

4. The Scale of Attitude toward Death (ATD)

This 31-item scale measures multidimensional attitude toward death using 5-point options. Five subscales and extra 2 indices of the scale are the following: fear of death, intention to live out own life, meaning of death for life, belief in existence of afterlife, approval of death with dignity, experience of thinking over death, and frequency of thinking about death. Higher scores indicate stronger tendency of each subscale or index.

ATD subscale 1: fear of death (9 items. possible range 9-45)

	40~49yr			50~59yr			60~69yr			70~79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	23.1	7.6	291	22.5	6.8	280	20.6	7.6	275	20.6	7.5	273	21.7	7.5	1119
Female	23.3	8.0	276	21.1	6.8	271	21.0	7.4	272	20.8	7.6	256	21.6	7.5	1075
Total	23.2	7.8	567	21.8	6.9	551	20.8	7.5	547	20.7	7.6	529	21.7	7.5	2194

ATD subscale 2: intention to live out own life (5 items. possible range 5-25)

	40~49yr			50~59yr			60~69yr			70~79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	20.9	3.1	291	21.0	3.4	280	21.2	3.6	278	21.6	3.7	275	21.1	3.5	1124
Female	21.4	2.8	277	21.3	3.1	271	21.8	2.9	275	22.4	3.1	263	21.7	3.0	1086
Total	21.1	3.0	568	21.1	3.2	551	21.5	3.3	553	22.0	3.5	538	21.4	3.3	2210

ATD subscale 3: belief in existence of afterlife (4 items. possible range 4-20)

	40~49yr			50~59yr			60~69yr			70~79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	10.1	3.9	291	9.3	3.9	280	9.0	3.8	276	9.3	4.1	272	9.4	3.9	1119
Female	11.2	3.7	276	10.6	3.7	271	10.7	3.7	274	10.7	4.0	260	10.8	3.8	1081
Total	10.6	3.8	567	10.0	3.8	551	9.9	3.9	550	10.0	4.1	532	10.1	3.9	2200

ATD subscale 4: meaning of death for life (5 items. possible range 5-25)

	40~49yr			50~59yr			60~69yr			70~79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	15.0	3.9	291	15.0	3.8	279	15.6	3.9	275	16.1	3.7	269	15.4	3.9	1114
Female	15.0	3.5	277	15.1	3.7	268	16.2	3.6	271	16.3	3.6	257	15.7	3.6	1073
Total	15.0	3.7	568	15.0	3.8	547	15.9	3.7	546	16.2	3.7	526	15.5	3.8	2187

ATD subscale 5: approval of death with dignity (4 items, possible range 4-20)

	40~49yr			50~59yr			60~69yr			70~79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	14.9	2.5	291	14.7	2.7	280	15.3	2.7	276	14.8	2.8	273	14.9	2.7	1120
Female	15.5	2.6	277	15.9	2.6	272	16.3	2.3	274	15.7	2.6	260	15.8	2.5	1083
Total	15.2	2.6	568	15.3	2.7	552	15.8	2.6	550	15.2	2.8	533	15.4	2.7	2203

ATD item 29: experience of thinking over death (1 item, possible range 1-5)

	40~49yr			50~59yr			60~69yr			70~79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	2.6	1.1	291	2.4	1.1	280	2.2	1.2	280	2.5	1.3	275	2.4	1.2	1126
Female	2.6	1.1	277	2.5	1.2	272	2.4	1.2	277	2.3	1.3	264	2.5	1.2	1090
Total	2.6	1.1	568	2.4	1.2	552	2.3	1.2	557	2.4	1.3	539	2.4	1.2	2216

ATD item 30: frequency of thinking about death (1 item, possible range 1-5)

	40~49yr			50~59yr			60~69yr			70~79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	1.9	0.9	291	1.8	0.9	280	1.8	1.0	280	2.1	1.1	275	1.9	1.0	1126
Female	2.0	0.9	277	1.9	1.0	272	2.1	1.1	277	2.0	1.1	264	2.0	1.0	1090
Total	1.9	0.9	568	1.9	1.0	552	1.9	1.0	557	2.0	1.1	539	2.0	1.0	2216

3) Social Relations

1. Social support from friends and acquaintances

Social support from friends and acquaintances is measured using 10-item scale (5 options, possible range 10-50). Higher score of the scale indicates higher perception of support from his/her social network excluding family.

Social support from friends and acquaintances (total score of 10 items, possible range 10-50)

	40~49yr			50~59yr			60~69yr			70~79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	28.1	5.5	289	29.5	6.1	282	30.0	6.3	283	29.2	5.8	281	29.2	6.0	1135
Female	29.9	5.2	281	31.0	5.4	278	30.9	5.6	281	30.8	6.2	275	30.7	5.6	1115
Total	29.0	5.5	570	30.2	5.8	560	30.5	6.0	564	30.0	6.1	556	29.9	5.9	2250

2. Social Exchange with Family Members

This scale assesses three functional properties of social exchange (emotional support, instrumental support, and negative exchange) using yes/no options. Items for negative exchange measure the interference and criticism dimensions of social interactions. Higher scores of the scale means higher perception of each property.

Social exchange with family members, total score of 3 subscales (12 items, possible range 0-12)

	40~49yr			50~59yr			60~69yr			70~79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	9.5	2.0	290	9.5	1.9	280	9.4	1.7	281	8.9	1.9	281	9.3	1.9	1132
Female	9.7	1.7	280	9.4	1.9	277	9.2	1.9	280	8.8	2.0	277	9.3	1.9	1114
Total	9.6	1.8	570	9.4	1.9	557	9.3	1.8	561	8.9	2.0	558	9.3	1.9	2246

Social exchange with family members, subscale 1: emotional support (4 items, possible range 0-4)

	40~49yr			50~59yr			60~69yr			70~79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	3.6	0.9	290	3.7	0.8	280	3.8	0.6	281	3.6	0.8	281	3.7	0.8	1132
Female	3.7	0.7	281	3.8	0.7	279	3.8	0.7	281	3.7	0.8	278	3.7	0.7	1119
Total	3.7	0.8	571	3.7	0.8	559	3.8	0.7	562	3.7	0.8	559	3.7	0.8	2251

Social exchange with family members, subscale 2: instrumental support (4 items, possible range 0-4)

	40~49yr			50~59yr			60~69yr			70~79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	3.7	0.8	290	3.7	0.7	282	3.7	0.6	283	3.7	0.7	281	3.7	0.7	1136
Female	3.6	0.8	280	3.6	0.8	279	3.7	0.7	281	3.6	0.9	279	3.6	0.8	1119
Total	3.6	0.8	570	3.7	0.8	561	3.7	0.7	564	3.6	0.8	560	3.7	0.7	2255

Social exchange with family members, subscale 3: negative exchange (4 items, possible range 0-4)

	40~49yr			50~59yr			60~69yr			70~79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	2.2	1.2	290	2.1	1.3	281	1.9	1.3	283	1.6	1.3	282	2.0	1.3	1136
Female	2.3	1.3	281	2.0	1.3	277	1.7	1.4	282	1.5	1.3	280	1.9	1.4	1120
Total	2.3	1.3	571	2.0	1.3	558	1.8	1.4	565	1.5	1.3	562	1.9	1.3	2256

4) Subjective Well-being

1. The Life Satisfaction Index-K (LSI-K)

The LSI-K has 9 items with 2 or 3 point response format to measure overall subjective well-being. This scale also consists of 3 subscales include: satisfaction with life as a whole, psychological stability, and evaluation of own aging. Response to 3-point scale is dichotomized when calculating total score, so that the possible total score range is 0 to 9. Higher score indicates higher life satisfaction.

LSI-K: total score of 3 subscales (9 items. possible range 0-9)

	40~49yr			50~59yr			60~69yr			70~79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	5.1	1.9	290	5.3	2.0	282	5.1	2.0	279	4.7	2.2	281	5.0	2.0	1132
Female	5.3	1.9	280	5.3	2.0	278	5.2	2.2	282	4.5	2.1	280	5.1	2.1	1120
Total	5.2	1.9	570	5.3	2.0	560	5.2	2.1	561	4.6	2.2	561	5.1	2.0	2252

LSI-K subscale 1: satisfaction with life as a whole (4 items. possible range 0-4)

	40~49yr			50~59yr			60~69yr			70~79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	1.8	1.1	290	1.9	1.2	282	2.1	1.2	279	2.1	1.2	281	1.9	1.2	1132
Female	1.9	1.2	281	2.1	1.2	278	2.3	1.2	283	2.2	1.2	281	2.1	1.2	1123
Total	1.8	1.1	571	2.0	1.2	560	2.2	1.2	562	2.1	1.2	562	2.0	1.2	2255

LSI-K subscale 2: psychological stability (3 items. possible range 0-3)

	40~49yr			50~59yr			60~69yr			70~79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	1.7	0.9	291	1.7	0.9	282	1.7	0.9	281	1.6	0.9	282	1.7	0.9	1136
Female	1.7	0.9	280	1.7	1.0	279	1.6	0.9	284	1.3	1.0	281	1.6	1.0	1124
Total	1.7	0.9	571	1.7	0.9	561	1.6	0.9	565	1.5	1.0	563	1.6	0.9	2260

LSI-K subscale 3: evaluation of own aging (2 items. possible range 0-2)

	40~49yr			50~59yr			60~69yr			70~79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	1.6	0.6	291	1.6	0.6	282	1.3	0.7	282	1.1	0.7	282	1.4	0.7	1137
Female	1.7	0.6	282	1.6	0.6	279	1.4	0.7	283	1.0	0.7	281	1.4	0.7	1125
Total	1.6	0.6	573	1.6	0.6	561	1.3	0.7	565	1.0	0.7	563	1.4	0.7	2262

2. The Satisfaction with Life Scale (SWLS)

This scale includes 5 items (7 options) to tap global life satisfaction. People satisfied with their own life are supposed to indicate higher score on the scale.

Satisfaction with life scale (total score of 5 items, possible range 5-35)

	40~49yr			50~59yr			60~69yr			70~79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	20.2	5.1	291	21.3	5.6	282	21.8	5.9	283	21.9	5.5	282	21.3	5.5	1138
Female	20.1	5.3	282	20.6	5.5	279	22.2	5.8	283	22.1	5.8	281	21.3	5.7	1125
Total	20.2	5.2	573	21.0	5.5	561	22.0	5.9	566	22.0	5.6	563	21.3	5.6	2263

5) Stress-Related Factors

1. Stress Coping Scale

This scale includes 30 items (5 options) each of which except two items comes under one of the 7 subscales as follows: passive, selective ignoring, distancing, help-seeking, avoidance, positive coping, and suppression. Higher scores of the scale mean frequent use of the coping strategies.

Stress coping scale, total score of 7 subscales: (30 items. possible range 30-150)

	40~49yr			50~59yr			60~69yr			70~79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	72.1	10.3	290	72.6	11.3	281	72.9	11.6	280	72.7	12.1	277	72.6	11.3	1128
Female	74.0	10.7	277	73.6	11.2	273	76.6	11.4	279	75.6	13.3	276	74.9	11.7	1105
Total	73.1	10.5	567	73.1	11.2	554	74.7	11.6	559	74.1	12.8	553	73.7	11.6	2233

Stress coping scale, subscale 1: passive coping (8 items. possible range 8-40)

	40~49yr			50~59yr			60~69yr			70~79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	15.1	4.3	290	14.3	4.3	282	13.4	4.2	281	13.0	4.0	280	14.0	4.3	1133
Female	16.5	4.6	282	15.4	4.5	279	14.9	5.2	283	13.9	4.5	280	15.2	4.8	1124
Total	15.8	4.5	572	14.9	4.5	561	14.1	4.8	564	13.4	4.3	560	14.6	4.6	2257

Stress coping scale, subscale 2: selective ignoring (5 items. possible range 5-25)

	40~49yr			50~59yr			60~69yr			70~79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	14.7	3.3	290	15.5	3.7	282	16.3	3.9	283	16.9	4.2	282	15.8	3.9	1137
Female	15.4	3.5	281	15.8	3.5	279	17.4	3.8	284	18.1	4.6	281	16.7	4.0	1125
Total	15.0	3.4	571	15.6	3.6	561	16.9	3.9	567	17.5	4.5	563	16.3	4.0	2262

Stress coping scale, subscale 3: distancing (3 items. possible range 3-15)

	40~49yr			50~59yr			60~69yr			70~79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	7.3	2.4	290	7.8	2.3	282	8.5	2.5	282	8.7	2.6	279	8.1	2.5	1133
Female	7.4	2.5	282	7.8	2.4	277	8.5	2.5	282	8.7	2.7	279	8.1	2.6	1120
Total	7.3	2.5	572	7.8	2.4	559	8.5	2.5	564	8.7	2.7	558	8.1	2.5	2253

Stress coping scale, subscale 4: help-seeking (3 items, possible range 3-15)

	40~49yr			50~59yr			60~69yr			70~79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	7.6	2.1	291	7.4	2.1	282	7.3	2.0	283	7.2	2.1	282	7.4	2.1	1138
Female	8.5	2.1	282	8.3	2.1	278	8.4	2.4	284	7.8	2.6	280	8.2	2.3	1124
Total	8.1	2.2	573	7.8	2.1	560	7.8	2.3	567	7.5	2.4	562	7.8	2.3	2262

Stress coping scale, subscale 5: avoidance (3 items, possible range 3-15)

	40~49yr			50~59yr			60~69yr			70~79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	4.9	1.9	290	4.5	1.7	282	4.0	1.5	283	3.7	1.0	282	4.3	1.6	1137
Female	3.7	1.1	281	3.6	1.0	279	3.4	0.9	283	3.3	0.9	282	3.5	1.0	1125
Total	4.3	1.7	571	4.1	1.5	561	3.7	1.3	566	3.5	1.0	564	3.9	1.4	2262

Stress coping scale, subscale 6: positive coping (3 items, possible range 3-15)

	40~49yr			50~59yr			60~69yr			70~79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	8.9	2.0	290	9.4	2.0	281	9.5	2.3	283	9.7	2.4	281	9.4	2.2	1135
Female	8.7	2.0	280	9.3	2.3	278	9.8	2.4	283	9.6	2.7	281	9.3	2.4	1122
Total	8.8	2.0	570	9.3	2.2	559	9.6	2.4	566	9.7	2.6	562	9.4	2.3	2257

Stress coping scale, subscale 7: suppression (3 items, possible range 3-15)

	40~49yr			50~59yr			60~69yr			70~79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	8.9	2.1	291	8.9	2.2	282	9.1	2.4	283	9.1	2.5	281	9.0	2.3	1137
Female	9.1	2.3	282	8.9	2.3	277	9.3	2.4	284	9.4	3.0	280	9.2	2.5	1123
Total	9.0	2.2	573	8.9	2.2	559	9.2	2.4	567	9.2	2.7	561	9.1	2.4	2260

2. Life Events Checklist

This checklist contains 63 events selected from traditional checklists including Social Readjustment Scale (Holmes and Rahe, 1967). Participants are asked to check off or report the events they experienced in the lifetime and recent past (2 year prior to the assessment time). Total number of experienced events is calculated by summing up the responses to the list.

Total number of life events experienced through the life (possible range 0-63)

	40~49yr			50~59yr			60~69yr			70~79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	19.9	8.3	291	22.2	9.1	282	21.8	9.1	283	21.3	7.5	282	21.3	8.5	1138
Female	16.8	7.6	282	17.7	7.7	279	18.1	6.7	285	17.6	6.4	282	17.5	7.1	1128
Total	18.4	8.1	573	20.0	8.7	561	19.9	8.2	568	19.5	7.2	564	19.4	8.1	2266

Total number of life events experienced during the past two years (possible range 0-63)

	40~49yr			50~59yr			60~69yr			70~79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	5.6	3.9	291	5.7	4.1	282	5.2	3.6	283	3.7	2.6	282	5.0	3.7	1138
Female	5.1	3.7	282	5.1	3.6	279	4.2	2.8	285	3.2	2.3	282	4.4	3.2	1128
Total	5.3	3.8	573	5.4	3.9	561	4.7	3.3	568	3.4	2.5	564	4.7	3.5	2266

6) ADL Scales

1. The Tokyo Metropolitan Institute of Gerontology (TMIG) Index of Competence

This scale comprises thirteen items to measure Instrumental Activities of Daily Living (IADL). Each item has Yes (1)/No (0) response options. Higher score indicates higher level of competence in IADL.

TMIG index of competence: total score of 13 items (possible range 0-13)

	40~49yr			50~59yr			60~69yr			70~79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	12.2	1.1	290	12.2	1.3	281	12.2	1.3	281	12.3	1.2	281	12.2	1.2	1133
Female	12.6	0.9	282	12.7	0.7	278	12.4	1.0	284	12.1	1.4	280	12.4	1.0	1124
Total	12.4	1.0	572	12.5	1.1	559	12.3	1.1	565	12.2	1.3	561	12.3	1.1	2257

2. The Katz Index

This scale generates the index of one's ADL level. The index permits ranking of individuals according to adequacy of performance in six functions (bathing, dressing, going to toilet, transferring, continence, and feeding). Adequacy is expressed as a grade (A to G). Level A means overall independence in the functions, and the opposite pole is level G, which means general dependence in ADL. None of the participants in the first-wave sample were graded as level D to G.

Katz index

		40~49yr		50~59yr		60~69yr		70~79yr		Total	
		N	%	N	%	N	%	N	%	N	%
level A	Male	290	100.0	282	100.0	282	99.6	280	99.3	1134	99.7
	Female	282	100.0	277	99.6	282	98.9	277	98.2	1118	99.2
	Total	572	100.0	559	99.8	564	99.3	557	98.8	2252	99.5
level B	Male	0	0	0	0	1	0.4	2	0.7	3	0.3
	Female	0	0	0	0	3	1.1	5	1.8	8	0.7
	Total	0	0	0	0	4	0.7	7	1.2	11	0.5
level C	Male	0	0	0	0	0	0	0	0	0	0
	Female	0	0	1	0.4	0	0	0	0	1	0.1
	Total	0	0	1	0.2	0	0	0	0	1	0.0

7) Intelligence and Cognitive Function Scales

1. Wechsler Adult Intelligence Scale-Revised Short Forms (WAIS-R-SF)

This short form of WAIS-R provides cost-effective and useful estimates of intelligence particularly for elderly participants since their attention and motivation could diminish easily if testing becomes prolonged. WAIS-R-SF has the following four subtests: information, similarities, picture completion, and digit symbol. Estimated intelligence quotient (EIQ) is derived from all four subtests. Intelligence level of individuals are ranked according to EIQ scores as low ($EIQ < 80$), middle ($80 \leq EIQ < 120$), and high ($120 \leq EIQ$).

WAIS-R-SF: estimated total score with four-subtest full scale (possible range 6-76)

	40~49yr			50~59yr			60~69yr			70~79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	43.8	7.1	290	44.6	7.6	281	41.9	8.7	282	42.9	8.6	280	43.3	8.1	1133
Female	43.1	7.7	282	41.1	7.9	278	38.0	8.1	285	38.4	8.7	280	40.1	8.4	1125
Total	43.4	7.4	572	42.8	8.0	559	39.9	8.6	567	40.7	8.9	560	41.7	8.4	2258

WAIS-R-SF: estimated intelligence quotient (EIQ) with four-subtest full scale

	40~49yr			50~59yr			60~69yr			70~79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	106.3	13.4	290	107.8	12.8	281	103.3	14.3	282	104.8	13.6	280	105.5	13.6	1133
Female	105.3	13.9	282	101.9	13.7	278	96.9	13.0	285	97.4	14.0	280	100.4	14.1	1125
Total	105.8	13.7	572	104.9	13.5	559	100.1	14.0	567	101.1	14.3	560	103.0	14.1	2258

WAIS-R-SF: parameter of distribution by EIQ levels

		40~49yr		50~59yr		60~69yr		70~79yr		Total	
		N	%	N	%	N	%	N	%	N	%
low ($EIQ < 80$)	Male	5	1.7	8	2.8	12	4.3	10	3.6	35	3.1
	Female	14	5.0	15	5.4	26	9.1	30	10.7	85	7.6
	Total	19	3.3	23	4.1	38	6.7	40	7.1	120	5.3
middle ($81 \leq EIQ < 120$)	Male	237	81.7	226	80.4	225	79.8	222	79.3	910	80.3
	Female	230	81.6	237	85.3	246	86.3	229	81.8	942	83.7
	Total	467	81.6	463	82.8	471	83.1	451	80.5	1852	82.0
high ($120 \leq EIQ$)	Male	48	16.6	47	16.7	45	16.0	48	17.1	188	16.6
	Female	38	13.5	26	9.4	13	4.6	21	7.5	98	8.7
	Total	86	15.0	73	13.1	58	10.2	69	12.3	286	12.7

WAIS-R-SF subtest 1: information (29 items, possible range 0-29)

	40~49yr			50~59yr			60~69yr			70~79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	17.0	5.1	291	16.9	4.9	282	14.7	5.6	283	14.0	5.4	282	15.6	5.4	1138
Female	14.8	5.6	282	13.2	5.3	278	11.6	5.2	285	10.5	4.9	281	12.5	5.5	1126
Total	15.9	5.5	573	15.1	5.4	560	13.1	5.6	568	12.3	5.5	563	14.1	5.7	2264

WAIS-R-SF subtest 2: similarities (14 items, possible range 0-28)

	40~49yr			50~59yr			60~69yr			70~79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	16.7	4.7	291	14.9	5.0	282	12.0	5.8	283	11.0	5.8	281	13.7	5.8	1137
Female	16.3	4.4	282	13.2	5.3	278	10.6	5.2	285	9.7	5.7	281	12.5	5.8	1126
Total	16.5	4.6	573	14.0	5.2	560	11.3	5.5	568	10.4	5.8	562	13.1	5.8	2263

WAIS-R-SF subtest 3: picture completion (21 items, possible range 0-21)

	40~49yr			50~59yr			60~69yr			70~79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	13.3	2.6	291	12.2	2.7	281	10.6	3.3	283	10.0	3.4	282	11.6	3.3	1137
Female	12.8	2.8	282	11.0	3.4	278	9.0	3.6	285	7.7	3.9	282	10.2	3.9	1127
Total	13.1	2.7	573	11.6	3.1	559	9.8	3.5	568	8.9	3.8	564	10.9	3.7	2264

WAIS-R-SF subtest 4: digit symbol (possible range 0-93)

	40~49yr			50~59yr			60~69yr			70~79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	64.4	10.3	290	55.9	12.2	281	45.4	11.8	282	37.8	10.3	281	51.0	15.1	1134
Female	68.6	11.2	282	56.8	11.5	278	44.0	10.7	285	36.2	9.9	281	51.4	16.5	1126
Total	66.5	10.9	572	56.3	11.9	559	44.7	11.3	567	37.0	10.2	562	51.2	15.8	2260

2. Mini Mental State Examination (MMSE)

The MMSE is a brief, easily-scored test for several cognitive functions. This scale comprises 11 questions concerning orientation in place and time, immediate and delayed recall of three words, attention and calculation, language and praxis, and visual construction. Only participants over 60 years old administer this scale because of the characteristic of the scale as a screening test for dementia.

MMSE: total score of 30 items (possible range 0-30. less than 60 years older unperformed)

	40~49yr			50~59yr			60~69yr			70~79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	-	-	0	-	-	0	27.5	2.4	281	27.0	2.3	281	27.3	2.4	562
Female	-	-	0	-	-	0	27.6	2.1	282	26.8	2.5	282	27.2	2.3	564
Total	-	-	0	-	-	0	27.5	2.2	563	26.9	2.4	563	27.2	2.4	1126

VIII. Visual and Auditory Examinations

VIII. Visual and Auditory Examinations

1) Visual system

1. Refraction

Spherical equivalent of refractive error in the right eye (Diopter)

Spherical equivalent of refractive error in the left eye (Diopter)

2. Visual acuity: near vision (33 cm), distant vision (5 m)

Presenting visual acuity - right eye

Presenting visual acuity - left eye

Best-corrected visual acuity - right eye

Best-corrected visual acuity - left eye

Presenting near vision - right eye

Presenting near vision - left eye

3. Kinetic visual acuity

Static visual acuity

Kinetic visual acuity

4. Stereoscopic vision

Stereo acuity - Titmus stereo test

Stereo acuity - TNO stereo test

5. Color perception

Correct answer in blue-yellow discrimination test (%)

Correct answer in red-green discrimination test (%)

6. Contrast sensitivity

Contrast sensitivity 1.5 (cycles/degree)

Contrast sensitivity 3 (cycles/degree)

Contrast sensitivity 6 (cycles/degree)

Contrast sensitivity 12 (cycles/degree)

Contrast sensitivity 18 (cycles/degree)

7. Visual field

Central threshold in visual field in the right eye (dB)

Central threshold in visual field in the left eye (dB)

Mean sensitivity in visual field in the right eye (dB)

Mean Sensitivity in visual field in the left eye (dB)

Visual field in the right eye

Visual field in the left eye

8. Intraocular pressure

Intraocular pressure in the right eye (mmHg)

Intraocular pressure in the left eye (mmHg)

9. Quantitative test of lens opacity

Anterior subcapsular opacification in the right eye (scattering intensity) (cct)

Anterior subcapsular opacification in the left eye (scattering intensity) (cct)

Nuclear opacification in the right eye (scattering intensity) (cct)

Nuclear opacification in the left eye (scattering intensity) (cct)

10. Retinal camera

Cup-disc ratio of optic disc in the right eye

Cup-disc ratio of optic disc in the left eye

Fundus photography in the right eye - diabetic retinopathy

Fundus photography in the right eye - arteriosclerosis (Keith-Wagener grading)

Fundus photography in the right eye - macular degeneration

Fundus photography in the left eye - diabetic retinopathy

Fundus photography in the left eye - arteriosclerosis (Keith-Wagener grading)

Fundus photography in the left eye - macular degeneration

11. Cornea

Corneal thickness - right eye

Corneal thickness - left eye

Endothelial cell density of cornea - right eye

Endothelial cell density of cornea - left eye

2) Auditory system

1. Pure-tone audiometry

Air conduction thresholds at 500,1000,2000,4000,8000Hz (dBHL)

Bone conduction thresholds at 500,1000,2000,4000Hz (dBHL)

2. Impedance audiometry

Single frequency tympanometry

Tympanometric peak pressure in the single frequency tympanogram
at 226Hz (daPa)

Static compliance in the single frequency tympanogram at 226Hz (ml)

Multifrequency tympanometry

Middle ear resonance frequency (Hz)

1. Refraction

Autorefractometry was obtained with the NIDEK-ARK700A.
 Refractive errors, in spherical equivalent, were assessed.

Spherical Equivalent of Refractive Error in the Right Eye (Diopter)

	40-49yr			50-59yr			60-69yr			70-80yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	-1.33	1.43	291	-1.00	1.46	281	-0.21	1.18	279	-0.18	1.29	271	-0.69	1.43	1122
Female	-1.18	1.41	282	-0.67	1.33	279	-0.11	1.38	284	-0.06	1.35	275	-0.50	1.44	1120
Total	-1.25	1.42	573	-0.83	1.40	560	-0.16	1.29	563	-0.12	1.32	546	-0.60	1.44	2242

Spherical Equivalent of Refractive Error in the Left Eye (Diopter)

	40-49yr			50-59yr			60-69yr			70-80yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	-1.29	1.40	290	-0.91	1.43	279	-0.13	1.01	282	-0.11	1.25	273	-0.62	1.38	1124
Female	-1.26	1.46	282	-0.73	1.45	278	-0.07	1.27	282	0.02	1.22	272	-0.51	1.45	1114
Total	-1.28	1.43	572	-0.82	1.44	557	-0.10	1.15	564	-0.05	1.24	545	-0.57	1.42	2238

2. Visual acuity: near vision (33 cm), distant vision (5 m)

Distant visual acuity was measured for each eye with a Landolt broken ring at 5m.

Presenting visual acuity was measured with the participant's current distance correction; when distance correction was not used, the unaided distant visual acuity was measured.

Subsequently, best-corrected visual acuity for each eye was determined after objective autorefractometry and subjective refinement.

Presenting near vision was measured with the participant's current near correction for each eye with a Landolt broken ring designed for use at 33 cm; when near correction was not used, the unaided near vision was measured.

Log VA in the Right Eye with own Habitual Glasses

	40-49yr			50-59yr			60-69yr			70-80yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	-0.04	0.24	291	-0.05	0.26	282	-0.13	0.27	282	-0.21	0.28	282	-0.11	0.27	1137
Female	-0.07	0.30	282	-0.10	0.26	279	-0.20	0.33	285	-0.28	0.35	278	-0.16	0.33	1124
Total	-0.05	0.27	573	-0.08	0.27	561	-0.17	0.31	567	-0.24	0.32	560	-0.13	0.30	2261

Log VA in the Left Eye with own Habitual Glasses

	40-49yr			50-59yr			60-69yr			70-80yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	-0.02	0.21	290	-0.05	0.27	282	-0.09	0.21	283	-0.22	0.31	282	-0.10	0.27	1137
Female	-0.09	0.30	281	-0.12	0.29	279	-0.17	0.29	284	-0.29	0.37	281	-0.17	0.32	1125
Total	-0.05	0.26	571	-0.08	0.28	561	-0.13	0.26	567	-0.26	0.34	563	-0.13	0.30	2262

Log Best-corrected VA in the Right Eye

	40-49yr			50-59yr			60-69yr			70-80yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.06	0.13	291	0.04	0.15	281	-0.03	0.19	282	-0.11	0.22	282	-0.01	0.19	1136
Female	0.05	0.19	282	0.04	0.11	279	-0.06	0.22	285	-0.16	0.27	278	-0.03	0.22	1124
Total	0.06	0.16	573	0.04	0.13	560	-0.04	0.21	567	-0.13	0.25	560	-0.02	0.21	2260

Log Best-corrected VA in the Left Eye

	40-49yr			50-59yr			60-69yr			70-80yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.07	0.10	290	0.03	0.18	281	-0.01	0.17	283	-0.12	0.26	282	-0.01	0.20	1136
Female	0.05	0.16	282	0.02	0.18	279	-0.06	0.24	285	-0.16	0.28	280	-0.04	0.24	1126
Total	0.06	0.14	572	0.03	0.18	560	-0.04	0.21	568	-0.14	0.27	562	-0.02	0.22	2262

Log Near Vision in the Right Eye with own Habitual Glasses

	40-49yr			50-59yr			60-69yr			70-80yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	-0.13	0.20	289	-0.25	0.25	280	-0.27	0.24	282	-0.34	0.25	280	-0.25	0.25	1131
Female	-0.16	0.21	280	-0.25	0.22	279	-0.33	0.28	281	-0.35	0.29	275	-0.27	0.26	1115
Total	-0.14	0.21	569	-0.25	0.23	559	-0.30	0.26	563	-0.35	0.27	555	-0.26	0.26	2246

Log Near Vision in the Left Eye with own Habitual Glasses

	40-49yr			50-59yr			60-69yr			70-80yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	-0.11	0.18	288	-0.24	0.28	280	-0.25	0.24	283	-0.33	0.28	281	-0.23	0.26	1132
Female	-0.15	0.26	282	-0.23	0.23	279	-0.30	0.23	280	-0.34	0.30	280	-0.25	0.27	1121
Total	-0.13	0.22	570	-0.23	0.25	559	-0.28	0.24	563	-0.33	0.29	561	-0.24	0.26	2253

Log Best-corrected Near Vision in the Right Eye

	40-49yr			50-59yr			60-69yr			70-80yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	-0.06	0.10	254	-0.09	0.11	248	-0.13	0.16	228	-0.18	0.18	239	-0.11	0.15	969
Female	-0.06	0.08	240	-0.08	0.09	232	-0.13	0.16	233	-0.18	0.18	230	-0.11	0.14	935
Total	-0.06	0.09	494	-0.08	0.10	480	-0.13	0.16	461	-0.18	0.18	469	-0.11	0.14	1904

Log Best-corrected Near Vision in the Left Eye

	40-49yr			50-59yr			60-69yr			70-80yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	-0.05	0.08	253	-0.09	0.17	248	-0.11	0.12	229	-0.17	0.18	241	-0.10	0.15	971
Female	-0.06	0.13	241	-0.08	0.13	232	-0.11	0.16	232	-0.20	0.26	232	-0.11	0.19	937
Total	-0.05	0.11	494	-0.08	0.15	480	-0.11	0.14	461	-0.18	0.22	473	-0.11	0.17	1908