

Supplementary File

		n(%)							
Subject		40's	n=58(11.1%)	50's	n=61(11.7%)	60's	n=244(46.7%)	70's	n=159(30.5%)
Occupation	Housewife	13	(22.4)	18	(29.5)	164	(67.2)	121	(76.1)
	Part time	33	(56.9)	36	(59.0)	47	(19.3)	13	(8.2)
	Regular employment	5	(8.6)	0	0.0	3	(1.2)	0	0.0
	Self-employment	2	(3.4)	4	(6.6)	9	(3.7)	8	(5.0)
	Other	3	(5.3)	3	(4.9)	17	(7.0)	12	(7.5)
Marriage	Married	43	(74.2)	45	(73.8)	188	(77.1)	106	(66.7)
	Divorced	7	(12.1)	3	(4.9)	14	(5.7)	7	(4.4)
	Never married	6	(10.3)	7	(11.5)	19	(7.8)	12	(7.5)
	Widowed	2	(3.4)	5	(8.2)	22	(9.0)	34	(21.4)
Parity	No	12	(20.7)	16	(26.2)	36	(14.8)	20	(12.6)
	Yes	46	(79.3)	45	(73.8)	204	(83.6)	133	(83.6)
Menopause	No	53	(91.4)	6	(9.8)	0	0.0	0	0.0
	Yes	1	(1.7)	51	(83.7)	229	(93.8)	150	(94.3)
	By surgery	3	(5.2)	3	(4.9)	15	(6.2)	9	(5.7)
Nursing care	No	56	(96.6)	52	(85.3)	201	(82.4)	143	(89.8)
	Yes	2	(3.4)	8	(13.1)	40	(16.4)	11	(7.0)
Stress	None	2	(3.4)	0	0.0	14	(5.7)	10	(6.3)
	Weak (1~3)	15	(25.9)	18	(29.6)	93	(38.1)	61	(38.4)
	Moderate (4~6)	16	(27.6)	19	(31.0)	70	(28.7)	49	(30.8)
	Strong (over 7)	23	(39.7)	21	(34.5)	41	(16.8)	18	(11.3)
Stress Coping	No	9	(15.5)	13	(21.4)	46	(18.9)	22	(13.8)
	Yes	48	(82.8)	47	(77.0)	187	(76.6)	132	(83.0)
Menopause symptoms (SMI scores)/points		58	37.2±18.5	60	35.9±19.2	242	33.0±20.3	156	29.4±18.9

Table 1: Characteristics of subjects (N=522).

(N=522 n(%)										
Subject			40s		50s		60s		70s	
Sleep	Time(hours/day)		48	6.6±1.2	55	6.0±1.1	206	6.4±1.0	135	6.3±0.9
	Satisfaction	No	23	(39.7)	22	(36.1)	76	(31.1)	42	(26.4)
		Yes	15	(25.9)	22	(36.1)	109	(44.7)	60	(37.7)
		Neither	17	(29.2)	13	(21.2)	48	(19.7)	44	(27.7)
	Waking during the night	No waking	22	(38.0)	21	(34.4)	56	(22.8)	26	(16.4)
		Once	21	(36.2)	27	(44.3)	127	(52.0)	86	(54.1)
		Twice	10	(17.2)	8	(13.1)	53	(21.9)	43	(27.0)
	Falling asleep	Soon	44	75.9	43	70.5	182	(74.5)	101	(63.6)
		Taking 1 hour or more	9	(15.5)	12	(19.7)	46	(19.0)	43	(27.1)
		Other	0	(0.0)	0	(0.0)	6	(2.4)	2	(1.2)
Exercise	Behavior	None	22	(38.0)	22	(36.1)	50	(20.5)	14	(8.8)
		Once/week	17	(29.3)	11	(18.0)	53	(21.7)	25	(15.8)
		2~3 times/week	10	(17.2)	18	(29.5)	73	(30.0)	54	(34.0)
		Every day	9	(15.5)	10	(16.4)	55	(22.5)	57	(35.7)
Eating behavior	Breakfast	Don't eat breakfast	1	(1.7)	0	(0.0)	3	(1.2)	2	(1.3)
		1~2/week	1	(1.7)	1	(1.6)	5	(2.0)	0	(0.0)
		3~4 times/week	6	(10.3)	2	(3.3)	3	(1.2)	2	(1.3)
		Everyday	50	(86.3)	58	(95.1)	230	(95.2)	156	(98.1)
	Dinner with 2 hours before going to bed	No	53	(91.4)	58	(95.1)	230	(94.3)	145	(91.2)
		Yes	5	(8.6)	3	(4.9)	13	(5.3)	13	(8.2)
	Late night snacks	No	45	(77.6)	41	(67.2)	206	(84.4)	135	(84.9)
		Yes	13	(22.4)	20	(32.8)	37	(15.2)	23	(14.5)

Table 2: Lifestyle of subjects (Sleep, Exercise, Eating behavior).

(n)%									
Subject		40s		50s		60s		70s	
Knowledge of metabolic syndrome	No	16	(27.6)	19	(31.2)	65	(26.6)	31	(19.5)
	Yes	42	(72.4)	42	(68.8)	174	(71.4)	120	(75.5)
Knowledge of menopausal features	No	30	(51.7)	21	(34.4)	47	(19.3)	38	(23.9)
	Yes	28	(48.3)	40	(65.6)	192	(78.7)	115	(72.3)
Consciousness of lifestyle- related disease prevention (from 50s)	No			30	(49.2)	98	(40.2)	60	(37.7)
	Yes			31	(50.8)	142	58.2	94	59.1
Behavior of lifestyle- related disease prevention	No	36	(62.1)	39	(64.0)	115	(47.2)	58	(36.5)
	Yes	22	(37.9)	22	(36.0)	121	(49.5)	93	(58.5)

Table 3: Cognition and behavior of lifestyle-related disease prevention.

n(%)							Mean value±SD		
Subject		40s		50s		60s		70s	
		n		n		n		n	
Height (cm)		58	159.6±3.8	61	157.9±5.3	239	154.7±5.3	159	152.1±4.8
Weight (kg)		58	52.9±6.5	61	50.7±7.7	240	50.6±7.6	159	49.6±6.6
BMI		58	20.8±2.5	61	20.3±2.9	240	21.2±3.0	159	21.4±2.6
Abdominal circmference (cm)		57	74.4±6.7	60	75.6±8.1	239	78.1±8.8	159	79.2±8.1
Blood pressure (mmHg)	Normal (less than 80 cm)	48	(84.2)	44	(73.4)	140	(58.6)	77	(50.7)
	Borderline (80~89 cm)	8	(14.0)	11	(18.3)	80	(35.5)	59	(38.3)
	High-risk (more than 90cm)	1	(1.8)	5	(8.3)	19	(7.9)	16	(10.5)
	Systolic	56	109.5±16.0	61	119.2±15.8	240	123.5±16.4	159	126.8±18.4
	Diastolic	56	66.4±11.2	61	71.8±11.7	240	72.5±11.0	159	72.6±10.1
	Normal (less than 130/85 mmHg)	51	(91.1)	46	(74.2)	152	(63.3)	86	(54.1)
	Borderline (130 or 85 mmHg)	1	(1.8)	13	(21.0)	61	(25.4)	53	(33.3)
	High-risk (more than 130/85 mmHg)	4	(7.1)	3	(4.8)	27	(11.3)	20	(12.6)
	Blood glucose (mg/dl)	56	87.3±7.4	60	90.8±8.3	239	95.7±23.9	158	92.4±14.8
Blood glucose (mg/dl)	Normal (less than 100 mg/dl)	54	(96.4)	53	(88.3)	191	(80.0)	128	(81.0)
	Borderline (100~109 mg/dl)	1	(1.8)	6	(10.0)	29	(12.1)	20	(12.7)
	High-risk (more than 110 mg/dl)	1	(1.8)	1	(1.7)	19	(7.9)	10	(6.3)
	HDL-C(mg/dl)	57	71.2±15.2	60	79.0±15.1	239	71.6±16.3	158	69.3±15.0
HDL-C(mg/dl)	Normal (more than 50 mg/dl)	52	(91.2)	59	(98.3)	220	(92.1)	142	(89.9)
	Borderline (40~50 mg/dl)	5	(8.8)	1	(1.7)	19	(7.9)	16	(10.1)
	High-risk (less than 40 mg/dl)	0	0.0	0	0.0	0	0.0	0	0.0
	Triglyceride (mg/dl)	57	74.7±63.0	60	82.4±54.2	239	96.6±43.9	158	95.6±37.6
Triglyceride (mg/dl)	Normal (less than 150 mg/dl)	53	(93.0)	57	(95.0)	207	(86.6)	146	(92.4)
	High-risk (more than 150 mg/dl)	4	(7.0)	3	(5.0)	32	(13.4)	12	(7.6)
	Weight gain of 10 kg from age 20	49	(84.5)	53	(86.9)	191	(78.3)	127	(79.9)
Recent weight gain	Yes	9	(15.5)	7	(11.5)	48	(19.7)	24	(15.1)
	Weight gain	34	(58.6)	17	(27.9)	66	(27.0)	33	(20.8)
	Weight loss	8	(13.8)	15	(24.6)	46	(19.0)	32	(20.1)
	No change	15	(25.9)	28	(45.9)	127	(52.0)	82	(51.6)

Table 4: Physical and laboratory assessment of subjects.

Table 5: Factors related to cognition and behavior of lifestyle-related disease prevention.

		Cognition of lifestyle-related disease prevention (from 50s)										Behavior of lifestyle-related disease prevention										n%
Factors		50s		p-value	60s		p-value	70s		p-value	40s		p-value	50s		p-value	60s		p-values	70s		p-value
		No	Yes		No	Yes		No	Yes		No	Yes		No	Yes		No	Yes		No	Yes	
Occupation	House wife	7(38.9)	11(61.1)	0.298	65(39.9)	98(60.1)	0.625	46(39.0)	72(61.0)	0.765	7(53.8)	6(46.2)	0.370	9(50.0)	9(50.0)	0.143	75(47.2)	84(52.8)	0.325	43(36.8)	74(63.2)	0.423
	Other	23(53.5)	20(46.5)		32(43.2)	42(56.8)		13(41.9)	18(58.1)		29(67.4)	14(32.6)		30(69.8)	13(30.2)		39(54.2)	33(45.8)		13(44.8)	16(55.2)	
SMI scores	Low	22(48.9)	23(51.1)	1.000	83(43.5)	108(56.5)	0.103	55(43.0)	73(57.0)	0.055	26(56.5)	20(43.5)	0.108	28(62.2)	17(37.8)	0.541	90(48.6)	95(51.4)	0.671	48(38.1)	78(61.9)	0.802
	High	8(53.3)	7(46.7)		15(30.6)	34(69.4)		5(21.7)	18(78.3)		10(83.3)	2(16.7)		11(73.3)	4(26.7)		25(52.1)	23(47.9)		9(40.9)	13(59.1)	
Stress of housework and work	Weak	7(38.9)	11(61.1)	0.433	40(38.5)	64(61.5)	0.578	29(41.4)	41(58.6)	0.273	10(58.8)	7(41.2)	0.848	8(44.4)	10(55.6)	0.063	47(46.5)	54(53.5)	0.443	23(34.8)	43(65.2)	0.619
	Strong	20(50.0)	20(50.0)		46(42.2)	63(57.8)		21(32.3)	44(67.7)		24(61.5)	15(38.5)		28(70.0)	12(30.0)		57(51.8)	53(48.2)		25(39.1)	39(60.9)	
Method of coping with stress	No	7(53.8)	6(46.2)	0.653	22(47.8)	24(52.2)	0.253	8(36.4)	14(63.6)	0.843	8(88.9)	1(11.1)	0.133	10(76.9)	3(23.1)	0.338	28(62.2)	17(37.8)	0.067	13(61.9)	8(38.1)	0.013*
	Yes	22(46.8)	25(53.2)		71(38.6)	113(61.4)		49(38.6)	78(61.4)		28(58.3)	20(41.7)		28(59.6)	19(40.4)		84(46.9)	95(53.1)		42(33.6)	83(66.4)	
Knowledge of metabolic	No	11(57.9)	8(42.1)	0.360	35(55.6)	28(44.4)	0.006**	17(54.8)	14(45.2)	0.019*	12(75.0)	4(25.0)	0.243	12(63.2)	7(36.8)	0.932	31(48.4)	33(51.6)		18(58.1)	13(41.9)	0.011*
	Yes	19(45.2)	23(54.8)		61(35.5)	111(64.5)		37(31.9)	79(68.1)		24(57.1)	19(42.9)		27(64.3)	15(35.7)		84(49.4)	86(50.6)		39(33.1)	79(66.9)	
Knowledge of menopausal features	No	14(66.7)	7(33.3)	0.048*	27(60.0)	18(40.0)	0.004**	18(48.6)	19(51.4)	0.109	18(60.0)	12(40.0)	0.737	13(61.9)	8(38.1)	0.811	26(55.3)	21(44.7)	0.328	22(59.5)	15(40.5)	0.002**
	Yes	16(40.0)	24(60.0)		69(36.3)	121(63.7)		38(33.9)	74(66.1)		18(64.3)	10(35.7)		26(65.0)	14(35.0)		89(47.3)	99(52.7)		33(31.6)	78(68.4)	

Chi-square *p<0.05 **<p0.01

Knowledge of metabolic syndrome and physical assessment									mean±SD
		40's		50's		60's		70's	
Weight (kg)	No knowledge	16	53.1±9.4	19	53.3±7.8	65	50.7±7.1	31	48.3±7.4
	Have knowledg	42	52.8±5.2	42	49.5±7.5	170	50.6±7.8	120	50.0±6.5
Knowledge of menopausal features and physical assessment									
HDL-C (mg/dl)	No knowledge	30	73.3±16.4	30	79.7±16.5	46	71.0±15.4	38	65.6±13.6
	Have knowledg	27	68.9±13.8	30	78.2±13.8	188	71.6±16.8	114	70.3±15.5
Consciousness of lifestyle-related disease prevention and physical assessment									
LDL-C (mg/dl)	Not conscious			30	138.6±31.1	96	130.3±28.7	60	137.0±34.3
	conscious			30	139.9±28.1	140	133.1±29.6	93	127.0±23.9
Behavior of lifestyle-related disease prevention and physical assessment									
Weight (kg)	No behavior	36	52.8±7.0	39	51.9±8.6	113	50.2±7.3	58	50.3±7.6
	gage in behavi	22	53.1±5.8	22	48.6±5.3	118	50.8±7.6	93	49.3±6.0

T-test

p<0.05 ** P < 0.01

Table 6: Cognition and behavior of lifestyle-related disease prevention and their association with physical and laboratory assessment.