

Description of survey areas, methods, and populations studied

At a meeting in Copenhagen in December 1976 investigators reviewed the literature on morbidity and mortality in the elderly and the socioeconomic, cultural, and environmental factors involved. Planning for a comparative epidemiological study then began, based on the gaps in the information then available about the elderly. A basic cross-sectional comparative study in a number of participating centres in Europe was proposed, and by November 1978 some 14 countries had shown an interest in taking part.

A standard protocol was prepared by a group of investigators for the method to be used in the study and the type of information that was to be collected. Centres were encouraged to extend the basic study and include larger numbers of subjects, survey additional age groups, collect further data, or make additional measurements that would be useful to them. Additional studies critically evaluating the answers to the questions on health status and functional ability by the examination of probands were considered highly desirable. Whenever possible, individual studies were also to aim at evaluating the importance of existing services for the elderly in the particular area of study. Decisions on the extent of such additional studies and ways of coordinating them were left to each individual survey centre. The basic protocol and the questionnaire finally agreed were to be common to all the participating studies. In view of the sensitive nature of some items, for example sexual behaviour, these were not included in the questionnaire.

The questionnaire consisted of a package of questions and interviewer evaluations that have, whenever possible, been used in earlier studies, for the most part conducted among elderly persons. However, many new questions had to be specially framed for this study. An initial pre-pilot study using the proposed questionnaire and protocol was conducted in Southampton, United Kingdom, in the summer of 1977. In 1978 four pilot studies were conducted in Belgrade (Yugoslavia), Bialystok (Poland), Kiev (USSR), and Tampere (Finland), and field testing of the questionnaire took place in four additional centres. To facilitate the coordination of data collection and to speed up data handling and analysis, a largely precoded questionnaire was used. The translation of this questionnaire from English into the language of each area was the responsibility of individual participating centres. It was suggested that epidemiologists as well as translators should be involved in this task and that the accuracy of the translation should be checked by having the document retranslated into English and then carefully compared with the original English version. In addition, it was agreed that each centre

should critically examine the face validity of the translated questionnaire that they used. By the end of 1978 eight centres had tested the translated questionnaire in the field.

The comparative study was designed as a cross-sectional one, but it was hoped that, at least in some centres, it might be possible to follow up the samples, at least in some age groups, and thus obtain the advantages of the additional information only available in a longitudinal study. Such action was left to each participating centre to take, if it was possible. As there is no agreed definition of an elderly person, and as the usual retirement age varies from country to country, it was decided to select six five-year age groups for the main study. These groups were defined by the calendar year of birth for ages 60–64 years, 65–69 years, 70–74 years, 75–79 years, 80–84 years, and 85–89 years. The full protocol and questionnaire issued to each participating centre is given in Annexes 1 and 2. The sampling method used in one centre, Bialystok (Poland), was different from that of the other centres; it sampled from subjects born in a single year rather than from the whole of the five-year age group, the individuals being aged 60, 65, 70, 75, and 80 at the time of the survey. A number of centres were able to include younger and older age groups in their studies. With the older groups it was sometimes only possible to study women, because of the fewer men who survive to such ages. A factor limiting sample size was cost, but in order to obtain reliable estimates for most of the data to be collected it was originally agreed that there should ideally be a minimum of 100 individuals of each sex in each five-year age group. This was not always possible, particularly in the older age groups, and in some survey areas the numbers were less than these in all the age and sex groups.

Geographical Area and Population Structure of Survey Areas

There are important urban/rural differences in morbidity and mortality, varying in extent from country to country. It was agreed that it would be desirable for each participating centre to consider carefully the area for its study. It had originally been suggested in the protocol that the population of the study area should, if possible, have a socioeconomic structure similar to that of the country as a whole and both urban and rural areas (and suburban areas as well) be included. Each centre initially aimed at sampling urban and rural areas in approximately the ratio in which they occur in the country as a whole. In the event, most of these suggestions for the selection of survey areas were too difficult to adopt, both for practical reasons and because of cost, but if it was possible to conduct the survey only in an urban area, for example, this did not eliminate that area from the cooperative study. Indeed it was agreed, at an early stage of the planning, that the comparison of areas in large cities may well be the most meaningful and that it was desirable that each centre should include such an urban area in its study, if feasible. In any case, each centre was to describe the characteristics of its study area. The geographical area for the study often had to be fairly large in order to include enough of the population, especially of the older age groups. Lower numbers than 100 in the oldest age group (85–89 years) were, however,

generally accepted, as the use of health services at these ages was more extensive. Thus, in these older age groups, reliable estimates of use would be possible on the basis of a smaller sample size. It was originally agreed in the protocol that, as far as was practical, the geographical area should be defined so as to include a number of institutions of various kinds (for the physically handicapped, mentally ill, etc.) typical of the area or country as a whole. It was left to each participating centre to identify the most suitable geographical area for its own study. Full details of the study areas and their population structures will be available in the reports of individual surveys. A brief summary only is given here (Tables 1 and 2).

Two studies were carried out in Belgium in order to provide a population structure similar to that of the country as a whole, half of the sample being taken in a large urban area (Brussels) and the other half in an area of smaller urban and rural communities. In the Brussels study the original area to be sampled was the urban area of Brussels town and Anderlecht — parts of Brussels capital, which has a population of over one million. Three fifths of the sample were to be from Brussels town and two fifths from Anderlecht. Because of difficulties in recruiting interviewers and in obtaining up-to-date population lists, and owing to the low response rate, it was impossible to include Anderlecht in the present survey; hence the smaller size of the sample for Brussels. Brussels town has a population of 146 000 with a density of 4400 per km². The other survey area in Belgium was in Leuven district, 25 km west of Brussels. It has an area of 1200 km², a population density of 350 inhabitants per km², and a population of 410 000 (January 1977). As well as Leuven the district includes Diest, Aarschot, and Tienen and a considerable rural area with small centres. In Belgium as a whole 14.1% of the population is over 65 years of age (1978); in the Brussels area 16.9% of the population is over 65 years. In the Brussels area 20.6% of the female population is over 65 years, whereas only 12.7% of the male population is over that age. In Leuven district the proportion of the population over 65 is slightly higher than that of Belgium as a whole.

The study in Berlin (West) was based on three areas. One was of the elderly in the area as a whole, which has a population of nearly two million, the other two of particular residential areas within the city, parts of the districts of Kreuzberg and Neukölln (Gropiusstadt). Berlin (West) had a density of 4135 inhabitants per km² in 1975, rather lower than it was in the previous 35 years. Kreuzberg, in the eastern part of Berlin (West), is a traditional working-class area near the centre of the old town. It had a population density of 15 264 people per km² in 1970. Gropiusstadt was built between 1962 and 1975 and is a suburban residential area. In Berlin (West) 22.6% of the population in 1977–78 were over 65 compared with 14.9% for the Federal Republic of Germany. Of the population, 29.2% were over the age of 60 as compared with 19.9% for the Federal Republic of Germany. In Kreuzberg 17.3%, and in Gropiusstadt 13.7%, of the population were over the age of 65 years.

In Finland the survey was carried out in Tampere, the second largest city in the country with a population of 168 000, situated some 175 km north of Helsinki. It is a mainly urban area of 525 km², but within the city limits

there are rural areas with several communes. In addition there are over 160 km² of water, as the central area lies along an isthmus between two large lakes. The proportion of the population over 65 years is 10.5%, which is similar to the national average for Finland in 1975. This proportion is increasing and was about 12% in 1979.

Two studies were carried out in France. The Midi-Pyrénées survey was in the largest area of France, containing 8.3% of the total area of the country and 4.3% of the population. It is an essentially rural area, but contains the city of Toulouse. In general the population density is low and there has recently been a considerable exodus from the rural areas. The other area in France was Upper Normandy, from which a stratified random sample was taken. This region includes both urban and rural areas with two large cities (Rouen and Le Havre), several smaller towns and numerous rural communities. At the last census in 1975 the total population of the region was 1 598 350, of which 1 128 316 lived in the urban zone. In France as a whole 18.7% of the population is over the age of 60 years; Midi-Pyrénées has a higher proportion of elderly than the national average, but Upper Normandy has a lower proportion.

In Greece the areas surveyed were largely rural, principally on the mainland of Greece but also including some typical islands. The areas were widely spread in the north, south, east and west of the country, and included 21 Greek villages and small towns in 12 departments, one of which was 30 km from the city of Athens. In the areas surveyed more than 12% of the population were over the age of 65 years in 1974 but the figure rose to 16% in some of the small rural communities. The last census was in 1971, but in many of the individual villages surveyed up to a quarter of the population were over the age of 60 years.

In Italy three separate areas were surveyed in Tuscany. Florence has a population of 462 000 (1980), with 4529 inhabitants per km². It is entirely urban and has recently had little population growth. The Low Valley of Ombrone has a population of 41 000 (1980), with 459 inhabitants per km²; the population growth is high and a considerable proportion of the area is devoted to agriculture. The third area in Italy was West Amiata; here the population in 1980 was 18 500, with 40 inhabitants per km². It is a dispersed agricultural area with a low density of population, which has decreased owing to the low birth rate and to emigration. In the three survey areas in Italy the proportion of the population over the age of 65 years at the 1971 census was 16% in Florence, 11.8% in Low Ombrone, and 19.9% in West Amiata.

In Kuwait the whole of the country was included in the survey. It has a total area of about 17 000 km² (including the offshore islands) and had a population of 1 355 827 in 1980. The inhabited area is about 6% of the total area of the country. In Kuwait about 47.5% of the population were Kuwaiti in 1975, 41.4% in 1980, the rest being from many other, especially Arab, countries. The age and sex structure of the non-Kuwaiti population is characterized by a higher male/female ratio than usual, a larger proportion in the working age group 20–50 years, and fewer in the older age groups. Although the life expectancy at birth is 69 (66 for males and 71 for females),

the proportion of old people, because of the high fertility rate, is low. Only 2.6% of the population were over 60 years in 1975, though 2.9% had been in 1965. In 1975 only 1.6% of the population were over the age of 65, and 78.2% of the elderly population were in the sample studied.

In Poland the survey was conducted in the city of Bialystok, at the centre of an agricultural and industrial region. The population was 626 400 in 1972, and the density 62 persons per km². The city itself has a population of 207 400, with a density of 2310 per km². The proportion of the population of Poland over the age of 60 years was 13.4% in 1977 but in Bialystok the proportion was rather less, 11.9%.

In Romania the survey was conducted in the second zone of Bucharest municipality, which is representative of the capital as a whole with regard to industrialization, urbanization, and the age distribution of the population. The population of the city as a whole in 1979 was 1 960 097, the area 605 km². In Bucharest the proportion of the elderly is rather higher than for Romania as a whole: 14.9% over 60 for men and 18.6% for women, and 9.5% over 65 for men and 12.6% for women. The proportion over the age of 85 was 3.4% for men and 5.8% for women.

In the USSR the survey was conducted in three districts of Kiev. Together these three districts are fairly representative of the city as a whole and include the oldest and youngest districts in terms both of buildings and of population. The total population of Kiev is over 2 million, with a density of 2700 per km². In Kiev 11.8% of the population in 1970 were over the age of 60, which makes this a slightly older population than that of the USSR as a whole, in which the proportion was 10.4%.

In Yugoslavia surveys were conducted in Belgrade and in Zagreb. Belgrade, the capital of Yugoslavia, had a population in 1980 of 1 310 361. Its area is 3200 km², the metropolitan area being some 350 km². The survey was conducted in 6 subregions of the city — 3 central communes and 3 sub-urban communes (the latter having a lower proportion of elderly persons). Zagreb, the second largest city in Yugoslavia, had a population of 722 809 in 1975. Its area is 1263 km², the density of population 572 persons per km². There are 12 communes in Zagreb, 10 of which — all strictly urban in character — were included in the study area. In Belgrade 10.4% of the male population and 13.2% of the female population were over the age of 60 in 1975, 6.8% of the male population and 9.1% of the female population over the age of 65. Recent figures suggest that these percentages have slightly increased. In Zagreb 7.6% of the male population and 11.3% of the female population were over the age of 65 years.

Work Opportunities in Survey Areas

The work opportunities in the survey areas varied considerably, but in few were there any special facilities for the elderly. In Brussels work opportunities are largely commercial and administrative, but there are also considerable numbers of factories. In Leuven work is largely in the machine and electrical industries, in the food and beverage industries, and in the expanding printing offices and scientific apparatus manufacturers. There is a

large range of industrial and administrative occupations in Berlin (West), and Tampere is an industrial town with a broad base. Both of the study areas in France were agricultural. In Midi-Pyrénées there are few industrial plants and traditional activities such as skins, textiles, and mining are now declining. There is a high proportion of unemployed. In Upper Normandy the area is again mainly agricultural but there is industry around Rouen and Le Havre; there is also a fishing industry on the coast. In Italy Florence is typically urban, with a large part of the population engaged in tertiary occupations. Low Ombrone is an extended urban area recently converted from agriculture to industry, with many small and average-sized industries interspersed among residential areas. West Amiata is a typical dispersed agricultural area from which the most active working population has emigrated. In Kuwait 70% of the gross domestic product was derived from oil in 1976; there are few industries other than oil, but trading and services are important occupations. The *per capita* gross national product is very high: US\$13 960 in 1978. The retirement age in the public sector is 60 years. In Bialystok just over half the population is employed by the State. There is a variety of industries including textiles, timber, foodstuffs, metallurgy, and glass. Part-time work is quite common among the elderly, especially in agriculture. The normal retirement age is 60 years for women and 65 years for men, but is sometimes lower. In Bucharest the retirement age is 60–62 years for men and 55–57 years for women. It has a variety of occupations typical of a large city. Similarly in Kiev there is a variety of occupations and pensioners are encouraged to work by various government schemes. In Belgrade the basic occupation is industry, especially the processing industry (metal, chemicals, textiles, leather). In Zagreb occupations are predominantly industrial, with a considerable amount of employment in building, engineering, and the electrical and chemical industries. Employment opportunities here, as in many other cities, are extremely limited for those over the age of 65 years. In Yugoslavia the general retirement age is 60 years for women and 65 years for men.

Medical and Social Facilities

Medical and social facilities vary enormously from area to area and in different parts of the same area. Brussels has 6.07 doctors per 1000 inhabitants, just over twice the proportion for Belgium as a whole in 1978. In the Belgian capital there are 4.6 hospital beds per 1000 inhabitants (public and private, not including maternity and paediatric beds). Leuven district has the largest number of medical facilities of any district in Flanders, with 2.4 doctors per 1000 population. In Berlin (West) there are slightly more houses for the very aged who do not need permanent nursing care or permanent surveillance than the number estimated, which is 2.8 per 100 population over the age of 65 years. Medical and social facilities for the elderly in Tampere are well developed, as is typical for Scandinavian countries. The medical services in Midi-Pyrénées are better than those of the country as a whole, but there is some variation within the region and the services are concentrated in the urban areas; the facilities for the aged are

Table 1. Type of survey area, size, and population

Participating centre	Type of area	Size (km ²)	Population (in thousands)
Brussels (Belgium)	Urban area of Brussels town and Anderlecht	5	240
Leuven (Belgium)	Mixed urban and rural	1 200	410
Berlin (West)	Urban area of Berlin (West) and two particular subareas	470	1 950
Tampere (Finland)	Mainly urban with small areas adjoining	525	170
Midi-Pyrénées (France)	Mainly rural with Toulouse	45 000	2 200
Upper Normandy (France)	Seven areas ranging from urban to rural	12 300	1 600
Rural Greece	Mainly rural	38 761 ^a	1 995 ^a
Florence (Italy)	Entirely urban	100	460
Low Ombrone (Italy)	Mixed rural and urban	90	40
West Amiata (Italy)	Rural	460	19
Kuwait (Kuwait)	Whole country (but population lives in about 6% of area)	17 000	1 356
Bialystok (Poland)	Urban area of city	89	210
Bucharest (Romania)	Zone of city	600 ^a	2 000 ^a
Kiev (USSR)	Three districts of city	780 ^a	2 000 ^a
Belgrade (Yugoslavia)	Six subregions of city	3 200 ^a	1 310 ^a
Zagreb (Yugoslavia)	Most of urban area	1 260 ^a	725 ^a

^a Only part included in survey.

Table 2. Age structure of survey areas (both sexes combined)^a

Participating centre	Percentage of population over:		Notes
	60 years	65 years	
Brussels	22.2	16.9	For the Brussels area
Leuven	18.5	14.6	
Berlin (West)	29.2	22.6	
Tampere	16.5	10.5	
Midi-Pyrénées	22.9	—	
Upper Normandy	15.9	11.8	For Upper Normandy as a whole
Rural Greece	17.7	12.7	For entire country
Florence	22.9	16.0	
Low Ombrone	17.2	11.8	
West Amiata	27.6	19.9	
Kuwait	2.6	1.6	
Bialystok	11.9	9.3	
Bucharest	16.9	11.2	For Bucharest as a whole
Kiev	11.8	—	For Kiev as a whole
Belgrade	11.9	8.0	For Belgrade as a whole
Zagreb	—	9.6	For Zagreb as a whole

^a Where the exact age structure is not known, the nearest comparable data are given.

Table 3. Total numbers of people sampled

	Age group (years)												
	Men						Women						
	60-64	65-69	70-74	75-79	80-84	85-89	60-64	65-69	70-74	75-79	80-84	85-89	
Brussels	62	67	91	82	95	115	81	105	106	83	100	97	
Leuven	52	52	52	52	53	62	50	51	53	51	58	61	
Berlin (West)	204	210	204	197	201	212	245	224	239	236	264	264	
Tampere	120	120	119	130	128	130	120	120	119	129	130	129	
Midi-Pyrénées	—	—	—	—	—	—	—	—	—	—	—	—	
Upper Normandy	102	99	98	92	95	95 ^a	95	101	100	102	99 ^a	—	
Rural Greece	133	210	155	107	60	39	146	224	166	141	61	66	
Florence	120	120	120	120	120	120	120	120	120	120	120	120	
Low Ombrone	120	120	120	120	120	120	120	120	120	120	120	120	
West Amiata	120	120	120	120	120	120	120	120	120	120	120	120	
Kuwait	130	139	133	131	121	122	80	83	83	84	84	77	
Bialystok ^b	136	135	136	143	136	0	133	129	145	132	129	0	
Bucharest	75	60	63	63	51	49	78	79	87	92	91	114	
Kiev	146	137	133	128	144	156	142	141	144	140	148	164	
Belgrade	170	170	170	170	170	170	170	170	170	170	170	170	
Zagreb	122	102	111	113	71	79	118	121	129	116	149	150	

^a 80 years and above.

^b For ages, see text.

Table 4. Numbers of completed questionnaires, including proxy interviews but excluding people in institutions

	Age group (years)													
	Men							Women						
	60-64	65-69	70-74	75-79	80-84	85-89	60-64	65-69	70-74	75-79	80-84	85-89		
Brussels	30	30	28	27	25	26	30	26	27	29	27	28		
Leuven	37	36	43	41	48	43	35	35	43	39	39	32		
Berlin (West)	120	120	126	118	132	115	118	128	127	133	121	113		
Tampere	92	90	85	86	79	55	86	91	95	89	75	40		
Midi-Pyrénées	88	96	89	56	39	61 ^a	85	98	84	83	84	126 ^a		
Upper Normandy	79	73	64	55	43	15	73	71	68	58	31	8		
Rural Greece	128	203	148	100	55	34 ^b	143	214	158	127	56	63 ^b		
Florence	73	80	94	86	96	95	63	85	74	81	85	85		
Low Ombrone	104	113	106	106	109	80	106	107	107	105	106	95		
West Amiata	102	97	105	98	94	70	98	101	95	94	80	83		
Kuwait	129	130	129	129	132	118	80	80	83	78	80	72		
Bialystok ^c	96	97	98	94	101	—	98	99	99	101	99	—		
Bucharest	65	60	54	59	42	43	71	73	82	85	88	92		
Kiev	100	107	100	101	102	99 ^d	114	116	116	103	105	100 ^d		
Belgrade	161	159	161	162	159	150	156	164	157	161	153	154		
Zagreb	104	96	96	89	57	32	106	115	120	97	95	51		

^a 10 men and 34 women aged over 91 years are included in the sample.

^b 4 men and 8 women aged over 91 years are included in the sample.

^c For ages, see text.

^d 10 men and 15 women aged over 91 years are included in the sample.

Table 5. Numbers of people who had died or moved (no questionnaire completed)

	Age group (years)													
	Men							Women						
	60-64	65-69	70-74	75-79	80-84	85-89	60-64	65-69	70-74	75-79	80-84	85-89		
Brussels	3	5	10	11	22	23	3	11	6	4	11	26		
Leuven	2	2	3	2	3	12	0	1	3	2	8	12		
Berlin (West)	5	5	2	3	6	20	6	5	8	4	14	11		
Tampere	10	10	11	21	20	42	8	6	7	15	14	40		
Midi-Pyrénées	—	—	—	—	—	—	—	—	—	—	—	—		
Upper Normandy	6	10	10	17	10	6	4	7	11	16	9	11		
Rural Greece	1	2	2	3	4	3	1	1	4	4	4	3		
Florence ^a	14	13	9	11	9	13	12	17	17	16	10	6		
Low Ombrone ^a	4	3	6	4	3	12	0	1	1	3	9	8		
West Amiata ^a	11	11	10	9	11	16	11	13	15	12	24	16		
Kuwait	0	0	0	0	1	0	0	2	0	1	1	0		
Bialystok ^b	6	6	10	15	18	0	12	7	12	5	9	0		
Bucharest	0	0	0	0	0	0	0	0	0	0	0	0		
Kiev	14	13	20	15	26	47	10	14	17	26	30	54		
Belgrade	7	5	8	8	11	18	13	3	7	5	12	13		
Zagreb	4	2	2	8	7	22	2	0	1	1	20	42		

^a Form not yet received; information from other sources.

^b For ages, see text.

Table 6. Numbers of people too ill to participate in the survey
(proxy interviews not carried out)

	Age group (years)													
	Men							Women						
	60-64	65-69	70-74	75-79	80-84	85-89	60-64	65-69	70-74	75-79	80-84	85-89		
Brussels	0	1	2	3	7	9	0	2	6	5	6	5		
Leuven	1	0	2	0	0	1	0	1	0	1	0	0		
Berlin (West)	4	8	8	8	15	6	6	5	8	11	12	23		
Tampere	1	1	1	1	0	1	0	0	2	0	8	5		
Midi-Pyrénées	—	—	—	—	—	—	—	—	—	—	—	—		
Upper Normandy	0	0	0	0	0	0	0	0	0	0	0	0		
Rural Greece	1	0	2	3	1	2	1	3	3	2	2	1		
Florence ^a	2	3	5	4	4	4	5	2	4	2	4	11		
Low Ombrone ^a	0	0	0	1	0	0	0	0	2	1	1	1		
West Amiata ^a	0	3	0	2	4	0	1	2	1	0	1	0		
Kuwait	0	0	1	0	0	3	0	0	0	0	0	1		
Bialystok ^b	0	0	0	0	0	0	0	0	0	0	0	0		
Bucharest	0	0	0	0	0	0	0	0	0	0	0	0		
Kiev	0	0	1	1	0	0	0	0	1	2	2	0		
Belgrade	0	0	0	0	0	0	0	0	0	0	0	0		
Zagreb	0	0	0	2	0	0	0	0	0	0	2	0		

^a Form not yet received; information from other sources.

^b For ages, see text.

Table 7. Numbers of questionnaires completed by proxy, excluding people in institutions

	Age group (years)													
	Men							Women						
	60-64	65-69	70-74	75-79	80-84	85-89	60-64	65-69	70-74	75-79	80-84	85-89		
Brussels	1	0	0	1	1	1	1	0	2	0	2	4		
Leuven	7	3	1	2	6	11	0	1	1	4	6	16		
Berlin (West)	1	5	6	6	12	10	0	1	0	2	3	9		
Tampere	0	0	1	5	2	6	0	0	0	3	4	4		
Midi-Pyrénées	—	—	—	—	—	—	—	—	—	—	—	—		
Upper Normandy	1	3	0	2	2	1	0	1	0	1	0	4		
Rural Greece	—	—	—	—	—	—	—	—	—	—	—	—		
Florence ^a	1	2	5	3	4	5	0	0	2	8	13			
Low Ombrone ^a	3	1	2	1	5	11	0	2	0	1	8	19		
West Amiata ^a	1	0	2	5	6	9	1	0	1	2	3	11		
Kuwait	0	0	0	0	0	0	0	0	0	0	0	0		
Bialystok ^b	1	1	4	5	5	0	2	2	3	6	10	0		
Bucharest	0	0	0	0	0	0	0	0	0	0	0	0		
Kiev	2	3	4	4	2	0	1	0	0	0	0	0		
Belgrade	0	0	0	0	0	0	0	0	0	0	0	0		
Zagreb	16	13	10	9	7	8	4	2	3	8	22	21		

^a Form not yet received; information from other sources.

^b For ages, see text.

Table 8. Numbers of completed questionnaires from people in institutions, including proxy interviews

	Age group (years)													
	Men							Women						
	60-64	65-69	70-74	75-79	80-84	85-89	60-64	65-69	70-74	75-79	80-84	85-89		
Brussels	0	0	3	2	4	4	0	4	3	1	3	2		
Leuven	1	2	1	4	1	4	1	1	2	5	7	15		
Berlin (West)	2	0	1	1	3	7	1	1	0	1	5	18		
Tampere	2	3	1	7	13	16	1	1	4	6	18	26		
Midi-Pyrénées	—	—	—	—	—	—	—	—	—	—	—	—		
Upper Normandy	0	0	3	3	1	1	1	1	2	1	4	6		
Rural Greece:														
special homes	3	8	1	1	0	0	0	5	0	0	0	1		
institutions	4	4	5	2	1	0	2	3	4	2	1	0		
Florence	0	1	2	3	4	2	0	1	1	4	3	4		
Low Ombrone	1	1	1	3	4	5	0	2	0	3	2	5		
West Amiata	0	0	1	1	3	3	1	2	0	2	5	2		
Kuwait	0	0	0	0	0	0	0	0	0	0	0	0		
Bialystok ^a	0	0	0	0	0	0	0	0	0	0	0	0		
Bucharest ^b	7	1	9	4	6	7	5	6	5	7	2	19		
Kiev	0	0	0	0	0	0	0	0	0	0	0	0		
Belgrade	0	0	0	0	1	0	0	1	0	1	0	0		
Zagreb	0	1	5	3	4	3	4	6	7	13	17	12		

^a For ages, see text.^b Form not yet received; information from other sources.

Table 9. Response rate for completed questionnaires

	Age group (years)													
	Men							Women						
	60-64	65-69	70-74	75-79	80-84	85-89	60-64	65-69	70-74	75-79	80-84	85-89		
Brussels	51	50	35	39	36	30	38	29	28	37	31	41		
Leuven	76	75	90	89	98	93	69	78	88	86	91	94		
Berlin (West)	61	59	63	61	69	62	50	59	55	58	49	48		
Tampere	85	84	79	84	83	76	77	81	88	82	77	63		
Midi-Pyrénées	—	—	—	—	—	—	—	—	—	—	—	—		
Upper Normandy	82	82	75	76	75 ^a	—	81	76	78	61	—	57 ^a		
Rural Greece	100	100	100	98	100	94	100	97	100	100	100	100		
Florence ^b	69	75	86	81	90	90	58	83	73	81	79	77		
Low Ombrone ^b	90	97	94	94	96	78	88	91	90	92	97	89		
West Amiata ^b	94	89	96	89	89	69	91	96	90	89	88	81		
Kuwait	99	94	97	98	100	97	100	99	100	94	96	94		
Bialystok ^c	74	75	78	73	86	—	81	81	74	80	83	—		
Bucharest	100	98	100	100	100	100	100	100	100	99	96	100		
Kiev	76	86	88	89	80	91	86	91	91	90	89	91		
Belgrade	99	96	99	100	100	99	99	70	96	98	97	98		
Zagreb	88	97	92	87	95	59	95	100	99	95	85	53		

^a 80 years and above.

^b Form not yet received; information from other sources.

^c For ages, see text.

Table 10. Percentages of married people^a

	Age group (years)													
	Men							Women						
	60-64	65-69	70-74	75-79	80-84	85-89	60-64	65-69	70-74	75-79	80-84	85-89		
Brussels	70	62	68	63	52	40	43	27	56	10	11	0		
Leuven	95	83	77	54	54	40	68	66	40	34	26	6		
Berlin (West)	82	76	75	66	64	44	48	30	24	21	11	10		
Tampere	81	82	72	65	62	40	40	43	33	18	15	0		
Midi-Pyrénées	85	90	75	68	69	58	78	65	54	42	27	8		
Upper Normandy	84	83	79	80	67	53	67	56	52	31	10	25		
Rural Greece	89	90	86	71	61	40	73	59	43	45	24	17		
Florence	85	92	80	74	67	56	57	47	35	30	25	4		
Low Ombrone	90	85	83	80	55	46	79	55	49	36	15	7		
West Amiata	87	90	84	73	71	46	81	67	56	37	23	17		
Kuwait	96	92	94	95	89	70	62	64	40	33	17	14		
Bialystok	92	91	88	82	71	—	65	52	43	23	15	—		
Bucharest	90	91	91	78	59	67	61	49	54	43	20	6		
Kiev	87	86	77	72	62	52	40	32	18	12	5	3		
Belgrade	87	85	84	73	68	60	47	46	36	18	14	5		
Zagreb	82	79	73	66	68	75	53	46	32	20	22	6		

^a Codebook item 15.2.

Table 11. Percentages of widowed people^a

	Age group (years)													
	Men							Women						
	60-64	65-69	70-74	75-79	80-84	85-89	60-64	65-69	70-74	75-79	80-84	85-89		
Brussels	7	13	19	22	25	56	27	54	33	72	70	86		
Leuven	3	11	21	39	40	58	21	26	55	63	67	91		
Berlin (West)	10	15	10	28	32	48	26	51	56	62	67	74		
Tampere	7	11	18	28	30	53	28	35	39	52	59	70		
Midi-Pyrénées	5	1	12	18	26	34	8	24	33	53	61	85		
Upper Normandy	14	7	8	13	28	40	23	31	42	60	76	50		
Rural Greece	7	8	12	25	37	60	24	38	48	52	70	75		
Florence	1	1	12	19	26	39	19	36	57	56	66	87		
Low Ombrone	3	8	9	16	41	49	17	33	43	59	77	83		
West Amiata	5	4	10	23	24	48	12	30	39	59	74	75		
Kuwait	2	5	5	3	11	26	30	34	52	58	79	81		
Bialystok	0	5	9	16	22	—	19	36	45	66	73	—		
Bucharest	6	3	7	20	34	26	21	42	37	48	68	81		
Kiev	9	9	18	26	38	45	47	55	74	80	90	91		
Belgrade	3	8	9	18	28	38	36	41	49	68	76	88		
Zagreb	2	7	19	20	21	13	25	43	51	71	64	86		

^a Codebook item 15.3.

Table 12. Percentages of people who never married^a

	Age group (years)													
	Men							Women						
	60-64	65-69	70-74	75-79	80-84	85-89	60-64	65-69	70-74	75-79	80-84	85-89		
Brussels	7	3	4	7	15	4	10	15	7	3	7	11		
Leuven	3	6	2	5	6	2	9	8	5	3	8	3		
Berlin (West)	2	2	5	5	2	5	9	7	10	12	11	11		
Tampere	3	3	8	4	5	0	15	13	24	26	24	27		
Midi-Pyrénées	7	8	10	14	3	3	11	9	11	2	11	6		
Upper Normandy	1	3	6	5	2	7	5	7	4	7	6	25		
Rural Greece	3	3	3	4	2	0	3	2	6	3	3	9		
Florence	9	6	7	7	6	5	19	14	5	15	9	8		
Low Ombrone	7	7	7	3	4	5	3	12	8	6	8	9		
West Amiata	8	8	6	4	5	4	6	3	5	4	0	8		
Kuwait	1	2	1	0	0	2	2	0	1	3	1	1		
Bialystok	3	2	2	1	2	-	12	8	8	9	10	-		
Bucharest	0	2	0	2	4	5	7	3	2	4	9	5		
Kiev	0	1	2	0	0	3	1	4	2	5	3	5		
Belgrade	3	2	2	7	3	1	8	6	7	6	8	4		
Zagreb	11	9	6	9	5	12	8	8	11	8	11	6		

^a Codebook item 15.1

Table 13. Percentages of people whose main occupation involved physical or manual work^a

	Age group (years)													
	Men							Women						
	60-64	65-69	70-74	75-79	80-84	85-89	60-64	65-69	70-74	75-79	80-84	85-89		
Brussels	61	55	44	52	52	32	57	68	42	55	48	46		
Leuven	43	58	57	63	50	37	32	30	26	24	9	22		
Berlin (West)	64	75	63	71	60	63	60	58	54	53	62	62		
Tampere	59	66	62	64	62	42	66	63	68	69	70	46		
Midi-Pyrénées	34	47	49	33	36	45	43	40	36	43	39	37		
Upper Normandy	72	63	55	59	63	60	66	60	69	71	75	67		
Rural Greece	23	21	15	10	13	12	5	5	8	4	5	6		
Florence	58	60	55	50	59	56	40	49	45	43	35	33		
Low Ombrone	65	57	55	58	48	57	28	42	31	36	38	36		
West Amiata	50	36	36	38	36	36	20	17	17	10	9	17		
Kuwait	80	75	76	84	79	84	9	14	11	13	6	11		
Bialystok	65	77	58	71	49	—	46	38	49	54	33	—		
Bucharest	57	50	43	37	24	36	47	44	28	37	21	15		
Kiev	37	40	35	36	34	41	32	34	35	35	31	30		
Belgrade	22	23	35	24	22	19	11	18	11	14	9	11		
Zagreb	58	43	53	60	46	34	30	28	27	21	21	14		

^a Codebook item 19.1.

Table 14. Percentages of people whose main occupation was agricultural work^a

	Age group (years)													
	Men							Women						
	60-64	65-69	70-74	75-79	80-84	85-89	60-64	65-69	70-74	75-79	80-84	85-89		
Brussels	0	0	0	0	0	0	0	0	0	0	0	0		
Leuven	16	19	17	22	17	30	9	14	12	5	20	19		
Berlin (West)	0	0	2	1	2	1	1	2	1	2	0	2		
Tampere	4	6	7	6	9	11	0	7	5	3	7	26		
Midi-Pyrénées	25	21	28	41	26	31	18	24	26	36	29	32		
Upper Normandy	6	11	10	19	21	0	10	11	16	15	10	33		
Rural Greece	57	61	67	74	83	80	82	89	83	87	86	92		
Florence	10	5	11	5	10	11	3	6	4	2	9	15		
Low Ombrone	26	35	40	42	48	37	18	19	27	24	23	24		
West Amiata	42	59	56	59	62	60	20	19	23	27	28	17		
Kuwait	0	1	1	0	2	2	0	0	0	0	0	0		
Bialystok	2	1	7	11	17	—	8	9	9	10	20	—		
Bucharest	1	0	0	5	2	0	1	0	2	0	1	3		
Kiev	1	0	2	5	4	2	2	4	6	10	8	12		
Belgrade	2	3	4	8	3	8	1	1	4	6	0	1		
Zagreb	0	3	3	6	5	5	1	1	2	3	1	3		

^a Codebook item 19.3.

Table 15. Percentages of people with less than 4 years of full-time education^a

	Age group (years)													
	Men							Women						
	60-64	65-69	70-74	75-79	80-84	85-89	60-64	65-69	70-74	75-79	80-84	85-89		
Brussels	0	0	4	0	4	0	3	0	4	3	11	4		
Leuven	3	0	5	6	5	16	3	0	0	3	8	8		
Berlin (West)	0	2	1	2	2	3	1	2	1	2	1	2		
Tampere	4	9	15	27	28	31	3	6	20	25	41	49		
Midi-Pyrénées	1	1	1	5	7	3	2	1	4	6	7	7		
Upper Normandy	0	3	2	6	8	0	1	0	3	5	0	0		
Rural Greece	28	36	40	49	53	65	61	70	75	84	89	92		
Florence	3	12	24	20	32	35	23	34	24	22	45	44		
Low Ombrone	24	37	58	76	66	75	53	61	76	81	78	74		
West Amiata	25	52	58	71	73	77	43	66	74	71	83	82		
Kuwait	74	74	74	81	80	89	95	89	98	94	96	99		
Bialystok	6	7	24	31	33	—	14	21	36	43	62	—		
Bucharest	15	5	9	5	7	10	5	8	12	11	9	13		
Kiev	3	7	8	12	22	24	9	17	34	29	41	49		
Belgrade	4	5	10	10	6	6	13	20	22	31	24	31		
Zagreb	3	2	6	3	5	3	7	12	17	20	17	22		

^a Codebook item 16.

Table 16. Percentages of people with more than 12 years of full-time education^a

	Age group (years)													
	Men							Women						
	60-64	65-69	70-74	75-79	80-84	85-89	60-64	65-69	70-74	75-79	80-84	85-89		
Brussels	7	17	21	15	12	16	13	15	8	7	11	4		
Leuven	11	6	5	3	5	13	3	3	9	3	0	0		
Berlin (West)	6	2	3	3	2	4	2	4	4	1	1	2		
Tampere	0	4	8	4	4	13	6	2	5	2	1	5		
Midi-Pyrénées	14	9	7	4	13	8	7	4	7	4	6	3		
Upper Normandy	5	6	3	4	7	7	5	6	7	2	3	0		
Rural Greece	4	1	2	3	5	0	0	1	1	0	0	0		
Florence	14	13	17	17	10	14	5	4	3	5	3	6		
Low Ombrone	1	3	3	0	0	0	0	0	0	3	0	0		
West Amiata	1	1	1	0	0	0	1	1	1	1	0	0		
Kuwait	5	2	1	1	1	2	1	0	0	1	1	0		
Bialystok	11	9	11	3	4	—	8	9	4	2	0	—		
Bucharest	29	29	37	31	56	52	19	8	11	16	20	15		
Kiev	49	36	38	33	16	24	18	25	12	16	11	9		
Belgrade	22	26	19	24	25	23	13	8	6	4	11	5		
Zagreb	22	32	20	13	19	25	9	10	4	4	3	2		

^a Codebook item 16.

Table 17. Percentages of people who had had 2 years or more of full-time vocational or professional training^a

	Age group (years)													
	Men							Women						
	60-64	65-69	70-74	75-79	80-84	85-89	60-64	65-69	70-74	75-79	80-84	85-89		
Brussels	21	29	21	17	15	29	20	14	23	21	15	7		
Leuven	14	21	12	7	4	7	3	0	5	3	0	3		
Berlin (West)	15	16	15	14	9	15	9	8	6	4	7	2		
Tampere	34	23	21	8	10	31	16	7	8	11	7	3		
Midi-Pyrénées	18	21	7	13	8	12	7	10	2	4	2	6		
Upper Normandy	12	15	17	10	14	29	7	7	4	5	3	0		
Rural Greece	2	2	3	3	2	0	0	0	1	0	0	0		
Florence	20	25	15	16	13	13	11	14	15	10	7	9		
Low Ombrone	3	2	1	1	2	4	0	0	1	2	0	0		
West Amiata	3	6	3	0	2	1	2	4	4	1	3	1		
Kuwait	1	2	2	3	1	1	0	0	0	0	0	0		
Bialystok	28	19	20	10	15	—	8	9	7	6	2	—		
Bucharest	25	33	37	37	59	60	23	25	21	27	33	29		
Kiev	4	7	8	10	3	13	3	3	2	4	1	0		
Belgrade	61	52	46	43	47	46	28	21	23	17	24	20		
Zagreb	2	5	3	1	5	0	2	1	0	0	0	0		

^a Codebook item 18.4.

especially uneven. In rural Greece doctors and nurses visit many of the villages once a week. In some villages inhabitants have to go to the nearest large village or town, which may be 10 km or more away over partly paved roads. There is no special geriatric hospital service in Greece, but there are hospitals for chronic diseases. In Greece as a whole in 1979 there were 2.4 physicians per 1000 population and 0.7 registered nurses (3 or 4 years' training) per 1000 population. In Kuwait health care is free. Social welfare is available to back up the well developed concept of the extended family. Because of this pattern of care there is almost no system of institutions or nursing homes for the elderly. In Bialystok city there are 6 doctors per 1000 population, which is much above the average for the country as a whole. Specialized geriatric care is organized by the district geriatric dispensary in Bialystok. There is a home for the aged and a department for the chronically ill. The retired are entitled to free medical services and free medicine. In Bucharest medical aid for all categories of the population is free. There are 1.7 doctors per 1000 population. In Kiev there are 7.9 doctors per 1000 population. In Yugoslavia there are 1.3 doctors per 1000 population but the number is higher in the large cities, the figure being 4.3 in Belgrade.

Sampling Frames

The 6 five-year age groups that form the basis of the survey were defined by calendar year of birth as follows: 1919–15 (age 60–64 years); 1914–10 (age 65–69 years); 1909–05 (age 70–74 years); 1904–00 (age 75–79 years); 1899–95 (age 80–84 years); 1894–90 (age 85–89 years). The intention, whenever possible, was to select 100 men and 100 women from each five-year group. In most of the survey areas either the electoral lists or a central register were used as a sampling frame. In Brussels the electoral lists were used, whereas in Leuven the national registers were used for half of the municipalities and electoral lists for the remainder. In Berlin (West) the administrations' population register was used to select the 3 samples. In Finland the population register of the city of Tampere was used as at January 1978; it gave full details of names, dates of birth, sex, and addresses. In France the same sampling procedure was used in both Midi-Pyrénées and Upper Normandy. It was a two degree stratified random sample based on census data and electoral lists. The electoral list contains the name, date and place of birth, sex and address of each individual. In rural Greece the electoral rosters were used as the sampling frame. In the 3 regions of Italy the sampling frame was the registry offices. Here it was possible to stratify by age, sex, and family structure. In Bialystok the electoral lists were used by year of birth, only those individuals born in 1899, 1904, 1909, 1914, and 1919 being sampled. The data from Bialystok are therefore not strictly comparable with those of the other survey areas, which have 6 age groups, each spanning a five-year period; the average age of the sample in Bialystok was therefore rather lower than the average age of the corresponding groups in the other survey areas, a fact that must be kept in mind in all comparisons involving Bialystok. In Bucharest the central register was used as the sampling frame. In Kiev a

partial census was undertaken using the data of the local administration in the 3 districts. This partial census included about 16 000 persons. In Yugoslavia central computer listings were available for the study. In Zagreb all the inhabitants in the appropriate age groups were obtained from the city information centre. Some of this information was updated, as part of the survey area was being completely reconstructed at the time of the survey.

Sampling Method

In order to obtain a reasonable number of individuals in all the age groups, different sampling ratios for each stratum were used in all areas. In rural Greece there was a total coverage of all persons aged 60 and over in some of the smaller villages; in the larger villages and towns the sampling ratio varied from 1 : 3 to 1 : 5 between the ages of 60 and 80 years and 1 : 2 over the age of 80 years. In Kuwait the sampling was stratified by the density of population, and then second-stage sampling on a systematic basis was carried out by age and sex.

Data Collection: Interviews

Data were obtained by a trained interviewer, who usually visited the sample population in their homes. It was not possible to standardize the background of the interviewers, which varied from country to country. When probands were in institutions and unlikely to return to their homes before the completion of the survey, they were interviewed in the institution with a modified questionnaire, but data for such interviews in institutions are not presented in this report. The forms for all the interviews were precoded. In order to obtain a high response rate, the interview was kept simple. All the interviewers were given a period of training before the survey started, usually at an institute with experience in conducting community surveys. The length of their training varied with their previous experience of surveys. Training the interviewers was the responsibility of each country, but advice could be obtained from the WHO Regional Office in Copenhagen. Guidelines for the training of interviewers were prepared for the investigators and are given in Annex 3. Each country was asked to try to include a social scientist with experience of such surveys in its coordinating committee.

To standardize for seasonal variations in replies to the questions it was originally hoped that the surveys in the various countries could be conducted at the same time, which was scheduled for the first half of 1979. In the event this was not possible in several areas. It was suggested that investigators might wish to send a letter to the probands to arrive shortly before the interview date; the letter would give the name of the interviewer and the research unit conducting the study, and state that the interview was part of an international survey. Before the survey, police and other authorities and, if desirable, the medical profession would be notified. A standard introduction by the interviewer was suggested to reduce the possibilities of bias. The interviewer would introduce herself or himself, mention the research unit conducting the study, refer to the letter to the proband, and ask to come in to discuss the survey with the proband. The fact would be stressed that all

the information was for research purposes and confidential, and that individuals would not be identified. It would also be mentioned that the survey was part of an international study of the elderly and that some questions might not be relevant to certain individuals in the study; individuals should therefore not be offended or distressed by any of the questions, as many might apply only to certain people or to certain areas, but it was necessary to ask them in all cases to make the international study valid. The cooperation of the proband would then be invited. At the end of the interview, the interviewers would thank the proband for his or her help. Any action that was required as a result of the visit, such as referral to a doctor or the social services, would be arranged with the proband's permission and such action would be carefully considered by each centre. The time taken to complete each questionnaire varied from under one to over three hours.

After training, each interviewer was familiar with the questionnaire and evaluations. Some monitoring of observer variation (both intra- and inter-observer variation) was considered desirable in each centre, but the extent varied considerably in the various surveys. Quality control was effected by regular scrutiny of completed questionnaires in respect of their completeness and by a small number of repeat interviews (a few for each interviewer) carried out by an experienced interviewer. Some countries wished to interview spouses as an optional extra. In such cases it was agreed that the proband should be interviewed first, individually if possible. These optional extra interviews are excluded from the analysis presented in this report and will be presented separately by individual investigators.

Data Collection: Proxy Interviews

When the interviewer found it impossible, or not meaningful, to interview the proband, every effort was made to interview the relative or neighbour who played the major part in looking after the proband, as the one most likely to have the information that the study sought. One important factor calling for a proxy interview was the proband's memory; if it did not reach the required standard, the interview with the proband was abandoned and a proxy interview was substituted. This decision was made if there were two or more mistakes in questions 1 and 2 of the questionnaire (Annex 2). In each case the reason for the proxy interview was recorded. Unless a definite decision was made to conduct a proxy interview, all the information was obtained direct from the proband with no help from anyone else. Similarly, if the interview was with the proxy, it was with the proxy only and no information was sought from the proband for any of the questions. A separate analysis of such interviews was proposed. The questionnaire for proxy interviews had certain, mainly subjective, questions omitted from the questionnaire. If the subject was in a hospital or some other institution, the interviewer waited to see if he or she was likely to return home during the survey period. If not, he or she was interviewed in the hospital or institution. For those in long-stay institutions some questions had to be omitted and others added, and a classification of institutions was proposed. The questions omitted were 13-14; 16-30; 33; 54-58; 77-82; and 108-112.

Interviews in each Survey Area

In Brussels the interviewers were 4 young psychologists and 1 nurse who were paid; in addition there were 16 young nurses who were students in hospital management and 7 more young women, including a social worker, who were paid by the State within an unemployment scheme. These individuals were trained by a social worker and psychologist. In Leuven most interviews were carried out through the temporary employment of young unemployed who had trained in nursing and social work. A few interviews were completed by retired nurses. The training took 3 weeks at Leuven. In Berlin (West) there were about 105 interviewers, social workers and students of social science. The average age was under 30. In Tampere there were 11 female students aged between 24 and 31 years, who were mainly taking degrees in social welfare subjects. In Midi-Pyrénées 7 medical students who were preparing their theses acted as interviewers. In Upper Normandy several of the interviewers had been used on previous studies and included 3 Rouen medical students. There were 7 new interviewers including physicians, medical students, and nurses. The age of the interviewers ranged between 23 and 28 years, and 8 of the 12 were female. In rural Greece there were 15 visiting nurses, all female and all in the fourth year of their studies and before graduation. Their ages were 23–24 years. Some difficulties were reported as subjects thought some of the interviewers were income tax officers or from the state pension organization. If the interviewer was known to the subjects they answered freely, but if not problems sometimes arose. In the 3 survey areas in Italy 15–20 interviewers were used in each area. Their age ranged from 20 to 30 years and generally they were living in the survey area. In Kuwait there were 40 interviewers who were all social workers with 5 years of experience after a bachelor's degree. Many had previous survey experience. Twenty-seven of the interviewers were male and 13 female, their ages ranging from 30 to 50 years. In Bialystok there were 21 interviewers, 17 of whom were female. Their ages ranged from 22 to 45 years; 13 were social workers and 5 environmental nurses. The majority knew the sample that was interviewed because they lived in the area. In Bucharest there were 10 women interviewers aged between 25 and 54 years, mostly under the age of 40 and mostly social workers. In Kiev there were 27 interviewers, of whom 10 came from the Institute of Gerontology and 17 were Red Cross nurses. In Belgrade there were 44 nurses, of whom 38 had the highest educational qualification, and there were 2 medical technicians. The ages of the interviewers varied from 25 to 45 years, and many had had previous survey experience. In Zagreb there were 60 interviewers who were social work students between the ages of 20 and 24 years; 50 were female and 10 male.

Response Rates

Tables 3–9 give the number of subjects initially selected and the numbers of completed interviews for each age group and each sex separately. The tables

also give the reasons for non-response. These results vary greatly in the different age groups and the different centres. For many age groups and in some centres the response rate was low for an epidemiological study; in all comparisons, therefore, the response rates should be kept in mind.

Analysis and Use of the Data

The final coding of the questionnaire was decided by the statisticians responsible for its processing. The WHO Regional Office for Europe undertook the tabulation and primary analysis. Eighty-column punch cards or magnetic tape were accepted, but WHO did not undertake coding or manual validation; those tasks were performed in each participating centre. The Regional Office, in cooperation with the participating centres, prepared a standard coding book and guidelines for clearing the data for use by all participating centres as well as for international comparisons. At the request of some of the participating centres WHO staff visited centres; this helped to make the data comparable. National reports, the responsibility for which lies with each participating centre, are available or are being prepared for each survey. For many of the questions data were combined to produce derived variables (see Annex 4). The central data bank is held by WHO in Copenhagen, but the data themselves are the property of the participating centres that collected and submitted the information. These data also include information on the elderly in long-stay institutions at the time of the survey who have not been included in this report.

In this report the data for non-institutionalized persons are presented in a number of ways and efforts have been made to make the information as standardized, and therefore as comparable, as possible. Use has been made of minimums, maximums, and quartiles in order to present an overview of the large amount of data available from the surveys. One of the main objectives of the study was to present the information for the five-year age groups separately. With 16 centres each providing 5 or 6 age groups and furnishing data for men and women separately, there are 190 subgroups by age and sex. To present all such data is obviously unrealistic and to summarize it adequately is difficult.

The maximum and minimum figures presented on the figures may not all come from the same centre but are selected from all the data for each age and sex subgroup separately so as to give the range. The quartile figures used in the figures are the upper and lower quartiles. A quarter of the observations lie above the upper quartile and a quarter below the lower quartile; half lie between the two quartiles. In this report the quartiles have been calculated mathematically. On many of the figures the results from individual centres have been superimposed on the range and quartiles. The reasons for the selection of such individual centres varies; sometimes they are typical results from an individual centre, sometimes they are high or low figures, and sometimes they show an unusual trend.

In presenting the data the percentages only are given in order to save space. The absolute numbers of the interviewed persons by age group and sex in different study populations are given in Table 4.

Selected Background Variables

In addition to the main characteristics of the study areas, certain background variables that may be of relevance in the interpretation of findings were considered.

Marital status

There were many more married men than women in all the age groups. This difference shows a dramatic increase with age (Table 10). Whereas in age groups below 75 years the percentage of married women was somewhat more than 50% of that of married men, among those 85–89 years of age the ratio of married men to married women was often more than 10:1. There was also marked variation among individual samples. In the age group 60–64 the lowest percentage of married men was found in Brussels (70%), the highest in Kuwait (96%). In the oldest group (85–89 years) the lowest percentage of married men was 40% and the highest 75%.

Widowed women preponderated over men in all the ages studied, and there was a systematic increase with age in both sexes (Table 11). The variation between samples was larger than in regard to married persons. In the age group 60–64, the lowest proportion of widowed women was found in Midi-Pyrénées (8%) and West Amiata (12%), the highest in Kiev (47%) and Belgrade (36%). In the oldest age group the corresponding figures were 50% in Upper Normandy and 91% in Leuven and Kiev respectively.

The proportion of never-married persons did not show any consistent age trend (Table 12). However, in general there were more never-married women than men. There were also marked differences between the samples.

Occupation

As was mentioned earlier, the study areas varied in regard to urban/rural characteristics. This is well illustrated by the main occupation in an individual's life (Table 13). In the majority of the areas studied an occupation that involved physical or manual work was the most frequent. An occupation of this kind was reported by more than 50% of men from Brussels, Berlin (West), Tampere, Upper Normandy, Florence, Low Ombrone, Kuwait, Bialystok, and Zagreb. This applies with few exceptions to all the age groups. Agriculture was a far less frequent occupation, the highest percentages being reported in rural Greece, West Amiata, Low Ombrone, Midi-Pyrénées, and Leuven (Table 14).

There was no consistent age trend in regard to occupation, and women showed a generally similar occupational pattern to men in this broad classification.

Education

There were three questions in relation to education. The most suitable for intercentre comparisons seems to be the number of years of full-time education (item 16, Annex 4). The extreme groups were selected for presentation here, one consisting of those having less than 4 years and the second

with more than 12 years of full-time education (Tables 15 and 16). The proportion of persons with the lowest level of education is highest in agricultural areas. There is a tendency for the prevalence of this level of education to increase from the youngest to the oldest age group; this is probably a cohort phenomenon. In general, the percentage of women with less than 5 years of education is higher than that for men.

The highest level of education was more frequently found in predominantly urban samples. In some of the samples the proportion of persons with more than 12 years of full-time education was more than one fifth (Belgrade, Zagreb) or even more than one third (Bucharest, Kiev). In some areas there is a slight tendency for this group to be more frequently represented in the higher ages. The percentage of women in this category is lower than that of men.

Men have had more vocational education lasting for 2 years or more than women, but between the younger age groups and the older ones the difference is not as clear as for basic education. Just as in the case of basic education, there are considerable regional differences in vocational education. In Belgrade and Bucharest the proportions of those who have had 2 years or more vocational training are the highest, in Belgrade 17-61% and in Bucharest 21-60%. Vocational education is very rare in the age groups in question in Low Ombrone, West Amiata, rural Greece, Kuwait, and Zagreb (Table 17).