCESIVE EXCLUSION OF SEPARATE CAUSES BY AGE IN NORWAY, 1966-1968

Male death rate when female death rate = 1 (left hand scale) and standardized male proportion, SMP, (right hand scale)

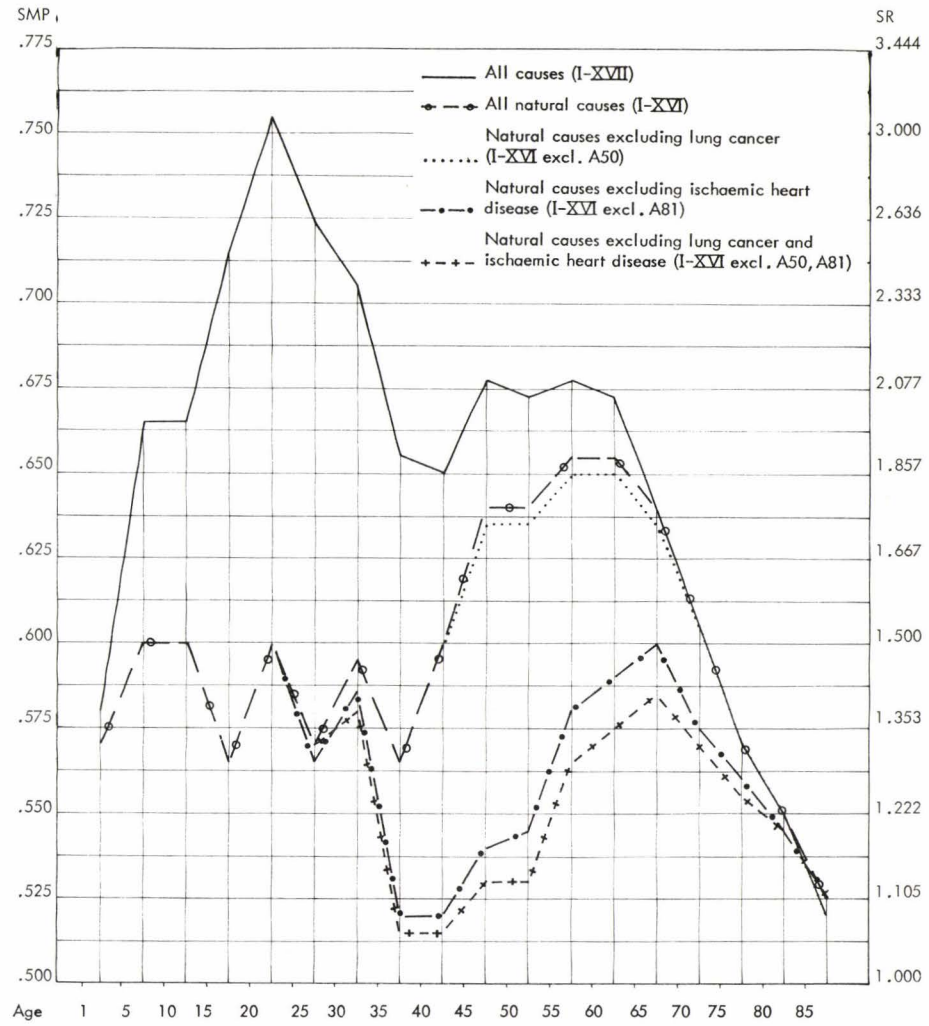


Fig. Y:2 STANDARDIZED MALE PROPORTION (SMP) OF TOTAL MORTALITY AND OF MORTALITY WITH SUCCESIVE EXCLUSION OF SEPARATE CAUSES BY AGE IN NORWAY, 1966-1968

Proportion of male deaths when standardized to equal population size of males and females (left hand scale) and sex ratio, SR, (right hand scale)

Table o

MORTALITY WITH SUCCESSIVE EXCLUSION OF SEPARATE CAUSES OF DEATH IN SWEDEN, 1966-1968

Male and female death rates per 100 000 mean population, sex ratios (SR) and standardized male proportions (SMP) from all causes (I-XVII), all natural causes (I-XVI), natural causes excluding lung cancer (I-XVI excl. A50), natural causes excluding ischaemic heart disease (I-XVI excl. A81) and natural causes excluding both lung cancer and ischaemic heart disease (I-XVI excl. A50, A81)

	Male death rates					Female death rates				
	I-XVII	I-XVI	I-XVI excl. A50	I-XVI excl. A81	I-XVI excl. A50, A81	I-XVII	I-XVI	I-XVI excl. A50	I-XVI excl. A81	I-XVI excl. A50, A81
Age										
1 - 4	68	45	45	45	45	46	35	35	35	35
5 - 9	42	21	21	20	20	32	20	20	20	20
10 - 14	34	18	18	17	17	23	15	15	15	15
15 - 19	86	24	24	24	24	37	16	16	16	16
20 - 24	112	32	32	31	31	50	25	24	24	24
25 - 29	115	41	41	39	39	54	30	30	30	29
30 - 34	146	62	61	59	59	78	54	54	52	52
35 - 39	193	103	102	90	89	110	87	85	85	83
40 - 44	266	168	163	131	125	168	141	139	134	131
45 - 49	416	301	291	212	202	262	227	224	211	208
50 - 54	660	535	511	355	330	391	351	344	313	305
55 - 59	1 058	931	886	579	534	617	578	565	493	481
60 - 64	1 801	1 669	1 576	1 012	919	993	951	934	743	726
65 - 69	2 997	2 861	2 719	1 707	1 565	1 751	1 697	1 670	1 209	1 182
70 - 74	4 892	4 743	4 574	2 845	2 676	3 262	3 192	3 157	2 166	2 132
75 - 79	8 097	7 879	7 730	4 858	4 708	6 130	5 995	5 955	3 957	3 916
80 - 84	12 802	12 499	12 388	7 742	7 631	10 562	10 280	10 233	6 615	6 538
85 -	22 632	22 110	22 024	13 806	13 720	20 027	19 364	19 315	12 071	12 021
Total	1 100	1 008	981	639	611	941	900	892	629	621

	Sex ratio (SR)					Stand. male prop. (SMP)				
	I-XVII	I-XVI	I-XVI excl. A50	I-XVI excl. A81	I-XVI excl. A50, A81	I-XVII	I-XVI	I-XVI excl. A50	I-XVI excl. A81	I-XVI excl. A50, A81
Age										
1 - 4	1.47	1.29	1.29	1.29	1.29	.595	.564	.564	.564	.564
5 - 9	1.32	1.01	1.01	1.02	1.02	.569	.504	.503	.505	.505
10 - 14	1.49	1.19	1.19	1.17	1.17	.598	.543	.543	.538	.539
15 - 19	2.32	1.51	1.51	1.50	1.50	.699	.602	.601	.600	.600
20 - 24	2.25	1.30	1.31	1.27	1.28	.692	.566	.568	.560	.562
25 - 29	2.15	1.35	1.35	1.33	1.33	.682	.575	.574	.572	.571
30 - 34	1.88	1.15	1.14	1.14	1.13	.653	.535	.533	.532	.530
35 - 39	1.76	1.19	1.19	1.06	1.07	.637	.543	.544	.515	.516
40 - 44	1.59	1.19	1.18	.98	.96	.613	.544	.540	.494	.488
45 - 49	1.58	1.33	1.30	1.00	.97	.614	.570	.565	.501	.492
50 - 54	1.69	1.52	1.49	1.13	1.08	.628	.604	.598	.531	.519
55 - 59	1.71	1.61	1.57	1.17	1.11	.632	.617	.610	.540	.526
60 - 64	1.81	1.75	1.69	1.36	1.27	.645	.637	.628	.577	.559
65 - 69	1.71	1.69	1.63	1.41	1.32	.631	.628	.619	.585	.570
70 - 74	1.50	1.49	1.45	1.31	1.26	.600	.598	.592	.568	.557
75 - 79	1.32	1.31	1.30	1.23	1.20	.569	.568	.565	.551	.546
80 - 84	1.21	1.22	1.21	1.17	1.17	.548	.549	.548	.539	.539
85 -	1.13	1.14	1.14	1.14	1.15	.531	.533	.533	.534	.534
Total	1.17	1.12	1.10	1.02	.98	.539	.529	.524	.504	.496

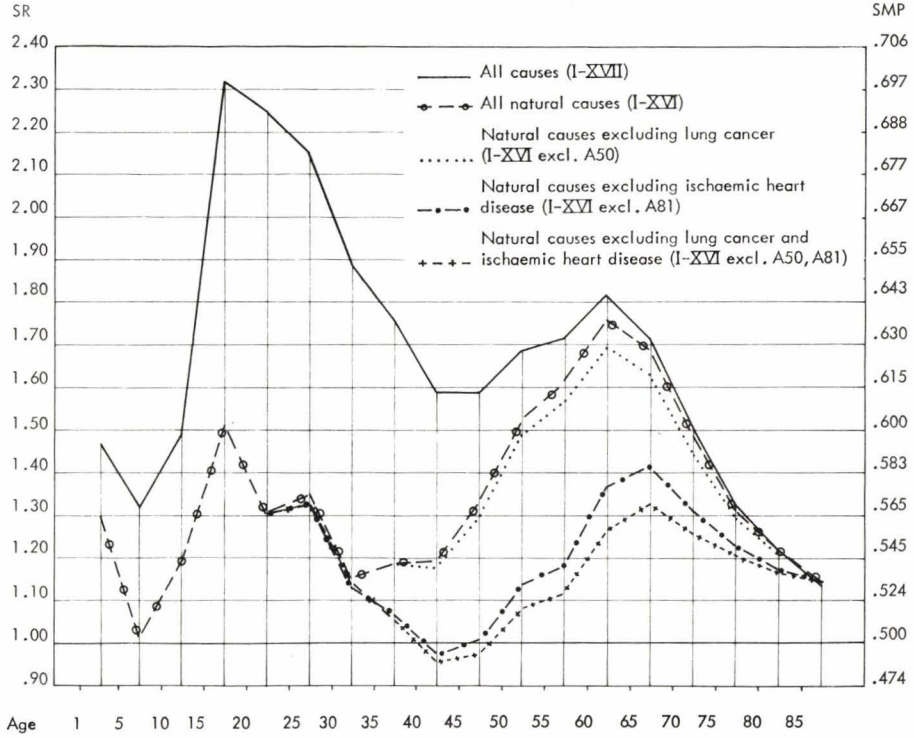


Fig. Z:1 SEX RATIO (SR) OF TOTAL MORTALITY AND OF MORTALITY WITH SUCCESIVE EXCLUSION OF SEPARATE CAUSES BY AGE IN SWEDEN, 1966-1968
Male death rate when female death rate = 1 (left hand scale) and standardized male proportion, SMP, (right hand scale)

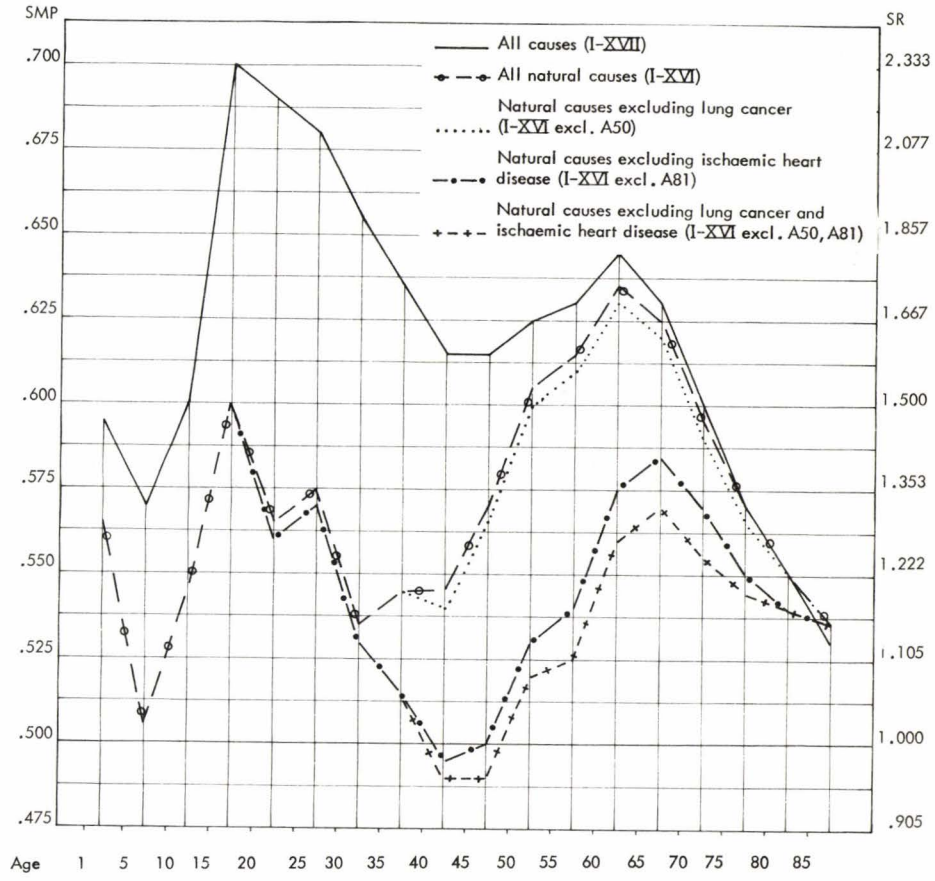


Fig. Z:2 STANDARDIZED MALE PROPORTION (SMP) OF TOTAL MORTALITY AND OF MORTALITY WITH SICCESIVE EXCLUSION OF SEPARATE CAUSES BY AGE IN SWEDEN, 1966-1968
Proportion of male deaths when standarsized to equal population size of males and females (left hand scale) and sex ratio, SR, (right hand scale)

Pris 16:– exkl moms

Gleerups AB, Stockholm 1971