7. APPENDICES

7.1 APPENDIX A: DESCRIPTIVES OF CENTRAL CONSTRUCTS

Table A 1: Basic distributions of health behaviors in young (16-35) and middle aged/older (36-90) participants

		M	SD	Min	Max	Skew (SE)	Kurt (SE)
Nutrition: low fat							
T1	Total sample	2.41	.59	1	4	.22 (.10)	-.12 (.20)
	Younger sample	2.26	.52	1	4	.13 (.12)	.08 (.23)
	Older sample	2.81	.57	1	4	-.02 (.19)	-.44 (.37)
T2	Total sample	2.49	.57	1	4	.07 (.10)	.02 (.20)
	Younger sample	2.38	.54	1	4	.14 (.12)	.33 (.24)
	Older sample	2.77	.54	1	4	-.18 (.19)	.01 (.38)
							$F(1,543) = 20.28, p < .001$
Nutrition: high fiber							
T1	Total sample	2.52	.63	1	4	.21 (.10)	-.23 (.20)
	Younger sample	2.36	.57	1	4	.22 (.12)	.13 (.23)
	Older sample	2.96	.58	1	4	-.01 (.19)	-.72 (.37)
T2	Total sample	2.58	.63	1	4	.15 (.10)	-.13 (.20)
	Younger sample	2.45	.57	1	4	.11 (.12)	-.13 (.24)
	Older sample	2.89	.65	1	4	-.12 (.19)	-.44 (.38)
							$F(1,542) = 5.06, p < .05$;
Physical activity							
T1	Total sample	5.01	4.85	0.0	35.0	1.94 (.10)	6.66 (.20)
	Younger sample	5.43	5.07	0.0	35.0	1.95 (.12)	6.74 (.23)
	Older sample	3.75	3.80	0.0	20.5	1.47 (.19)	2.76 (.39)
T2	Total sample	4.92	5.14	0.0	35.0	2.35 (.10)	8.90 (.20)
	Younger sample	5.33	5.24	0.0	35.0	2.17 (.12)	7.85 (.24)
	Older sample	3.92	4.73	0.0	35.0	3.10 (.20)	14.64 (.39)
							$F(1,519) = .18$, n.s.
Alcohol consumption							
T1	Total sample	38.93	107.34	0.0	714.0	4.41 (.11)	22.99 (.22)
	Younger sample	42.09	103.19	0.0	714.0	4.27 (.13)	20.63 (.25)
	Older sample	28.07	60.29	0.0	292.0	2.75 (.24)	7.53 (.47)
T2	Total sample	43.35	110.85	0.0	796.0	4.56 (.12)	23.72 (.24)
	Younger sample	42.58	109.08	0.0	796.0	4.55 (.13)	23.73 (.26)
	Older sample	47.53	120.61	0.0	796.0	4.57 (.28)	24.03 (.55)
							$F(1,342) = .01$, n.s.
Cigarette consumption							
T1	Total sample	13.78	5.92	1.0	30	.23 (.20)	-.57 (.39)
	Younger sample	13.94	5.92	1.0	30	.31 (.22)	-.58 (.43)
	Older sample	13.12	5.79	1.0	20	-.36 (.46)	-.90 (.90)
T2	Total sample	13.69	6.36	1.0	30	.18 (.19)	-.50 (.39)
	Younger sample	13.67	6.28	1.0	30	.13 (.21)	-.56 (.42)
	Older sample	14.14	6.94	2.0	30	.32 (.50)	-.03 (.92)
							$F(1,123) = 1.49$, n.s.

Table A 2: Basic distributions of health cognitions in young (16-35) and middle aged/older (36-90) participants

		M	SD	Min	Max	Skew (SE)	Kurt (SE)
Subjective health							
T1	Total sample	3.24	.75	1	5	-.01 (.09)	.66 (.18)
	Younger sample	3.34	.73	1	5	.24 (.11)	.05 (.22)
	Older sample	3.02	.75	1	5	-.53 (.17)	1.42 (.34)
T2	Total sample	3.24	.71	1	5	.14 (.09)	.86 (.19)
	Younger sample	3.31	.69	2	5	.47 (.11)	.25 (.22)
	Older sample	3.07	.75	1	5	-.41 (.17)	1.31 (.34)
							F(1,684) =.01, n.s.
Risk perception							
T1	Total sample	3.58	1.29	1	7	-.06 (.11)	.03 (.21)
	Younger sample	3.46	1.29	1	7	-.01 (.13)	.03 (.25)
	Older sample	3.89	1.25	1	7	-.14 (.20)	-.22 (.40)
T2	Total sample	3.73	1.25	1	7	-.36 (.11)	.25 (.21)
	Younger sample	3.61	1.26	1	7	-.32 (.13)	.23 (.25)
	Older sample	4.02	1.16	1	7	-.51 (.20)	-.34 (.40)
							F(1,451) = 2.47, n.s.
Outcome expectancies: nutrition							
T1	Total sample	2.79	.66	1	4	-.57 (.10)	.37 (.20)
	Younger sample	2.75	.64	1	4	-.58 (.12)	.53 (.23)
	Older sample	2.91	.70	1	4	-.71 (.19)	.23 (.38)
T2	Total sample	2.82	.60	1	4	-.54 (.10)	.73 (.20)
	Younger sample	2.78	.59	1	4	-.63 (.12)	1.07 (.24)
	Older sample	2.90	.62	1	4	-.34 (.19)	-.15 (.38)
							F(1,534) = .15, n.s.
Outcome expectancies: physical activity							
T1	Total sample	3.32	.53	1	4	-.84 (.10)	1.23 (.20)
	Younger sample	3.31	.52	1	4	-.52 (.12)	.06 (.23)
	Older sample	3.36	.58	1	4	-1.51 (.19)	3.50 (.38)
T2	Total sample	3.29	.54	1	4	-.70 (.10)	.92 (.20)
	Younger sample	3.28	.54	1	4	-.49 (.12)	.17 (.24)
	Older sample	3.31	.57	1	4	-1.21 (.20)	2.87 (.40)
							F(1,517) = .75, n.s.
Outcome expectancies: alcohol							
T1	Total sample	3.00	.88	1	4	-.76 (.10)	-.05 (.22)
	Younger sample	3.06	.83	1	4	-.82 (.12)	.21 (.25)
	Older sample	2.74	.98	1	4	-.44 (.25)	-.78 (.49)
T2	Total sample	2.94	.84	1	4	-.73 (.12)	.05 (.23)
	Younger sample	2.93	.84	1	4	-.71 (.13)	.06 (.26)
	Older sample	2.96	.87	1	4	-.85 (.28)	-.11 (.55)
							F(1,375) = 1.06, n.s.
Outcome expectancies: smoking							
T1	Total sample	3.30	.60	1	4	-.62 (.19)	.07 (.38)
	Younger sample	3.31	.62	1	4	-.68 (.21)	-.10 (.42)
	Older sample	3.23	.48	1	4	-.11 (.46)	.23 (.88)
T2	Total sample	3.17	.67	1	4	-.73 (.19)	.69 (.37)
	Younger sample	3.16	.70	1	4	-.76 (.20)	.55 (.40)
	Older sample	3.22	.48	1	4	-.47 (.50)	-.81 (.97)
							F(1,138) = 2.67, n.s

Table A 2 (continued): Basic distributions of health cognitions in young (16-35) and middle aged/older (36-90) participants

		M	SD	Min	Max	Skew (SE)	Kurt (SE)
Action self-efficacy: nutrition							
T1	Total sample	2.64	.73	1	4	-.15 (.10)	-.20 (.20)
	Younger sample	2.57	.73	1	4	-.14 (.12)	-.17 (.23)
	Older sample	2.81	.71	1	4	-.17 (.19)	-.29 (.38)
T2	Total sample	2.60	.70	1	4	-.18 (.10)	-.19 (.20)
	Younger sample	2.56	.69	1	4	-.16 (.12)	-.10 (.24)
	Older sample	2.71	.72	1	4	-.25 (.20)	-.30 (.39)
							F(1,525) =.89, n.s.
Coping self-efficacy: nutrition							
T1	Total sample	2.62	.71	1	4	-.19 (.10)	-.09 (.20)
	Younger sample	2.55	.69	1	4	-.14 (.12)	-.04 (.23)
	Older sample	2.80	.73	1	4	-.41 (.19)	-.09 (.38)
T2	Total sample	2.57	.68	1	4	-.03 (.10)	-.14 (.20)
	Younger sample	2.51	.68	1	4	.05 (.12)	-.01 (.24)
	Older sample	2.73	.67	1	4	-.02 (.20)	-.35 (.39)
							F(1,525) = 1.44, n.s.
Action self-efficacy: physical activity							
T1	Total sample	3.16	.74	1	4	-.73 (.10)	.25 (.20)
	Younger sample	3.12	.72	1	4	-.57 (.12)	.02 (.23)
	Older sample	3.27	.75	1	4	-1.20 (.19)	1.31 (.39)
T2	Total sample	3.05	.75	1	4	-.61 (.10)	.10 (.20)
	Younger sample	3.01	.73	1	4	-.42 (.12)	-.18 (.24)
	Older sample	3.16	.79	1	4	-1.12 (.20)	-.14 (.40)
							$F(1,511) = 7.05$, $p < .01$.
Coping self-efficacy: physical activity							
T1	Total sample	2.68	.63	1	4	-.52 (.10)	.85 (.20)
	Younger sample	2.63	.58	1	4	-.51 (.12)	.99 (.23)
	Older sample	2.81	.73	1	4	-.76 (.19)	.75 (.38)
T2	Total sample	2.66	.59	1	4	-.33 (.10)	.73 (.20)
	Younger sample	2.64	.56	1	4	-.18 (.12)	.71 (.24)
	Older sample	2.70	.67	1	4	-.64 (.19)	.70 (.39)
							F(1,538) = .14, n.s.
Action self-efficacy: alcohol							
T1	Total sample	2.94	.92	1	4	-.43 (.11)	-.85 (.22)
	Younger sample	2.96	.91	1	4	-.41 (.12)	-.86 (.25)
	Older sample	2.87	.99	1	4	-.48 (.26)	-.92 (.52)
T2	Total sample	2.84	.87	1	4	-.37 (.12)	-.58 (.23)
	Younger sample	2.87	.88	1	4	-.39 (.13)	-.59 (.26)
	Older sample	2.75	.83	1	4	-.36 (.28)	-.35 (.55)
							F(1,367) = 1.87, n.s.
Action self-efficacy: smoking							
T1	Total sample	2.42	.85	1	4	.06 (.19)	-.64 (.38)
	Younger sample	2.35	.86	1	4	.18 (.21)	-.60 (.42)
	Older sample	2.73	.68	1	4	-.48 (.46)	.42 (.89)
T2	Total sample	2.46	.81	1	4	.13 (.19)	-.54 (.37)
	Younger sample	2.44	.80	1	4	.16 (.20)	-.48 (.40)
	Older sample	2.56	.82	1	4	-.12 (.49)	-.49 (.95)
							F(1,138) = 1.24, n.s

Table A 2 (continued): Basic distributions of health cognitions in young (16-35) and middle aged/older (36-90) participants

		M	SD	Min	Max	Skew (SE)	Kurt (SE)
Coping self-efficacy: smoking							
T1	Total sample	2.50	.89	1	4	-.08 (.19)	-.79 (.38)
	Younger sample	2.41	.92	1	4	.08 (.21)	-.88 (.42)
	Older sample	2.87	.53	1	4	-.13 (.46)	.52 (.89)
T2	Total sample	2.58	.87	1	4	-.10 (.18)	-.68 (.37)
	Younger sample	2.54	.87	1	4	-.10 (.20)	-.72 (.40)
	Older sample	2.70	.79	1	4	.02 (.49)	-.21 (.95)
							$F(1,138) = 1.58$, n.s.
Intention to adopt better nutrition							
T1	Total sample	3.94	1.35	1	7	-.08 (.10)	.02 (.18)
	Younger sample	3.79	1.30	1	7	-.06 (.12)	.10 (.23)
	Older sample	4.32	1.43	1	7	-.27 (.19)	.03 (.37)
T2	Total sample	4.69	1.06	1	7	-.24 (.09)	1.36 (.18)
	Younger sample	4.61	1.02	1	7	-.34 (.11)	1.68 (.22)
	Older sample	4.90	1.12	1	7	-.16 (.17)	.74 (.34)
							$F(1,613) = 158.02$, $p < .001$
Intention to be physically active							
T1	Total sample	4.61	1.94	1	7	-.57 (.10)	-.59 (.20)
	Younger sample	4.48	1.95	1	7	-.51 (.12)	-.70 (.23)
	Older sample	4.93	1.89	1	7	-.75 (.19)	-.21 (.37)
T2	Total sample	4.76	1.50	1	7	-.60 (.09)	.54 (.18)
	Younger sample	4.65	1.47	1	7	-.53 (.11)	.52 (.22)
	Older sample	5.03	1.53	1	7	-.81 (.17)	.88 (.34)
							$F(1,613) = 2.29$, *n.s.*
Intention to limit alcohol							
T1	Total sample	3.73	1.90	1	7	.01 (.10)	-.87 (.20)
	Younger sample	3.69	1.93	1	7	-.06 (.12)	-.91 (.23)
	Older sample	3.87	1.84	1	7	-.14 (.19)	.72 (.37)
T2	Total sample	4.07	1.58	1	7	-.17 (.09)	-.03 (.18)
	Younger sample	4.03	1.61	1	7	-.13 (.11)	-.13 (.22)
	Older sample	4.16	1.51	1	7	-.27 (.17)	.32 (.34)
							$F(1,613) = 14.90$, $p < .001$
Intention to quit smoking							
T1	Total sample	2.90	2.04	1	7	.69 (.19)	-.82 (.38)
	Younger sample	2.62	1.93	1	7	.92 (.21)	-.40 (.42)
	Older sample	4.32	2.10	1	7	-.28 (.46)	-.83 (.90)
T2	Total sample	3.76	1.81	1	7	.01 (.19)	-.66 (.37)
	Younger sample	3.72	1.83	1	7	.09 (.20)	-.72 (.40)
	Older sample	3.95	1.70	1	7	-.37 (.49)	.27 (.95)
							$F(1,155) = 29.02$, $p < .001$
Action planning: nutrition							
T1	Total sample	2.26	.92	1	4	.03 (.10)	-1.00 (.20)
	Younger sample	2.13	.89	1	4	.13 (.12)	-.99 (.23)
	Older sample	2.60	.93	1	4	-.34 (.19)	-.76 (.38)
T2	Total sample	2.29	.83	1	4	-.01 (.10)	-.77 (.20)
	Younger sample	2.20	.80	1	4	.07 (.12)	-.71 (.24)
	Older sample	2.55	.87	1	4	-.31 (.20)	-.70 (.39)
							$F(1,525) = .39$, n.s.

Table A 2 (continued): Basic distributions of health cognitions in young (16-35) and middle aged/older (36-90) participants

		M	SD	Min	Max	Skew (SE)	Kurt (SE)
Coping planning: nutrition							
T1	Total sample	2.29	.85	1	4	.07 (.10)	-.81 (.20)
	Younger sample	2.18	.84	1	4	.03 (.12)	-.86 (.23)
	Older sample	2.59	.82	1	4	-.39 (.19)	-.30 (.38)
T2	Total sample	2.32	.78	1	4	-.05 (.10)	-.50 (.20)
	Younger sample	2.23	.75	1	4	-.03 (.12)	-.53 (.24)
	Older sample	2.59	.79	1	4	-.23 (.20)	-.30 (.40)
							$F(1,521) = 1.35$, n.s.
Action planning: physical activity							
T1	Total sample	2.57	.75	1	4	-.49 (.10)	.09 (.20)
	Younger sample	2.52	.73	1	4	-.45 (.12)	.10 (.23)
	Older sample	2.68	.78	1	4	-.65 (.19)	.25 (.38)
T2	Total sample	2.62	.72	1	4	-.49 (.10)	.24 (.20)
	Younger sample	2.62	.69	1	4	-.40 (.12)	.34 (.24)
	Older sample	2.65	.78	1	4	-.69 (.19)	.15 (.39)
							$F(1,538) = 3.77$, $p = .05$
Coping planning: physical activity							
T1	Total sample	2.33	.75	1	4	-.02 (.10)	-.04 (.20)
	Younger sample	2.26	.73	1	4	.04 (.12)	.01 (.23)
	Older sample	2.51	.77	1	4	-.20 (.19)	.06 (.38)
T2	Total sample	2.36	.70	1	4	-.06 (.10)	.19 (.20)
	Younger sample	2.35	.69	1	4	.03 (.12)	.26 (.24)
	Older sample	2.40	.73	1	4	.34 (.19)	.18 (.39)
							$F(1,538) = 2.05$, *n.s.*
Action planning: alcohol							
T1	Total sample	2.13	1.04	1	4	.44 (.11)	-1.03 (.23)
	Younger sample	2.12	1.03	1	4	.45 (.12)	-.98 (.25)
	Older sample	2.14	1.06	1	4	.35 (.27)	.72 (.37)
T2	Total sample	2.29	.96	1	4	.15 (.12)	-.96 (.24)
	Younger sample	2.26	.96	1	4	.19 (.13)	-.92 (.26)
	Older sample	2.49	.95	1	4	-.13 (.29)	-1.29 (.44)
							$F(1,361) = 8.50$, $p < .01$
Coping planning: alcohol							
T1	Total sample	2.15	1.04	1	4	.36 (.11)	-1.09 (.23)
	Younger sample	2.16	1.03	1	4	.36 (.12)	-1.05 (.25)
	Older sample	2.09	1.07	1	4	.40 (.28)	-1.25 (.54)
T2	Total sample	2.28	.96	1	4	.15 (.12)	-.97 (.24)
	Younger sample	2.27	.97	1	4	.15 (.13)	-.98 (.26)
	Older sample	2.37	.93	1	4	-.09 (.29)	-.86 (.57)
							$F(1,360) = 4.71$, $p < .05$
Action planning: smoking							
T1	Total sample	2.28	1.03	1	4	.13 (.19)	-1.18 (.38)
	Younger sample	2.27	1.04	1	4	.16 (.21)	-1.20 (.42)
	Older sample	2.36	1.00	1	4	-.11 (.46)	-1.04 (.89)
T2	Total sample	2.31	.98	1	4	-.14 (.19)	-1.03 (.37)
	Younger sample	2.35	.97	1	4	.11 (.20)	-.98 (.40)
	Older sample	2.02	1.03	1	4	.51 (.49)	-.94 (.95)
							$F(1,138) = .49$, n.s.

Table A 2 (continued): Basic distributions of health cognitions in young (16-35) and middle aged/older (36-90) participants

		M	SD	Min	Max	Skew (SE)	Kurt (SE)
Coping planning: smoking							
T1	Total sample	2.17	.94	1	4	.21 (.19)	-.94 (.38)
	Younger sample	2.13	.95	1	4	.32 (.21)	-.91 (.42)
	Older sample	2.39	.86	1	4	-.38 (.46)	-.54 (.90)
T2	Total sample	2.23	.92	1	4	.22 (.19)	-.82 (.37)
	Younger sample	2.25	.91	1	4	.16 (.20)	-.83 (.40)
	Older sample	1.98	.89	1	4	.65 (.49)	-.07 (.95)
							$F(1,138) = .95$, n.s.

7.2 APPENDIX B: ADDITIONAL INFORMATION FOR THE MAIN ANALYSES OF THE STUDY

7.2.1 Means, Standard Deviations and Factors Loading for Items/Parcels Constituting HAPA-Model

Table B 1: Means, standard deviations and factors loadings for items/parcels constituting HAPA-Model in the domain of nutrition behavior

Latent variables and their indicators	Mean (SD)	Factors loadings within constructs
Risk perception:		
Having a heart attack	3.48 (1.48)	.94
Having a high cholesterol level	3.54 (1.43)	.73
Having a high blood pressure	3.65 (1.55)	.83
Outcome expectancies:		
Parcel 1[12]	2.63 (.81)	.66
Parcel 2	2.91 (.79)	.82
Parcel 3	2.84 (.75)	.80
Action self-efficacy		
I can stick to a healthy diet even if I have to learn much about nutrition	2.60 (.82)	.76
I can stick to a healthy diet even if I initially have to make plans	2.68 (.81)	.83
Intention		
I intend to eat as little fat as possible.	3.48 (1.65)	.73
I intend to eat as healthy as possible.	4.40 (1.41)	.76
Coping self-efficacy		
I can stick to a healthy diet even if I initially don't get much support.	2.53 (.77)	.79
I can stick to a healthy diet even if it takes a long time to get used to it.	2.59 (.78)	.86
I can stick to a healthy diet even if I have to start all over again several times until I succeed.	2.58 (.77)	.82
Planning		
I already have concrete plans how to change my nutrition habits.	2.30 (.88)	.85
I already have concrete plans when to change my nutrition habits.	2.29 (.89)	.85
I already have concrete plans when to especially watch out in order to maintain my new nutrition habits.	2.36 (.85)	.87
I already have concrete plans what to do in difficult situations in order to stick to my intentions.	2.30 (84)	.85
I already have concrete plans how to deal with relapses	2.31 (.86)	.87
Nutrition behavior		
Low fat diet	2.49 (.57)	.85
High fibre diet	2.58 (.63)	.84

[12] Two items constituted parcel 1: 1) If I eat healthy foods (low-fat or low salt), I'll feel physically more attractive; 2) If I eat healthy foods (low-fat or low salt), I won't have weight problems (anymore). Two items constituted parcel 2: 1) If I eat healthy foods (low-fat or low salt), that will be good for my blood pressure. 2) If I eat healthy foods (low-fat or low salt), I'll feel more comfortable mentally. Two items constituted parcel 3: 1) If I eat healthy foods (low-fat or low salt) that will be good for my cholesterol level. 2) If I eat healthy foods (low-fat or low salt) other people will appreciate my willpower.

Table B 2: Means, standard deviations and factors loadings for items/parcels constituting HAPA-Model in the domain of physical activity

Latent variables and their indicators	Mean (SD)	Factors loadings within constructs
Risk perception:		
Having a cardiovascular disease	3.67 (1.49)	.83
Having a high cholesterol level	3.54 (1.43)	.67
Having a high blood pressure	3.65 (1.55)	.86
Outcome-expectancies:		
Parcel 1[13]	3.53 (.61)	.74
Parcel 2	3.30 (.64)	.86
Parcel 3	3.45 (.61)	.88
Parcel 4	3.32 (.86)	.78
Parcel 5	3.01 (.74)	.62
Action self-efficacy		
I can change to a physically active life style.	3.12 (.82)	.85
I can be physically active once a week.	3.22 (.77)	.86
I can be physically active at least 3 times a week for 30 minutes.	3.14 (.89)	.77
Intention		
I intend to exercise regularly.	4.61 (1.94)	1.00
Coping self-efficacy		
Parcel 1[14]	2.60 (.77)	.82
Parcel 2	2.49 (.71)	.88
Parcel 3	2.48 (.79)	.81
Parcel 4	2.69 (.76)	.89
Parcel 5	2.69 (.75)	.89
Planning		
Action planning	2.62 (.72)	.92
Coping planning	2.36 (.70)	.76
Physical activity		
Frequency of physical activity	4.92 (5.14)	1.00

[13] Two items constituted parcel 1: 1) If I exercise regularly, I will simply feel better afterwards.; 2) If I exercise regularly, I won't have weight problems (anymore). Two items constituted parcel 2: 1) If I exercise regularly, my cholesterol level will improve.. 2) If I exercise regularly, I'll look more attractive. Two items constituted parcel 3: 1) If I exercise regularly I'll be more balanced in my daily life. 2) If I exercise regularly that will mean an increase of life quality for me. Two items constituted parcel 4: 1) If I exercise regularly I prevent a heart attack. 2) If I exercise regularly that will be good for my blood pressure. Two items constituted parcel 5: 1) If I exercise regularly other people will appreciate my willpower. 2) If I exercise regularly I will be appreciated by others for that.

[14] Two items constituted parcel 1: 1) I can keep being physically active regularly, even if it takes me long to make it a habit; 2) I can keep being physically active regularly, even if I am worried and troubled. Two items constituted parcel 2: 1) I can keep being physically active regularly, even if I don't see success at once. 2) I can keep being physically active regularly, even if I am tired. Two items constituted parcel 3: 1) I can keep being physically active regularly, even if I am stressed out. 2) I can keep being physically active regularly, even if I feel tense. Two items constituted parcel 4: 1) I can keep being physically active regularly, even if my blood pressure doesn't improve immediately. 2) I can keep being physically active regularly, even if I won't get social support for my first attempts. Three items constituted parcel 5: 1) I can keep being physically active regularly, even if I have to start all over again several times until I succeed. 2) I can keep being physically active regularly, even if my partner/family isn't physically active. 3) I can keep being physically active regularly, even if my cholesterol doesn't improve immediately.

Table B 3: Means, standard deviations and factors loadings for items/parcels constituting HAPA-Model in the domain of alcohol consumption

Latent variables and their indicators	Mean (SD)	Factors loadings within constructs
Risk perception:		
Having a cardiovascular disease	3.67 (1.49)	.87
Having a high cholesterol level	3.54 (1.43)	.69
Having a high blood pressure	3.65 (1.55)	.87
Outcome-expectancies:		
If I drink less alcohol I might prevent a heart attack	2.93 (1.00)	.74
If I drink less alcohol that will be good for my weight	3.01 (.99)	.80
If I drink less alcohol my cholesterol level will improve	3.01 (.96)	.91
If I drink less alcohol that will be good for my blood pressure	3.04 (.97)	.25
Action self-efficacy		
I can limit my alcohol consumption.	3.13 (.96)	.85
I can stop drinking totally.	2.65 (1.16)	.79
Drink only on special occasions.	3.06 (1.05)	.77
Intention		
I intend to drink less alcohol.	3.73 (1.90)	1.00
Planning		
Action planning	2.29 (.96)	.99
Coping planning	2.28 (.96)	.91
Alcohol consumption		
Frequency of alcohol consumption	43.35 (110.85)	1.00

Table B 4: Means, standard deviations and factors loadings for items/parcels constituting HAPA-Model in the domain of cigarette consumption

Latent variables and their indicators	Mean (SD)	Factors loadings within constructs
Risk perception:		
Having a heart attack	3.48 (1.48)	.93
Having a high cholesterol level	3.54 (1.43)	.67
Having a high blood pressure	3.54 (1.57)	.87
Outcome expectancies:		
Parcel 1[15]	2.23 (.80)	.82
Parcel 2	3.28 (.78)	.91
Parcel 3	2.21 (.70)	.83
Action self-efficacy		
Parcel 1[16]	2.53 (1.01)	.87
Parcel 2	2.58 (.96)	.95
Parcel 3	2.45 (1.01)	.89
Parcel 4	2.60 (.97)	.85
Intention		
I intend to quit smoking.	2.90 (2.04)	1.00
Coping self-efficacy		
I can resist smoking even if I get little support during my first attempts to quit..	2.53 (.94)	.91
I can resist smoking even if I have to start all over again several times.	2.65 (.90)	.91
I can resist smoking even if I let myself be seduced some time.	2.54 (.93)	.90
Planning		
Action planning	2.31 (98)	.91
Coping planning	2.23 (.92)	.96
Cigarette consumption		
Number of consumed cigarettes	13.69 (6.36)	1.00

[15] Two items constituted parcel 1: 1) If I quit smoking that will be good for my blood pressure; 2) If I quit smoking, that will unburden me financially. Two items constituted parcel 2: 1) If I quit smoking I might prevent a heart attack; 2) If I quit smoking I will be more attractive for others. Three items constituted parcel 3: 1) If I quit smoking I will simply feel better physically.; 2) If I quit smoking my cholesterol level will improve; 3) If I quit smoking others will appreciate my willpower.

[16] Two items constituted parcel 1: 1) I can resist smoking, even if I hang out with friends who smoke; 2) I can resist smoking, even if I feel tense or nervous. Two items constituted parcel 2: 1) I can resist smoking, even if I want to concentrate; 2) I can resist smoking, even if I have a strong desire for it. Two items constituted parcel 3: 1) I can resist smoking, even if I am worried or troubled, 2) I can resist smoking; even if I'm stressed out. Three items constituted parcel 4: 1) I can resist smoking, even if I'm around friends or colleagues who smoke;. 2) I can resist smoking, even if my partner/family don't quit smoking; 3) I can resist smoking, even if I will have to push myself

7.2.2 Exact Probabilities for the LCA Solution

Table B 5: Exact probabilities to be in a certain cluster given certain behavioral characteristics

	Cluster 1	Cluster2	Cluster 3
Overall %	0.37	.37	.26
Nutrition			
Excellent	.00	.00	.02
Good	.26	.15	.58
Moderate	.70	.77	.39
Poor	.04	.08	.01
Physical activity			
Active	.09	.35	.90
Passive	.91	.65	.10
Alcohol consumption			
No	.86	.59	.82
Yes, regularly	.14	.41	.18
Smoking			
Non-smoker	.99	.17	.82
Ex-smoker	.01	.09	.11
Occasional smoker	.00	.09	.02
Smoker	.00	.65	.05

7.2.3 Goodness of Fit Statistics for the Nested Models with and without the Inclusion of Baseline Behavior

Table B 6: Goodness of Fit statistics for the nested models with and without the inclusion of baseline nutrition behavior

Sample	n	χ^2	df	χ^2/df	p	CFI	TLI	RMSEA	CI 90 %
Baseline	686	1139.5	396	2.88	<.001	.94	.93	.037	.035, .040
No baseline	686	1266.1	397	3.12	<.001	.93	.92	.040	.038, .043

Table B 7: Goodness of Fit statistics for the nested models with and without the inclusion of baseline physical activity

Sample	n	χ^2	df	χ^2/df	p	CFI	TLI	RMSEA	CI 90 %
Baseline	689	1390.3	404	3.44	<.001	.92	.90	.042	.040, .045
No baseline	689	1531.6	405	3.78	<.001	.91	.89	.045	.043, .047

Table B 8: Goodness of Fit statistics for the nested models with and without the inclusion of baseline alcohol consumption

Sample	n	χ^2	df	χ^2/df	p	CFI	TLI	RMSEA	CI 90 %
Baseline	412	248.5	203	1.22	<.05	.99	.99	.016	.008, .023
No baseline	412	297.6	204	1.46	<.001	.97	.98	.024	.018, .029

Table B 9: Goodness of Fit statistics for the nested models with and without the inclusion of baseline cigarette consumption

Sample	n	χ^2	df	χ^2/df	p	CFI	TLI	RMSEA	CI 90 %
Baseline	159	332.2	256	1.30	<.001	.98	.97	.031	.020, .039
No baseline	159	406.9	257	1.58	<.001	.95	.94	.043	.035, .050

7.3 APPENDIX C: ADDITIONAL CONTROL ANALYSES

7.3.1 Multi-Group Comparison: Nonintenders Versus Intenders in the Domain of Nutrition.

In order to investigate the structural differences between nonintenders and intenders in the interplay of social cognitive variables at predicting nutrition behavior, a multiple group comparison was carried out. The precondition for a multiple group comparison is the adequateness of the model when tested for each group separately. Therefore, the HAPA-Model for nutrition was tested separately for the groups of nonintenders and intenders. The model for nonintenders yielded a satisfactory fit to the data, $\chi^2 = 165.4$, $df = 128$, $p < .05$, χ^2 /df = 1.29, CFI = .97, TLI = .96, RMSEA = .049, 90% CI = .023, .069. The fit of the model for intenders was also very satisfactory, $\chi^2 = 152.5$, $df = 128$, $p = .07$, χ^2 /df = 1.19, CFI = .98, TLI = .97, RMSEA = .040, 90% CI = .000, .063. Thus, the hypothesized model represented the data well within each group.

The predicted relationships were confirmed. A large amount of variance was accounted for within the sample of nonintenders, 39% of nutrition behavior and 16% of planning. In the sample of intenders, the corresponding amounts were 37% of nutrition behavior and 51% of planning. The regression weights for the different age groups are depicted in Figure C1. The question whether stage of change moderates the specified relations was investigated in the next set of analyses.

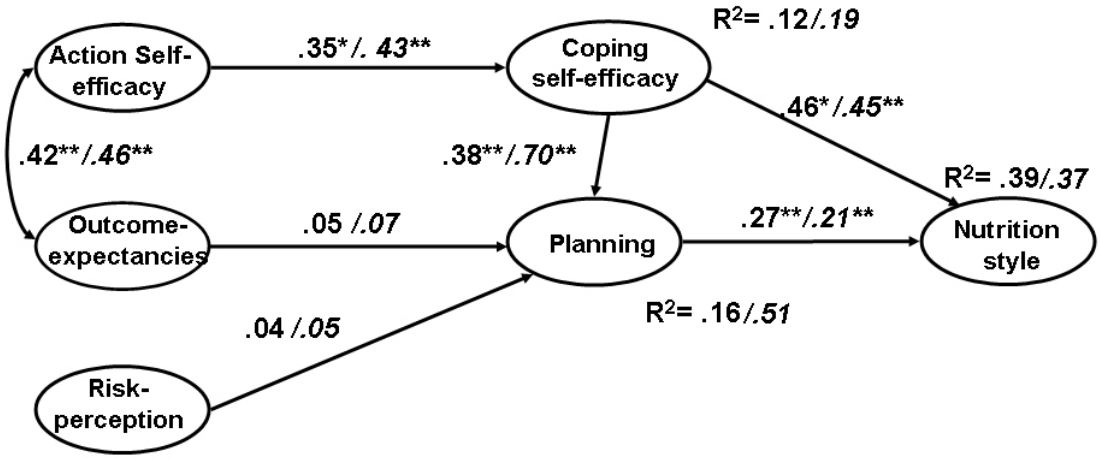

Figure C 1: Standardized coefficients across the groups of nonintenders and intenders. In italics are coefficients for the group of intenders.

In order to investigate whether there were significant differences in the structure of the social-cognitive variables across the groups of nonintenders and intenders, multiple-group analyses were further pursued. The goodness of fit indices for the models with different constraints are summarized in Table C1. The fit indices for the baseline model indicate that the hypothesized HAPA structure is well represented across both groups.

In a second step, measurement invariance between age groups was investigated. Accordingly, a model (M2) constraining all factor loadings to be equal was tested against a model that allowed the factor loadings to vary across subsamples. With a χ^2-difference value of 5.10 and df = 12, p = .95, the assumption of factorial invariance across different age groups was confirmed. This model (M2) was tested against a model (M3) that additionally constrained the factorial variance. Again, no difference between groups was found, with a χ^2-difference value of 2.97 and df = 3, p = .40.

After the measurement model equivalence across age groups was substantiated, the invariance (i.e., equivalence) of the structural model across groups was investigated in the third step. Accordingly, a model (M4) fixing all regression weights to be equal across groups was tested against model M3. The results were non-significant, with a χ^2-difference value of 6.08 and df = 6, p = .41, indicating no structural differences in the prediction pattern of nutrition behavior between the group of nonintenders in comparison to the group of intenders.

Table C 1: Goodness of Fit Indices for nested models

Model	$\Delta\chi^2$(df; p)	χ^2	df	p	χ^2/df	CFI	TLI	RMSEA	CI 90%
Baseline (M1)		317.94	256	<.01	1.24	.97	.96	.032	.018, .042
Constrained factor loadings (M2)	5.10 (12; n.s)	323.04	268	<.05	1.20	.98	.97	.029	.015, .040
Constrained factor variance (M3)	2.97 (3; n.s)	326.00	371	<.05	1.20	.98	.97	.029	.014, .040
Constrained regression weights (M4)	6.08 (6, n.s.)	332.08	277	<.05	1.20	.98	.97	.029	.014, .040

7.3.2 Multi-Group Comparison: Nonintenders Versus Intenders in the Domain of Physical Activity.

In order to investigate the structural differences between nonintenders and intenders in the interplay of social cognitive variables at predicting physical activity, a multiple group comparison was carried out. First, the HAPA-Model for physical activity was tested separately for the groups of nonintenders and intenders. The model for nonintenders yielded a satisfactory fit to the data, $\chi^2 = 220.6$, $df = 164$, $p < .01$, χ^2 /df = 1.34, CFI = .95, TLI = .94, RMSEA = .053, 90% CI = .033, .070. The fit of the model for intenders was also satisfactory, $\chi^2 = 264.90$, $df = 164$, $p < .001$, χ^2 /df = 1.61, CFI = .94, TLI = .92, RMSEA = .054, 90% CI = .042, .066. Thus, the hypothesized model represented the data well within each group.

The predicted relationships were partially confirmed. Only a small amount of variance was accounted for within the sample of nonintenders, 7% of physical activity and 45% of planning. In the intender's sample, the corresponding amounts were 4 % for physical activity and 32% for planning. The regression weights for the different age groups are depicted in Figure C2. The question whether stage of change moderates the specified relations was investigated in the next set of analyses.

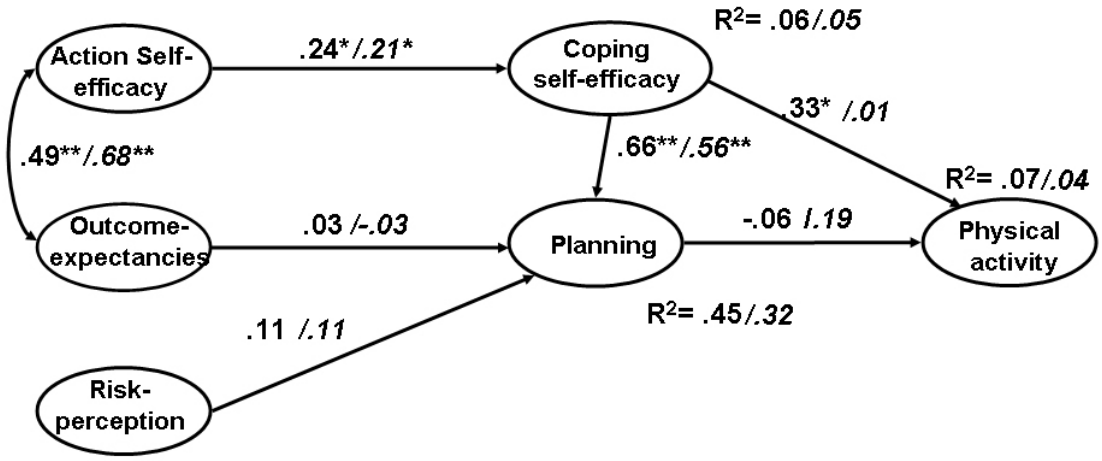

Figure C 2: Standardized coefficients across the groups of nonintenders and intenders. In italics are coefficients for the group of intenders

In order to investigate whether there were significant differences in the structure of social-cognitive variables across the groups of nonintenders and intenders, multiple-group analyses were further pursued. The goodness of fit indices for the models with different constraints are summarized in Table C2. The fit indices

for the baseline model indicate that the hypothesized HAPA structure is well represented across both groups.

In a second step, measurement invariance between age groups was investigated. Accordingly, a model (M2) constraining all factor loadings to be equal was tested against a model that allowed the factor loadings to vary across subsamples. With a χ^2-difference value of 36.34 and $df = 14$, $p < .001$, the assumption of factorial invariance across different age groups was violated. In order to pinpoint the source of differences in the measurement model across two groups, single factorial weights were investigated in the following step. The source of differences in the measurement model constituted the differences in the factorial weight of parcels composing outcome expectancies. Thus, indicators of outcome expectancies might measure different latent constructs in these two groups. Since the main interest was to investigate differences in the path coefficients between two groups, the multi-group analysis was carried further. Only those factorial weights that did not differ across groups were constrained equal. However, the results might only be interpreted with caution.

This model (M2) was tested against a model (M3) that additionally constrained the factorial variance. Again, difference between groups was found, with a χ^2-difference value of 19.65 and $df = 3$, $p < .001$. Constraining variance across group constitutes a conservative model test. Kleine (2005) argues for the negligibility of variance constraints, because groups may be expected to differ in their variabilities on common factors. Thus, in the following variance cross-constraints were abandoned.

The invariance (i.e., equivalence) of the structural model across groups was investigated in the third step. Accordingly, a model (M4) fixing all regression weights to be equal across groups was tested against model (M2). The results were non-significant, with a χ^2-difference value of 3.04 and $df = 6$, $p = .80$, indicating no structural differences in the prediction pattern of physical activity between the group of nonintenders in comparison to the group of intenders.

Table C 2: Goodness of Fit indices for nested models

Model	$\Delta \chi^2$(df; *p*)	χ^2	df	*p*	χ^2/df	CFI	TLI	RMSEA	CI 90%
Baseline (M1)		480.50	328	<.001	1.46	.95	.93	.037	.030, .045
Constrained factor loadings (M2)	6.21 (8; n.s)	486.71	236	<.001	1.45	.95	.94	.037	.029, .044
Constrained regression weights (M4)	3.04 (6, n.s.)	489.75	242	<.001	1.43	.95	.94	.036	.029, .043

7.3.3 Multi-Group Comparison: Nonintenders Versus Intenders in the Domain of Alcohol Consumption

In order to investigate the structural differences between nonintenders and intenders in the interplay of social cognitive variables at predicting physical activity, a multiple group comparison was carried out. First, the HAPA-Model for physical activity was tested separately for the groups of nonintenders and intenders. The model for nonintenders yielded a satisfactory fit to the data, $\chi^2 = 123.67$, $df = 85$, $p < .01$, χ^2 /df = 1.45, CFI = .97, TLI = .96, RMSEA = .058, 90% CI = .033, .079. The fit of the model for intenders was also satisfactory, $\chi^2 = 119.08$, $df = 85$, $p < .01$, χ^2 /df = 1.40, CFI = .94, TLI = .92, RMSEA = .080, 90% CI = .041, .112. Thus, the hypothesized model represented the data well within each group.

The predicted relationships were partially confirmed. Only a small amount of variance was accounted for within the sample of nonintenders, 1% of alcohol consumption and 20% of planning. In the intender's sample, the corresponding amounts were 1% for alcohol consumption and 16% for planning. The regression weight for the different age groups are depicted in Figure C3. The question whether stage of change moderates the specified relations was investigated in the next set of analyses.

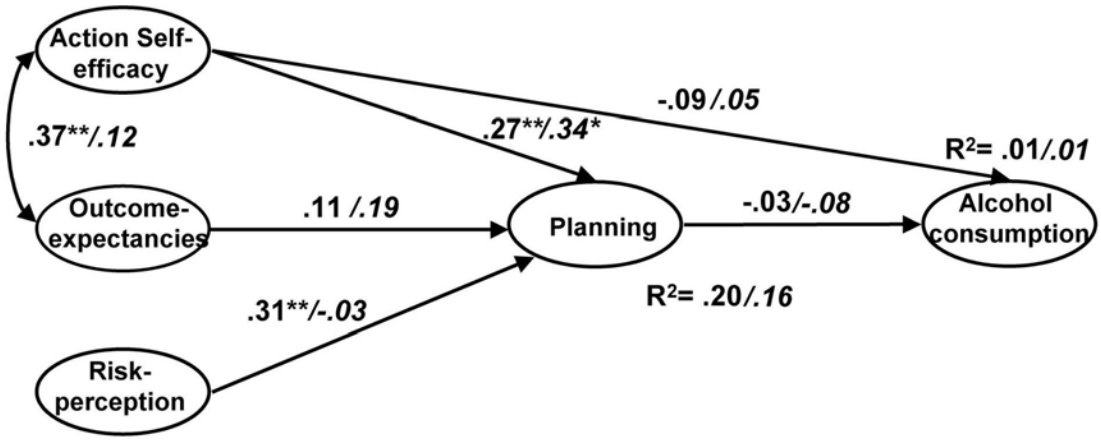

Figure C 3: Standardized coefficients across the groups of nonintenders and intenders. In italics are coefficients for the group of intenders

In order to investigate whether there were significant differences in the structure of social-cognitive variables across the groups of nonintenders and intenders, multiple-group analyses were further pursued. The goodness of fit indices for the models with different constraints are summarized in Table C3. The fit indices for the baseline model indicate that the hypothesized HAPA structure is well represented across both groups.

In a second step, measurement invariance between age groups was investigated. Accordingly, a model (M2) constraining all factor loadings to be equal was tested against a model that allowed the factor loadings to vary across subsamples. With a χ^2-difference value of 14.50 and $df = 10$, $p < .001$, the assumption of factorial invariance across different age groups was confirmed. This model (M2) was tested against a model (M3) that additionally constrained the factorial variance. Difference between groups was found, with a χ^2-difference value of 13.81 and $df = 3$, $p < .01$. Constraining variance across groups constitute a conservative model test. Kleine (2005) argues for the negligibility of variance constraints, because groups may be expected to differ in their variabilities on common factors. Thus, in the following variance cross-constraints were abandoned.

The invariance (i.e., equivalence) of the structural model across groups was investigated in the third step. Accordingly, a model (M4) fixing all regression weights to be equal across groups was tested against model (M2). The results were non-significant, with a χ^2-difference value of 5.93 and $df = 5$, $p = .31$, indicating no structural differences in the prediction pattern of alcohol consumption between the group of nonintenders in comparison to the group of intenders.

Table C 3: Goodness of Fit indices for nested models

Model	$\Delta \chi^2$(df; *p*)	χ^2	df	*p*	χ^2/df	CFI	TLI	RMSEA	CI 90%
Baseline (M1)		243.11	170	<.001	1.43	.96	.95	.046	.032, .059
Constrained factor loadings (M2)	14.50 (10; n.s)	257.61	180	<.001	1.43	.96	.95	.046	.033, .059
Constrained regression weights (M4)	5.93 (5, n.s.)	263.54	185	<.001	1.43	.96	.95	.046	.032, .058

7.4 APPENDIX D: SCALES AND INSTRUMENTS EMPLOYED IN THE PRESENT STUDY

7.4.1 General Description of the Participants

7.4.1.1 Age and Sex

Date of birth				
	Age	Year	Month	Day
Sex				
	❑ male	❑ female		

7.4.1.2 Socioeconomic Status

Education

Your highest degree:

Did not graduate from high school	❑1
Middle school	❑2
Dropped out of vocational training	❑3
High school or dropped out of college	❑4
Technical school	❑5
College/university	❑6
Graduate school and more	❑7

Occupation

What is your current occupation/ was your last one?

High school or college student	❑1
Housewife	❑2
Unemployed	❑3
Blue-collar worker (farmer, construction worker, factory worker)	❑4
Skilled worker (carpenter, hairdresser, electrician)	❑5
Service or sales domain (tradesman, insurance agent, policeman)	❑6
White collar worker (business employee)	❑7
Manager, entrepreneur	❑8
Professional who does freelance work (physician, professor, lawyer, clergyman etc.)	❑9
Others_____	❑10

7.4.1.3 Marital Status

single	❑1
married or living together	❑2
widowed	❑3
remarried	❑4
divorced or separated	❑5

7.4.1.4 Social Standing

How would you describe your social standing?

lower class	❑1
lower middle class	❑2
middle class	❑3
upper middle class	❑4
upper class	❑5

7.4.1.5 Financial Scope

How would you describe your financial scope?

much above average	❑1
above average	❑2
average	❑3
below average	❑4
much below average	❑5

7.4.1.6 Household Income

How high is your household income?

500 won or less	❑1
510 – 1500 won	❑2
1510 – 3000 won	❑3
3010 won or more	❑4

7.4.2 Health Behaviors

7.4.2.1 Nutrition Style

Some statements about your nutrition habits in general: How much does each statement apply to you?	Not at all true	Barely true	Mostly true	Exactly true
I am a vegetarian.	❑1	❑2	❑3	❑4
When I eat cake or chocolate, I only eat little of it.	❑1	❑2	❑3	❑4
I pay regard to eating little fat.	❑1	❑2	❑3	❑4
I take vitamin supplements regularly.	❑1	❑2	❑3	❑4
I usually eat fresh food.	❑1	❑2	❑3	❑4
When I drink milk or eat milk products, I choose low-fat products (e.g. low-fat milk).	❑1	❑2	❑3	❑4
I often eat eggs (e.g. scrambled, boiled, fried).	❑1	❑2	❑3	❑4
I am aware of the amount of calories in my food.	❑1	❑2	❑3	❑4
I drink soft drinks without sugar.	❑1	❑2	❑3	❑4
I don’t eat fast food.	❑1	❑2	❑3	❑4
I eat well-balanced food.	❑1	❑2	❑3	❑4
I only eat low-salt food.	❑1	❑2	❑3	❑4
I avoid cholesterol-rich food.	❑1	❑2	❑3	❑4
I deliberately eat many vitamins.	❑1	❑2	❑3	❑4
I prefer low-fat meat.	❑1	❑2	❑3	❑4
I almost always add more salt to my food.	❑1	❑2	❑3	❑4
I eat a lot of pork and beef.	❑1	❑2	❑3	❑4
To sweeten food, I use sweetener.	❑1	❑2	❑3	❑4
I always remove the visible fat from my food (e.g. from steaks or belly of pork).	❑1	❑2	❑3	❑4

7.4.2.2 Exercise

Duration and type of exercise

How often do you usually carry out the following physical activities?

	(almost) every day	3-4 times a week	once a week	1-3 times a month	less or never
Bicycling (also exercise bike)	❑1	❑2	❑3	❑4	❑5
Walking, hiking	❑1	❑2	❑3	❑4	❑5
Calisthenics, gymnastics, aerobics, dancing	❑1	❑2	❑3	❑4	❑5
Endurance sports (swimming, running, jogging, rowing, etc.)	❑1	❑2	❑3	❑4	❑5
Bodybuilding (weight training, weightlifting etc.)	❑1	❑2	❑3	❑4	❑5
Martial arts (karate, judo, taekwondo, aikido, kendo, kickboxing, boxing, etc.)	❑1	❑2	❑3	❑4	❑5
Sport games (baseball, soccer, volleyball, tennis, handball, basketball, squash, badminton, etc.)	❑1	❑2	❑3	❑4	❑5

Regularity of exercise activities

Have you been exercising on a regular basis during the last year?

- ❑$_1$ no
- ❑$_2$ yes, with longer interruptions
- ❑$_3$ yes, with short interruptions
- ❑$_4$ yes, without interruption

7.4.2.3 Tobacco Consumption

Smoker status

Are you a...

- ❑1 regular smoker?
- ❑2 occasional smoker?
- ❑3 ex-smoker (don't smoke anymore, but used to)?
- ❑4 non-smoker (don't smoke and never did)?

Number of tobacco products consumed per day

How much do or did you usually smoke per day?

_____cigarettes a day _____small cigars or cigars a day
_____pipes a day ❑1 I don't/ did not smoke every day.

7.4.2.4 Alcohol Consumption

Regularity of alcohol consumption

Do you drink alcohol on a regular basis (irrespective of amount of alcohol consumed)

❑1 no ❑2 yes

Frequency and amount of alcohol consumption

How often do you drink the following alcoholic beverages?

Alcoholic beverage	daily	6-4 times a week	3-2 times a week	once a week	1-3 times a month	very seldom, almost never	**amount of alcohol consumed on one occasion**
Rice wine	❑1	❑2	❑3	❑4	❑5	❑6	**Rice wine glass (200ml)**
traditional Korean liqueur, Ginsengschnaps	❑1	❑2	❑3	❑4	❑5	❑6	**Glass (200ml)**
Suju	❑1	❑2	❑3	❑4	❑5	❑6	**Sujuglass (30ml)**
Beer	❑1	❑2	❑3	❑4	❑5	❑6	**Glass (200ml)**
Western spirits	❑1	❑2	❑3	❑4	❑5	❑6	**Glass (30ml)**
Asian spirits	❑1	❑2	❑3	❑4	❑5	❑6	**Glass (30ml)**

7.4.3 Health-Related Cognitions

7.4.3.1 Risk Perception

Absolute risk perception for the self

How likely is it you will have a sometime in your life...

	very unlikely			**moderately likely**		**very likely**	
... a high cholesterol level?	❑1	❑2	❑3	❑4	❑5	❑6	❑7
... a heart attack?	❑1	❑2	❑3	❑4	❑5	❑6	❑7
... a high blood pressure?	❑1	❑2	❑3	❑4	❑5	❑6	❑7
... a cardiovascular disease?	❑1	❑2	❑3	❑4	❑5	❑6	❑7

7.4.3.2 Intentions

Which intentions do you have for the next weeks and months?
I intend to...

	Don't intend at all						Strongly intend
...live a healthier life.	❑1	❑2	❑3	❑4	❑5	❑6	❑7
...eat as healthy as possible.	❑1	❑2	❑3	❑4	❑5	❑6	❑7
... eat as little fat as possible (i.e. avoid fatty meat, cheese, etc.)	❑1	❑2	❑3	❑4	❑5	❑6	❑7
...do more for my health.	❑1	❑2	❑3	❑4	❑5	❑6	❑7
...quit smoking.	❑1	❑2	❑3	❑4	❑5	❑6	❑7
...eat low-salt food.	❑1	❑2	❑3	❑4	❑5	❑6	❑7
...drink less alcohol.	❑1	❑2	❑3	❑4	❑5	❑6	❑7
...exercise regularly (at least once a week).	❑1	❑2	❑3	❑4	❑5	❑6	❑7
...lose weight.	❑1	❑2	❑3	❑4	❑5	❑6	❑7

7.4.3.3 Planning Behavior Changes

Planning to change nutrition habits

Action Planning

Most people would like to further improve their nutrition by taking in less salt and fat. How about you? **I already have concrete plans...**				
	Not at all true	Barely true	Mostly true	Exactly true
how to change my nutrition habits.	❑1	❑2	❑3	❑4
when to change my nutrition habits.	❑1	❑2	❑3	❑4

Coping Planning

Most people would like to further improve their nutrition habits by taking in less salt and fat. How about you? **I already have concrete plans...**				
	Not at all true	Barely true	Mostly true	Exactly true
when to especially watch out in order to maintain my new nutrition habits.	❑1	❑2	❑3	❑4
what to do in difficult situations in order to stick to my intentions.	❑1	❑2	❑3	❑4
how to deal with relapses	❑1	❑2	❑3	❑4

Planning new exercise activities

Action Planning

Do you already have concrete plans with regard to exercising? **I already have concrete plans...**				
	Not at all true	Barely true	Mostly true	Exactly true
...when to exercise.	❑1	❑2	❑3	❑4
...where to exercise.	❑1	❑2	❑3	❑4
...how to exercise.	❑1	❑2	❑3	❑4
...how often to exercise.	❑1	❑2	❑3	❑4
...with whom to exercise.	❑1	❑2	❑3	❑4

Coping Planning

Do you already have concrete plans for your new exercise schedule (habits)? **I already have concrete plans...**	Not at all true	Barely true	Mostly true	Exactly true
...what to do if something intervenes.	❑1	❑2	❑3	❑4
...what to do if I miss an exercise session.	❑1	❑2	❑3	❑4
…what to do in difficult situations in order to stick to my intentions.	❑1	❑2	❑3	❑4
…when to especially watch out in order to stay committed.	❑1	❑2	❑3	❑4

Planning smoking withdrawal

Action Planning

Most people want to quit smoking. How about you? **I already have concrete plans...**	Not at all true	Barely true	Mostly true	Exactly true
...when to quit smoking.	❑1	❑2	❑3	❑4
...how to quit smoking.	❑1	❑2	❑3	❑4

Coping Planning

Most people want to quit smoking. How about you? **I already have concrete plans...**	Not at all true	Barely true	Mostly true	Exactly true
...how to deal with relapses into my old habits.	❑1	❑2	❑3	❑4
...what to do in difficult situations to stick to my intentions.	❑1	❑2	❑3	❑4
...when to especially watch out in order not to reach again for a cigarette.	❑1	❑2	❑3	❑4

Planning to limit alcohol consumption

Action Planning

Do you already have concrete plans to reduce your alcohol consumption?
I already have concrete plans...

	Not at all true	Barely true	Mostly true	Exactly true
...when to reduce alcohol consumption.	❑1	❑2	❑3	❑4
...where, i.e. in which situations (at home, at parties) to reduce alcohol consumption.	❑1	❑2	❑3	❑4
...how to reduce alcohol consumption.	❑1	❑2	❑3	❑4

Coping Planning

Do you already have concrete plans to reduce your alcohol consumption?
I already have concrete plans...

	Not at all true	Barely true	Mostly true	Exactly true
...how to deal with relapses into my old drinking habits.	❑1	❑2	❑3	❑4
...what to do in difficult situations in order to stick to my intentions.	❑1	❑2	❑3	❑4
...when to especially watch out in order not to drink alcohol again.	❑1	❑2	❑3	❑4

7.4.3.5 Outcome Expectancies of Behavior Change

Outcome expectancies – change of nutrition habits

What do you think, what will be the consequences if you change your nutrition to low-fat or low-salt food?
If I eat healthy foods (low-fat or low salt)...

	Not at all true	Barely true	Mostly true	Exactly true
I'll feel physically more attractive.	❑1	❑2	❑3	❑4
I won't have weight problems (anymore).	❑1	❑2	❑3	❑4
that will be good for my blood pressure.	❑1	❑2	❑3	❑4
I'll feel more comfortable mentally.	❑1	❑2	❑3	❑4
that will be good for my cholesterol level.	❑1	❑2	❑3	❑4
other people will appreciate my willpower.	❑1	❑2	❑3	❑4

Exercise outcome expectancies

What do you think, what will be the consequences if you exercise regularly?
If I exercise regularly...

	Not at all true	Barely true	Mostly true	Exactly true
I will simply feel better afterwards.	❑1	❑2	❑3	❑4
I won't have weight problems (anymore).	❑1	❑2	❑3	❑4
other people will appreciate my willpower.	❑1	❑2	❑3	❑4
my cholesterol level will improve.	❑1	❑2	❑3	❑4
I'll look more attractive.	❑1	❑2	❑3	❑4
I'll be more balanced in my daily life.	❑1	❑2	❑3	❑4
that will mean an increase of life quality for me.	❑1	❑2	❑3	❑4
I will be appreciated by others for that.	❑1	❑2	❑3	❑4
I prevent a heart attack.	❑1	❑2	❑3	❑4
that will be good for my blood pressure.	❑1	❑2	❑3	❑4

Outcome expectancies – quitting smoking

What do you think, which consequences will arise if you do not smoke?
If I quit smoking ...

	Not at all true	Barely true	Mostly true	Exactly true
...that will be good for my blood pressure.	❑1	❑2	❑3	❑4
...that will unburden me financially.	❑1	❑2	❑3	❑4
...I might prevent a heart attack.	❑1	❑2	❑3	❑4
...I will be more attractive for others (whiter teeth, better skin, and nicer smell of clothes).	❑1	❑2	❑3	❑4
... I will simply feel better physically.	❑1	❑2	❑3	❑4
... my cholesterol level will improve.	❑1	❑2	❑3	❑4
...others will appreciate my willpower.	❑1	❑2	❑3	❑4

Outcome expectancies – reduction of alcohol consumption

What do you think, what will be the consequences if you drink less alcohol? **If I drink less alcohol...**				
	Not at all true	Barely true	Mostly true	Exactly true
...I might prevent a heart attack.	❑1	❑2	❑3	❑4
...that will be good for my weight.	❑1	❑2	❑3	❑4
… my cholesterol level will improve.	❑1	❑2	❑3	❑4
...that will be good for my blood pressure.	❑1	❑2	❑3	❑4

7.4.3.5 Behavior Change Self-Efficacy

Self-efficacy – change of nutrition habits

Action self-efficacy

Certain barriers make it hard to change one's nutrition habits. How sure are you that you can overcome the following obstacles? **I can stick to a healthy (low-fat or low-salt) diet even...**				
	Not at all true	Barely true	Mostly true	Exactly true
...if I have to learn a lot about nutrition.	❑1	❑2	❑3	❑4
...if I initially have to make plans.	❑1	❑2	❑3	❑4

Coping self-efficacy

Certain barriers make it hard to change one's nutrition habits. How sure are you that you can overcome the following obstacles? **I can stick to a healthy (low-fat or low-salt) diet even...**				
	Not at all true	Barely true	Mostly true	Exactly true
...if I have to start all over again several times until I succeed.	❑1	❑2	❑3	❑4
...if I initially don't get much support.	❑1	❑2	❑3	❑4
...if it takes a long time to get used to it.	❑1	❑2	❑3	❑4

Exercise self-efficacy

Motivational Self-Efficacy

Certain barriers make it hard to begin exercising.
How sure are you that you can begin exercising regularly?
I am sure that...

	Not at all true	Barely true	Mostly true	Exactly true
I can change to a physically active life style.	❑1	❑2	❑3	❑4
I can be physically active once a week.	❑1	❑2	❑3	❑4
I can be physically active at least 3 times a week for 30 minutes.	❑1	❑2	❑3	❑4

Coping Self-Efficacy

It is important to stay physically active. Are you confident you can manage that?
I am sure I can keep being physically active regularly, even if...

	Not at all true	Barely true	Mostly true	Exactly true
... it takes me long to make it a habit.	❑1	❑2	❑3	❑4
...I am worried and troubled.	❑1	❑2	❑3	❑4
...I don't see success at once.	❑1	❑2	❑3	❑4
...I am tired.	❑1	❑2	❑3	❑4
...I am stressed out.	❑1	❑2	❑3	❑4
...I feel tense.	❑1	❑2	❑3	❑4
...my blood pressure doesn't improve immediately.	❑1	❑2	❑3	❑4
...I won't get social support for my first attempts.	❑1	❑2	❑3	❑4
...I have to start all over again several times until I succeed.	❑1	❑2	❑3	❑4
...my partner/ family isn't physically active.	❑1	❑2	❑3	❑4
...my cholesterol doesn't improve immediately.	❑1	❑2	❑3	❑4

Self-efficacy – quitting smoking

Action self-efficacy

Some situations make it hard to quit smoking.
I can resist smoking, even if...

	Not at all true	Barely true	Mostly true	Exactly true
...I hang out with friends who smoke.	❑1	❑2	❑3	❑4
...I feel tense or nervous.	❑1	❑2	❑3	❑4
...I want to concentrate.	❑1	❑2	❑3	❑4
...I have a strong desire for it.	❑1	❑2	❑3	❑4
...I am worried or troubled.	❑1	❑2	❑3	❑4
...I'm stressed out.	❑1	❑2	❑3	❑4
...I'm around friends or colleagues who smoke.	❑1	❑2	❑3	❑4
...my partner/ family don't quit smoking.	❑1	❑2	❑3	❑4
...I will have to push myself.	❑1	❑2	❑3	❑4

Coping self-efficasy

Some situations make it hard to quit smoking.
I can resist smoking, even if...

	Not at all true	Barely true	Mostly true	Exactly true
...I get little support during my first attempts to quit.	❑1	❑2	❑3	❑4
...I have to start all over again several times until I succeed.	❑1	❑2	❑3	❑4
...I let myself be seduced some time.	❑1	❑2	❑3	❑4

Self-efficacy – limitation of alcohol consumption

I am very sure I can force myself to...

	Not at all true	Barely true	Mostly true	Exactly true
...limit my alcohol consumption.	❑1	❑2	❑3	❑4
...stop drinking totally.	❑1	❑2	❑3	❑4
...drink only on special occasions.	❑1	❑2	❑3	❑4