

A STUDY OF SATISFACTION WITH LIFE AND HEALTH-PROMOTING LIFESTYLE BEHAVIOURS IN PATIENTS AFTER MYOCARDIAL INFARCTION

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ABSTRACT

Objective: To research behaviours relative to satisfaction with life (SWL) and health-promoting lifestyle in patients having experienced myocardial infarction.

Material and methods: The study was performed on 149 eligible patients coming for follow-up at the Cardiology Department Outpatient Clinics. A personal data questionnaire, the Health Promotion Lifestyle Profile-II (HPLP II) form and the Satisfaction with Life Scale (SWLS) questionnaires were used.

Results: Patients aged 30-45 represented 25.5% of the total, as also did those aged over 81; 81.9% of patients were male, 56.4% were literate with no schooling, and 87.2% were married. SWLS mean scores were significantly different according to the different categories of professional and income status ($p < 0.05$). HPLP II mean scores differed according to age, sex, educational status, marital status, number of offspring, family type, income, level of myocardial infarction (MI) education and compliance with different recommendations ($p < 0.05$). The SWLS was significantly correlated to the different subdimensions and the total score of HPLP II.

Conclusion: Both demographic and disease-related characteristics of patients were found to affect the levels of SWL and health promotion lifestyle. These two elements were positively correlated each other.

Key words: Myocardial infarction, health-promotion lifestyle behaviour, satisfaction with life.

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Introduction

The social significance of diseases is related to their incidence. The more frequently a disease is seen in society, the more important it becomes as a health problem⁽¹⁾. Coronary heart disease (CHD) is the most common cardiovascular disease, causing more than 50% of adult deaths in industrial societies. High morbidity and mortality, frequent onset in the productive years of life, high treatment costs and serious complications, among other factors, make it into a very important social health problem⁽²⁻⁶⁾.

The World Health Organization (WHO) reports that 17.3 million people lost their life in 2008 because of CHD, and another 23 millions are predicted to follow them until the year 2030⁽⁷⁾.

Coronary arterial disease (CAD) manifests itself as angina pectoris, myocardial infarction (MI) or sudden death^(8,9).

Severe manifestations experienced by MI patients may leave serious sequelae in the chronic phase. Patients are negatively affected not only by the fear of experiencing a relapse of the disease symptoms but also by a suspicion of symptoms due to other diseases, panic attacks and the fear of death. This all may impair the patients' physical, emotional and social functioning and limit their satisfaction with life (SWL)⁽¹⁰⁻¹³⁾.

SWL is defined as a positive evaluation by an individual of the person's own life as a whole, according to criteria set by the same individual. SWL is a subjective belief of well-being; it involves a comparison by the subject between one's own criteria and the perception of one's living conditions, and consequently one's life. SWL relative to one's entire life is an important index, showing the quality of the subject's mental health. Different hurdles, stresses, conflicts or sudden negative changes (for example disease or accidents) may lead to a fall in

the level of SWL⁽¹⁴⁾.

MI, which causes changes in life style, directly affects SWL and health-promoting behaviour⁽¹⁵⁾.

Health-promoting behaviour has been defined as the control by the individual of all one's own behaviours that may affect health and the subject's selecting behaviours, in daily activity, that are consonant with one's healthy status⁽¹⁶⁾. The WHO indicates that 60% of people's individual quality of health is a result of their behaviour and lifestyle⁽¹⁷⁾.

Different studies have shown that applying health-promoting behaviours reduce disease incidence and mortality. So, they are essential in disease prevention, early diagnosis and maintenance of a healthy state^(9,18,19).

The aim of nursing, at this point, is to play a supportive role to the patient, ensuring that the subject may take care of one's self in the shortest time possible, and to develop health-promoting behaviours by modifying the life style in order to increase SWL^(5,20).

This study was designed to study SWL and HPLP in patients who had previously experienced an MI.

Material and methods

The study population consisted of patients coming to the Erzurum Regional Teaching and Research Hospital Cardiology Department outpatient clinics for routine follow-up visits one month or longer after MI. The Atatürk University Health Sciences School Ethical Committee had approved the study. The study objectives were explained to the participants and their oral consent obtained. They were informed that their personal data would be used for scientific purposes only. A random sampling method was used to select the study patients. The study sample was made of 149 patients who came to the outpatient clinics between April and July 2012, had no cognitive defect and consented to participate.

A nine-question form prepared by the investigator was used to define the patients' demographic characteristics and the disease.

Satisfaction with Life Scale (SWLS)

The SWLS, composed of five questions to evaluate SWL, was developed in 1985 by Diener, Emmons, Larsen and Griffin (21). A seven-answer Likert-type response is used for each question ("do not agree at all", "do not agree", "do not agree in

part", "uncertain", "agree in part", "agree" and "agree fully").

The score for each question may vary from one to seven and the total score from five to thirty-five. The higher the score, the higher is the level of SWL. The validation and reliability study was performed by Köker (1991) and Yetim (1993) for the scale in Turkish^(22,23).

Health-promoting Lifestyle Profile II (HPLP II)

HPLP was first developed by Walker, Sechrist ve Pender in 1987(24). It was revised in 1996 and named HPLP II, the validity and reliability of which was studied by Bahar et al in 2008⁽²⁵⁾.

This scale comprises 52 items and six subfactors; assessment follows a four-choice Likert-type scale as follows: never [1], sometimes [2], often [3], regularly [4]. The lowest total score is 52 and the highest 208. The higher the score, the higher is the level of HPLP II⁽²⁵⁾.

Statistical Evaluation

Statistical analyses were performed using the Statistical Package for Social Sciences (SPSS), version 11.5 for Windows. The percentages, means and standard deviations of the data were determined. In this study, the variables exhibiting a normal distribution were analyzed using parametric tests, and the variables not exhibiting a normal distribution were analyzed using non-parametric tests. When comparing data of demographic and disease characteristics and SWLS' and HPLP II' means according to the demographic and disease characteristics, as parametric tests, Student's t-test and the analysis of variance (ANOVA) were used. Non parametric evaluations of the data were performed with Mann-Whitney U test and Kruskal-Wallis test. Correlations between SWLS and HPLP II scores were analysed using Pearson correlation test. The measure for statistical significance was established as $P < 0.05$.

Results

A look at the patient characteristics shows that 25.5% were aged 30-45 and another 25.5% were 81 and over; 81.9% were male, 56.4% were literate but not educated, 87.2% were married, 64.4% lived in a nuclear family and 34.2% were not occupied.

Table 1 shows the distribution of SWLS scores according to different patient characteristics. No significant differences could be established accord-

ing to age, sex, educational status, marital status or family type ($p>0.05$).

SWLS mean scores were significantly different according to the categories of professional status ($p=0.001$); the lowest SWLS was scored by the unemployed, whereas the highest by the retired patients.

Patient Characteristics	S	%	X	SS	Test Value Significance Level
Age					
30-45	38	25.5	13.50	3.88	F=0.930, p=0.482
46-64	36	24.2	14.72	3.73	
65-80	37	24.8	14.29	3.25	
81 and older	38	25.5	12.25	3.94	
Sex					
Female	27	18.1	13.48	3.33	t=-1.277, p=0.203
Male	122	81.9	14.51	3.90	
Educational status					
Illiterate	37	24.9	13.78	3.18	$\chi^2=4.848, p=0.303$
Literate with no schooling	84	56.4	14.28	3.77	
Primary school	13	8.7	15.23	5.26	
Middle school	9	6.0	16.55	3.77	
High school	6	4.0	13.00	4.14	
Marital Status					
Married	130	87.2	14.51	3.79	Z=-1.580, p=0.114
Widowed	19	12.8	13.05	3.81	
Family type					
Nuclear	96	64.4	14.27	3.91	t=-0.249, p=0.804
Extended	53	35.6	14.43	3.67	
Occupation					
Not gainfully occupied	51	34.2	12.82	3.39	$\chi^2=16.549, p=0.001$
Laborer	47	31.5	14.40	3.35	
Employee	8	5.4	13.62	4.13	
Retired	43	28.9	16.16	4.02	
Family history of heart disease					
Yes	85	57.0	14.21	3.52	t=-0.430, p=0.668
No	64	43.0	14.48	4.20	
Disease duration (years)					
0-5	51	34.2	14.82	4.22	F=2.589, p=0.079
5-10	47	31.5	14.85	4	
11-15	51	34.2	13.35	3	

Table 1: Comparison of SWLS means scores according to patient characteristics and disease characteristics.

No significant differences in SWLS could be found according to the presence or absence of family history of heart disease or the CAD duration.

Table 2 details the mean HPLP II scores by the patients' age groups and sex. No significant correlation could be found between age and any of the health responsibility, nutritional habits, interpersonal relationships and stress management subdimension scores ($p>0.05$).

Age did, however, significantly correlate with the physical activity and spiritual growth subdimension scores ($p=0.002$ and 0.032 , respectively). While physical activity was highest in the 30-45 and lowest in the 81 and above age group, the peak

for spiritual growth was in the 46-64 age group, while lowest in patients over 81.

Age significantly correlated also with total HPLP II score ($p=0.009$). The lowest scores were in the 81 and over age group.

No significant correlation could be established between patient sex and health responsibility or interpersonal relationships subdimension scores ($p>0.05$).

Patient sex was correlated to the nutrition, spiritual growth and stress management subdimension scores ($p=0.037, 0.001$ and 0.001 , respectively). The physical activity, spiritual growth and stress management subscores were higher in males whereas the nutrition one was higher in the female.

Patient sex also significantly correlated with total HPLP II score ($p=0.028$); being lower in the female patients.

Table 3 shows the mean HPLP II subdimension scores by educational and marital status. Educational status was correlated to the health responsibility, physical activity, spiritual growth and stress management subdimension scores ($p=0.006, p<0.001, p<0.000, p<0.000$ and $p=0.049$, respectively). Subdimension scores for spiritual growth, interpersonal relationships and stress management were highest in the middle school graduates and lowest in the illiterate patients.

The highest score in the physical activity subdimension was in the elementary school graduates and the lowest in the illiterate patients ($p<0.001$).

No significant correlation was found between the educational status and nutrition subdimension scores ($p>0.05$).

Educational Status significantly correlated with total HPLP II score ($p<0.001$). The lowest total score was in the illiterate patients.

A comparison of HPLP II subdimension scores disclosed no relationships with health responsibility or nutrition ($p>0.05$).

There were, however, statistically significant correlations of marital status with the spiritual growth and stress management subscores (respectively $p<0.001$ and $p=0.001, 0.008$ and 0.001). The results showed higher physical activity, spiritual growth, interpersonal relationships and stress management subscores than in the widowed patients.

Marital status significantly correlated with total HPLP II score ($p=0.001$). The lowest score was found in widowed patients.

Table 4 shows the distribution of HPLP II scores by the patients' occupation and family type.

Characteristics			Health Responsibility		Physical Activity		Nutrition		Spiritual Growth		Interpersonal Relationships		Stress Management		Total	
	S	%	X	SS	X	SS	X	SS	X	SS	X	SS	X	SS	X	SS
Age																
30-45	38	25.5	20.63	3.42	12.42	3.45	20.15	2.27	22.92	2.82	24.34	2.65	19.21	2.10	119.68	10.53
46-64	36	24.2	21.11	3.73	12.38	2.83	21.41	4.55	23.22	3.33	24.63	2.77	19.27	2.02	122.05	13.80
65-80	37	24.8	20.13	3.03	11.02	2.78	20.24	2.53	22.05	3.29	23.43	3.28	19.43	2.32	116.32	13.46
81 and older	38	25.5	19.47	2.88	10.21	2.47	19.50	2.41	21.23	3.16	23.21	3.02	18.97	1.97	112.60	12.37
Test / Significance level			F=1.692, p=0.171		F=5.205, p=0.002		F=2.456, p=0.063		F=3.012, p=0.032		F=2.045, p=0.110		F=0.306, p=0.821		F=3.974, p=0.009	
Sex																
Female	27	18.1	20.33	3.29	9.44	1.18	21.44	5.50	20.51	3.56	22.88	3.10	18.03	1.53	112.66	15.43
Male	122	81.9	20.32	3.32	11.95	3.12	20.06	2.22	22.75	3.00	24.12	2.91	19.48	2.12	118.71	12.14
Test / Significance level			t=0.008, p=0.994		t=-4.105, p=0.000		t=2.108, p=0.037		t=-3.376, p=0.001		t=-1.968, p=0.051		t=-3.351, p=0.001		t=-2.223, p=0.028	

Table 2: Distribution of patients' HPLP II scores by age and sex.

Characteristics			Health Responsibility		Physical Activity		Nutrition		Spiritual Growth		Interpersonal Relationships		Stress Management		Total	
	S	%	X	SD	X	SD	X	SD	X	SD	X	SD	X	SD	X	SD
Education Status																
Illiterate	37	24.9	19.13	2.50	9.62	1.36	19.62	2.84	20.45	3.17	22.29	2.91	18.51	1.77	109.64	11.19
Literate w/o schooling	84	56.4	20.52	3.29	11.85	3.14	20.21	2.37	22.41	2.81	24.05	2.90	19.25	2.07	118.32	11.45
Elementary	13	8.7	20.84	3.71	13.53	3.77	20.69	2.42	23.23	3.24	24.76	2.24	19.76	2.71	122.84	13.84
Middle Sch	9	6.0	23.55	3.00	12.88	2.75	23.66	7.63	26.33	2.44	26.55	2.35	20.88	2.08	133.88	15.06
High Sch	6	4.0	19.00	4.24	11.66	2.33	20.16	1.72	25.16	1.32	25.66	1.63	19.50	1.51	121.16	4.95
Test / Significance level			χ ² =14.478, p=0.006		χ ² =25.800, p=0.000		χ ² =6.312, p=0.177		χ ² =31.352, p=0.000		χ ² =21.465, p=0.000		χ ² =9.521, p=0.049		χ ² =27.773, p=0.000	
Marital Status																
Married	130	87.2	20.40	3.20	11.80	3.09	20.46	3.11	22.66	3.22	24.10	3.04	19.43	2.10	118.89	13.01
Widowed	19	12.8	19.78	3.99	9.42	1.21	19.26	2.92	20.15	2.24	22.52	1.98	17.73	1.32	108.89	8.65
Test / Significance level			Z=-1.073, p=0.283		Z=-3.593, p=0.000		Z=-1.928, p=0.054		Z=-3.439, p=0.001		Z=-2.644, p=0.008		Z=-3.348, p=0.001		Z=-3.428, p=0.001	

Table 3: Distribution of HPLP II mean scores according to patients' educational and marital status.

A significant correlation was not shown between the patients' occupation on one hand and health responsibility or nutrition subdimension scores on the other (p>0.05).

The difference was significant, though, between occupation and the physical activity subscore (p<0.001); lowest was physical activity in the unemployed subjects and highest among the retired.

Occupation was significantly correlated with spiritual growth and stress management subscores (p<0.001 for both). The spiritual growth, interpersonal relationships and stress management sub-

scores were lowest in the unemployed and highest in the employees.

Occupation significantly correlated with total HPLP II score (p<0.001). The lowest total score was in the unemployed patients.

When examining HPLP II subdimension totals according to family type, no significant differences could be evidenced between that and health responsibility, nutrition, spiritual growth, interpersonal relationships or stress management (p>0.05).

A significant difference according to physical activity subscore was found among family types

Characteristics			Health Responsibility		Physical Activity		Nutrition		Spiritual Growth		Interpersonal Relationships		Stress Management		Total	
S	%		X	SD	X	SD	X	SD	X	SD	X	SD	X	SD	X	SD
<i>Occupation</i>																
Unemployed	51	34.2	19.98	3.28	9.82	1.89	20.33	4.47	20.27	3.15	22.50	3.02	18.11	1.46	111.03	13.43
Laborer	47	31.5	19.72	3.32	11.91	2.78	20.10	2.27	23.06	2.88	23.95	2.77	19.29	2.11	118.06	11.99
Employee	8	5.4	21.12	3.60	12.62	3.58	20.75	1.66	25.25	2.05	26.00	1.85	20.62	2.32	126.37	9.33
Retired	43	28.9	21.25	3.12	12.83	3.43	20.44	2.01	23.48	2.48	25.09	2.58	20.18	2.08	123.30	10.19
Test / Significance level			$\chi^2=7.056, p=0.070$		$\chi^2=31.320, p=0.000$		$\chi^2=3.150, p=0.369$		$\chi^2=38.734, p=0.000$		$\chi^2=23.719, p=0.000$		$\chi^2=25.659, p=0.000$		$\chi^2=28.974, p=0.000$	
<i>Family Type</i>																
Nuclear	96	64.4	14.27	3.91	20.66	3.37	12.10	3.16	22.55	3.34	24.21	2.94	19.33	2.15	119.43	13.34
Extended	53	35.6	14.43	3.67	19.71	3.11	10.41	2.44	21.98	2.98	23.32	2.97	19.01	2.00	114.32	11.63
Test / Significance level			$t=1.689, p=0.093$		$t=3.369, p=0.001$		$t=1.308, p=0.193$		$t=1.036, p=0.302$		$t=1.776, p=0.078$		$t=0.875, p=0.383$		$t=2.342, p=0.021$	

Table 4: Distribution of HPLP II mean scores according to patients’ occupation and family type.

($p=0.001$); it was highest in patients living in nuclear families.

Family type significantly correlated with total HPLP II score ($p<0.021$). The lowest score was found in patients who lived in extended families.

Table 6 presents data showing a significant, parallel correlation between SWLS and either the subdimension or total scores for HPLP II ($p<0.05$).

Characteristics	Health Responsibility		Physical Activity		Nutrition		Spiritual Growth		Interpersonal Relationships		Stress Management		Total			
	S	%	X	SS	X	SS	X	SS	X	SS	X	SS	X	SS		
<i>Family History of Heart Disease</i>																
None	85	57.0	20.76	3.52	11.74	3.03	20.57	3.35	22.58	3.28	24.14	2.96	19.11	2.05	118.92	12.94
Present	64	43.0	19.75	2.92	11.18	3.02	19.96	2.73	22.03	3.13	23.57	2.99	19.35	2.16	115.87	12.87
Test / Significance level			$t=1.871, p=0.063$		$t=1.105, p=0.271$		$t=1.182, p=0.239$		$t=1.045, p=0.298$		$t=1.144, p=0.254$		$t=-0.695, p=0.488$		$t=1.428, p=0.155$	
<i>Disease Duration (years)</i>																
0-5	51	34.2	19.78	3.5	11.19	3.04	19.94	2.54	22.25	3.3	23.15	3.04	19.39	2.08	115.72	12.77
6-10	47	31.5	20.21	2.62	12.14	3.09	20.44	2.32	22.65	3.15	24.34	2.86	19.34	2.17	119.14	11.89
11-15	51	34.2	20.98	3.59	11.21	2.91	20.56	4.12	22.15	3.23	24.23	2.92	18.94	2.04	118.09	14.05
Test / Significance level			$F=1.729, p=0.181$		$F=1.570, p=0.211$		$F=0.577, p=0.563$		$F=0.328, p=0.721$		$F=2.475, p=0.088$		$F=0.696, p=0.500$		$F=0.906, p=0.406$	

Table 5: Distribution of HPLP II scores according to the presence or absence of a family history of heart disease and patients’ disease duration.

	Health Responsibility	Physical Activity	Nutrition	Spiritual Growth	Interpersonal Relationships	Stress Management	Total Score
<i>Satisfaction with Life</i>	$r=0.205, p=0.012$	$r=0.237, p=0.004$	$r=0.158, p=0.054$	$r=0.506, p=0.000$	$r=0.361, p=0.000$	$r=0.506, p=0.000$	$r=0.436, p=0.000$

Table 6: Correlations between SWLS and HPLP II scores.

Table 5 compares HPLP II mean scores according to the presence or absence of family history of heart disease or the disease duration. Family history of heart disease did not seem to correlate with either HPLP II subdimension or HPLP II total scores ($p>0.05$). The result was similar for disease duration.

Discussion

Data Relative to Satisfaction with Life Scale (SWLS)

Even though no significant correlation had been shown to exist between age and SWLS, the highest mean scores were in the 46-64 age group

and the lowest in patients aged 81 or older one (Table 1). Among the possible causes of the fall in the SWL level with age are problems specific to the advanced age group, such as cognitive and physical regression, the abandonment of a productive function, changes in the social environment, weakening of interpersonal support and the loss of health^(26,27).

In the absence of a significant difference in SWLS relative to the patients' sex, mean scores appeared higher in males (Table 1), a finding consistent with the results of earlier reports^(28,29).

SWLS scores seemed to be highest in middle school graduates even though no significant differences relative to educational status had been evidenced (Table 1). While studies on different aspects report an increase of SWL with increasing patient education level^(30,31), the fact that a large majority (81%) of our subjects were illiterate or barely literate may have caused this finding.

Similarly, marital status was not found to be correlating significantly with SWLS, while the mean scores appeared to be higher in married patients (Table 1). This impression was also consistent with earlier studies. Spouses and children may be considered the psychological and social support of married patients and causing a better outcome^(29,30).

Likewise no significant difference could be evidenced in SWLS according to family type while mean scores seemed higher in patients living in an extended family.

SWLS score means were significantly different according to occupation ($p=0.001$); the highest scores being among the retired patients (Table 1). This finding is similar to the result obtained by Erdem et al. in a study performed in haemodialysis patients. Retirement, along with the accompanying aging, may be thought to cause such a result as the individual considers having reached most of one's goals in life.

Discussion of Health-Promoting Lifestyle Profile II (HPLP II) Data

Age group was significantly correlated with the HPLP II physical activity and spiritual growth subdimension scores and the total HPLP II score ($p=0.002$, 0.032 and 0.009 respectively) (Table 2). While physical activity fell with advancing age, spiritual growth was at its highest in the 46-64 age group and lowest in patients' aged 81 and over one. These findings were consistent with earlier studies⁽³¹⁻³⁴⁾. The inverse relationship between age and

physical activity may be ascribed to a worsening of bodily condition. As for the increase, parallel with age, of the spiritual growth level, it may be interpreted as a result of the already established character of many facets of life and the perception of self and to the larger portion of time dedicated to the subject's own person.

Patient sex was correlated to the HPLP II physical activity, nutrition, spiritual growth and stress management subdimension scores, as well as the total HPLP II score ($p<0.001$ and $p=0.037$, 0.001 0.001 and 0.028 , respectively) (Table 2). The physical activity, spiritual growth and stress management subscores were higher in the males while the nutrition subscore was higher in the female patients. These findings in our study were consistent with earlier reports^(28, 31, 33-36).

A possible explanation for the higher level of physical activity in the men might be the use of such activity by the latter as a means for socializing and getting rid of stress, while women may be unable to reserve much time for it because of their responsibilities regarding the care of children, family and household, or their not attributing importance to exercise. The better and more correct nutrition of women may be a result of their being at home more often, which may entail a more regular feeding pattern.

Educational status was correlated to health responsibility, physical activity, spiritual growth, interpersonal relationships and stress management subdimension scores of HPLP II and to the total HPLP II score ($p=0.006$, $p<0.001$, $p<0.001$, $p<0.001$, $p=0.049$ and $p<0.001$, respectively) (Table 3).

HPLP II mean scores were highest in middle school graduates and lowest in illiterate patients. Reports from earlier studies, however, find that HPLP II mean scores increase in parallel to the educational level^(31,32,35).

Educational status was correlated to health responsibility, physical activity, spiritual growth, interpersonal relationships and stress management subdimension scores of HPLP II and to the total HPLP II score ($p=0.006$, $p<0.001$, $p<0.001$, $p<0.001$, $p=0.049$ and $p<0.001$, respectively) (Table 3). HPLP mean scores were found to be higher in married patients. These findings in our study were similar to results of earlier studies^(31,33,34).

It may be that the higher level of physical activity, spiritual growth, interpersonal relationships and stress management are a result of the support, the order and the feeling of responsibility which

should go with the married status of these patients.

The patients' occupation, on the other hand, correlated with physical activity, spiritual growth, interpersonal relationships and stress management subdimension scores of HPLP II and the total HPLP II score ($p < 0.001$ all) (Table 4). While the physical activity subscore was higher in the retired persons, those measuring spiritual growth, interpersonal relationships and stress management were elevated among employees compared to other employment status groups. The higher physical activity level of retired patients might be traced back to their having more time to dedicate to it. As for the better performance in spiritual growth, interpersonal relationships and stress management among employees, it may be attributed to a supply of sources of support in their professional environment, which could also be providing a feeling of being useful to one's self and social environment, as well as more occupational self-reliance.

The physical activity subscore and the total score of HPLP II significantly depended on the types of family in which the patient lived ($p = 0.001$ and 0.021 , respectively) (Table 4). The highest physical activity subdimension score was among patients living in nuclear families, a result that might be theorized to result from the larger amount of time the patient can reserve for one's self.

Family history of heart disease did not seem to correlate with an HPLP II subdimension or the HPLP II total score ($p > 0.05$). A study by Thanavaro et al.(35) of women with CHD found low mean HPLP scores in subjects with family history of heart disease.

We could not establish a significant correlation between disease duration and HPLP II mean scores ($p > 0.05$) (Table 5). One could here risk the hypothesis that individual health-promoting efforts (such as obtaining the necessary education) affect the outcome rather than disease duration.

A statistically significant relationship between HPLP II and SWLS scores was also found (Table 6); this parallel relationship with SWLS also was established for HPLP II subdimensions. One may think that the health-promoting behaviour of the subjects would promote their wellness.

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