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# Self Actualization Scores As Predictors Of Physical Health

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SELF ACTUALIZATION SCORES  
AS PREDICTORS OF PHYSICAL  
HEALTH

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Self Actualization Scores

As Predictors Of Physical Health  
(TITLE)

BY

Gloria A. Leitschuh

**THESIS**

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Self-Actualization Scores as  
Predictors of Physical Health

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Running head: Self-Actualization and Health

Abstract

A study was completed to investigate the predictive validity of two measures. It was hypothesized that it would be possible to predict subjects' physical health status from their scores obtained on scales of self-actualization. The independent variable was subjects' obtained scores on the Personal Orientation Inventory (POI). The dependent variable was subjects' obtained scores on the Cornell Medical Index (CMI). Regression analysis and chi square analysis were used to test research questions.

The results of each statistical analysis indicate that a significant relationship exists between the CMI health status scores and POI scale 7, self regard. This scale measures a subject's acceptance of self due to personal strenghts. None of the other eleven POI scales reached levels of significance.

### Acknowledgements

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# Self-Actualization and Health

## Table of Contents

	Page
Chapter I Introduction	
Background of the Problem.....	3
Description and Importance of the Problem....	3
Research Problems.....	5
Definition of Terms.....	6
Proposal.....	8
Statement of Hypotheses.....	8
Chapter II Review of the Literature	
Lifestyle Practices.....	10
Emotional Health.....	11
Emotional Health and Headaches.....	12
Emotional Health and Heart Attacks.....	13
Emotional Health and Cancer.....	14
Other Illnesses.....	15
Chapter III Methodology	
Subjects.....	17
Instrumentation.....	17
Personal Orientation Inventory.....	17
Cornell Medical Index.....	18
Procedure.....	20
Data Analysis.....	21



## Self-Actualization and Health

### Chapter IV Results

Hypothesis I.....	22
Hypothesis II.....	22
Hypothesis III.....	24
Summary.....	28

### Chapter V Discussion

Implications of the study.....	30
Limitations of the study.....	31
Future Research.....	32
References.....	34

CHAPTER I

Introduction

Background of the Problem

One of the many roles of counseling psychologists is to provide preventive health care, which will ultimately increase the likelihood of emotional and physical well-being. In order to increase the likelihood that healthy people will remain healthy, it is desirable to examine the psychological differences which exist between those who have maintained emotional and physical health and those who have not. Many studies have been conducted which demonstrate the links between existing psychological factors and the development and cure of specific physical illnesses. It is the opinion of this author that the whole person concept, which includes physical, mental, emotional, and spiritual well-being, should be considered when conclusions are drawn about causality of health status. Genetic and environmental influences also need to be considered. According to Benbossat, Cohen, and Antonanshy (1981), a given disease may result from an interaction between the etiologic host (heredity) and environmental conditions (pollution and social pressure to use drugs). Although environmental and genetic influences are important factors of overall health, psychological and emotional contributors will be

the focus of this thesis. An investigative study was completed in order to demonstrate the validity of predicting subjects' physical symptoms reported on the Cornell Medical Index (CMI) from their reported scores on the Personal Orientation Inventory (POI).

#### Description and Importance of the Problem

The uniqueness of individuals' interactions with and responses to their environments appears to be related to specific illnesses. Information concerning specific methods for reducing levels of stress and methods for coping with the environment have been readily available to the public throughout the past 30 years. Physicians, the media, and a host of books and journals have dealt with effective emotional coping strategies. Various personality traits, which have been related to physical illness, have also been given special attention.

In some instances an actual event is less likely to predispose an individual to an illness than a person's specific internal cognitions and emotional responses to the event (Leichtman & Japikse, 1985; Kidman, 1984). If emotional responses and personality patterns are learned it follows that some diseases thought to be genetically inherited might be the result of learned emotional responses. Future research may provide

the information necessary in order to draw additional relevant conclusions.

#### Research Problems

According to Lazarus (1966) reaction to life changes or demands depends on the capacity of the person to deal with them. Cohen (1979) supports studying those psychological factors (or modes of coping) that enable individuals to meet threatening situations without developing illness. He suggests that although some people do become ill when no discernible changes have occurred in their lives, others may find healthy ways of dealing with change. In order to learn more about these coping mechanisms, Cohen suggests that research is needed comparing those who handle life changes well and those who break down following what seems to be little provocation.

Many studies demonstrate a significant relationship between existing personality factors and the development of specific physical illnesses. The controversial nature of these studies seems to revolve around their largely retrospective nature. Such investigations generally study subjects who are already diseased, infected with a virus, or physically incapacitated. A weakness of such investigations is that traits identified in persons with a particular disease may have resulted from their having

the disease rather than having been contributors to the disease.

In most cases, once a disease is diagnosed, increased expressions of hopelessness and helplessness can be expected, and patients are likely to respond differently to questions about their health related experiences. For example, researchers once thought that Down's syndrome might be a result of mothers' emotional stress that occurred during early pregnancy, because mothers of Down's syndrome children recalled such stressful events when asked about their pregnancies after their children were born. It was only after the discovery that a chromosomal defect produced this anomaly that such stress-related etiological hypotheses were finally discarded (Brown 1974). According to Cohen (1979) predictive studies, following large groups of healthy adults with no disease, are necessary in order to overcome these research deficiencies. The present study has attempted to correlate the health of adults with measures of personality.

#### Definition of terms

According to Jourard (1963) the healthy personality is manifested by individuals who have been able to gratify basic needs through acceptable behavior such that their own personality is no longer a problem. Such a

## Self-Actualization and Health

7

person can take him/herself more or less for granted and devote energies to socially meaningful interests beyond security or status. In the view of existentialists, "the healthy personality takes responsibility for his actions, makes decisions, and seeks to transcend the determining, limiting effects on his behavior of handicap, social pressures to conformity, extreme stress, and biological impulses and feelings" (Jourard, 1963, p. 13).

Maslow (1954) identified fifteen traits which appeared consistently in what he called the self actualizing person. Those traits are such characteristics as spontaneity, a strong sense of ethics, creativeness, and a high degree of acceptance of themselves and others. In addition, Maddi and Kobasa (1984) have defined some of the characteristics which they have found in subjects who possess "personality hardiness". These characteristics include "resilience, activeness, self-reliance, and zest for living" (p. 31). Furthermore, (Maddi and Kobasa, 1984), Kobasa found that "personality hardiness" combines three tendencies, namely, "toward commitment rather than alienation, toward control rather than powerlessness, and toward challenge rather than threat" (p.31). The results of their two year study show that subjects who possess these attitudes

toward life remain healthier than those who did not possess these attitudes.

### Proposal

The purpose of the present study was to determine if personality factors can accurately predict the subsequent acquisition of physical disease symptoms. A statistical study was conducted in order to investigate the predictive validity of two sets of measures. Ninety-two volunteer students from a medium-sized (10,000 students), midwestern university served as subjects. It was proposed that subjects' health status scores obtained on the Cornell Medical Index (CMI) could be predicted by their scores obtained on the twelve scales of the Personal Orientation Inventory (POI). Regression analysis and chi square analysis were used to test the research questions.

### Statement of Hypotheses.

The following three hypotheses were recommended for research.

Null Hypothesis 1: There will be no significant relationship between CMI values and twelve POI scales as measured by multiple regression analysis.

Null Hypothesis 2: There will be no significant relationship between each of the POI subscale scores (standard scores above or below 40) and the CMI values

## Self-Actualization and Health

9

(scoring below or above 25 yes responses) as measured by two 2 by 2 chi square analyses.

Null Hypotheses 3: There will be no significant differences between the scores obtained for males and scores obtained for females on the POI and the CMI.



## CHAPTER II

## Review of the Literature

Lifestyle Practices

The results of a study by Petosa (1984) support the contention that individuals with self actualizing characteristics tend to engage in "healthier lifestyle" practices when compared to less actualizing people. A trend analysis using multiple regression techniques was used to determine the strength and shape of the relationship between self actualizing scores obtained from the Personal Orientation Inventory (POI) and scores obtained from the Health Practices Inventory (HPI). When assessed as being relatively more actualizing, subjects reported significantly more practices supportive of health. Better physical health, then, might result from healthy lifestyle practices. In addition, characteristics measured by the POI include personality traits, which when present may reduce emotional stress and, thus, decrease susceptibility to illness or disease.

Holmes and Rahe (1967) have investigated the relationship between stressful life events and the onset of illnesses of all types. According to Holmes and Rahe (1967) life stress is determined by life events or life changes that require a significant change in the life pattern of the individual. They include life changes

that are considered both positive and negative in nature. The Schedule of Recent Experiences (SRE) lists these various life changes, and the subject indicates how many times in the preceding two year period each of these has occurred (Holmes & Rahe, 1967). These researchers have demonstrated that life events cluster significantly in a two-year period preceding the onset of illness and that the onset of illness can be predicted from the total number of life events. However, according to Hinkle (1974) the life change approach emphasizes the negative effects of life changes and disregards the substantial number of people who undergo severely stressful events without developing illness.

#### Emotional Health

Emotional responses have been found to act on hormones of the adrenal glands. Hormones released by the pituitary are also responsive to psychological stress. Selye, as reported in Arehart-Treichel (1975), found that psychological stress can damage the thymus, a major gland of the immune system. Earlier, Mason (1968) found that the metabolic effects of hormones are dependent not on the absolute level of any one hormone but on the relative overall balance among several hormones.

According to Lock and Colligan (1988) certain processes can interfere with the work of immune cells.

They indicate that biochemicals released under stress inhibit the immune system and that people who do not cope well in stressful situations show a decline in the activity of their natural killer cells.

Walker and Codd (1985) have proposed that there exists a direct link between the nervous and immune systems. Their clinical and experimental studies have shown that "individuals suffering emotional trauma are more susceptible than others to developing physical illness". Ben-Sira (1985) found that subjects who maintained emotional homeostasis and possessed a sense of potency (a feeling of confidence in one's own capacities and in the meaningful orderliness of society) could better cope with stress and thus diminish the deleterious effects on physical health.

#### Emotional Health and Headaches

One common physical manifestation of stress is the migraine headache. Marcussen and Wolff (1949) were able to induce headaches in their subjects by using "stress-inducing" interview techniques that involved discussing personal topics in a way that created resentment and guilt. More recently, Wolff (cited in Schmidt 1985) completed clinical observations that demonstrated the association of migraine headaches with personality traits, such as inflexibility, unrelenting

resentment, preoccupation with achievement, and an excessive amount of parental dependency. Because Wolff's approach is based on clinical interpretation, it is vulnerable to errors of subjective clinical judgment. However, Wolff's work has provided the impetus for subsequent scientific research in this area.

#### Emotional Health and Heart Attacks

Heart attack victims have been studied at length in order to determine personality types which may contribute to illness. Friedman and Rosenman (1975) have identified what they call the "Type-A coronary-prone behavior pattern." They have associated the aggressive, competitive, and highly successful person with the occurrence of heart attacks, and they suggest that the more relaxed, easygoing person (Type-B) will not be as susceptible to heart attacks. In an eight-year follow-up study of individuals initially identified as Type A's, Rosenman et al. (1975) found that Type A's had more than twice the rate of heart disease compared to individuals who did not exhibit the Type A behavior pattern. Temoshok's study (cited in Locke & Colligan 1988) identified a new pattern of behavior that she dubbed the Type C personality, the dominant characteristic being the nonexpression of emotion, especially negative feelings. Temoshok and her colleagues interviewed and videotaped

150 melanoma patients and found a distinct personality type among them. The video tapes were viewed by psychologists who rated each individual as a Type A, B, or C. Following the course of each subject's illness for the next one and one half years, Temoshok found that the majority of the Type C's were concentrated in the relapse group.

The adverse effects of psychological stress on physical health were addressed by Lock and Colligan (1988). They found that biochemicals released under stress inhibit the immune system, and that people who do not cope well in stressful situations show a decline in the activity of their natural killer cells.

#### Emotional Health and Cancer

Thomas, as reported in McQuerter (1978), collected longitudinal psychological information on 1,337 medical students. Her data indicate that cancer tends to occur more often in low-key, non-aggressive individuals who keep their emotions to themselves. Although this study includes a large sample of subjects over a long period of time, the validity of the study is compromised by the fact that viruses, radiation, chronic physical irritants, and countless chemicals also cause cancer (McQuerter, 1978). Her data does, however, lend support to other studies by LeShan (cited in McQuerter, 1978). In

LeShan's study of 71 terminally ill cancer patients, he reported that three emotional aspects occurred in his patients significantly more often than in a control group of 12,000. They were labeled as (a) the inability to express anger or resentment, (b) the presence of emotional tension concerning the death of a parent, and (c) a pervasive despair that seemed to arise from a long series of perceived failures and the loss of a central relationship. These emotional aspects were present in 68 of the 71 patients. LeShan's study has been criticized for using a small volunteer sample.

#### Other Illnesses

Several additional illnesses have been linked to psychological stress. Among these are hypertension, ulcerative colitis, and gastrointestinal illnesses. In a study of hypertension and personality by Pilowsky et al. (1973) a significant relationship was found to exist between blood pressure levels and autonomic activity on one hand and personality variables on the other. These personality attributes were described as needing to adopt a differential and self abasive attitude toward others and a tendency to be lacking in ego strength. Although this study provides objective measures correlated with a wide range of personality attributes, the subject sample was small.

Ulcerative colitis is one of the most serious and perplexing of all gastroenterologic conditions. It afflicts hundreds of thousands of persons, yet no physical cause for the disease has been identified (Arehart-Treichel, 1980). A 1970 study of ulcerative colitis patients by McGegney, (cited in Aregart-Treichel, 1980) indicated a high incidence of emotional disturbances and life crises within six months preceding that disease. It was also found that the degree of severity of disease was correlated with the degree of trauma involved with the emotional disturbance.

Greenwald (1984) completed a study comparing gastrointestinal and dermatological patients. The gastrointestinal patients displayed a responsive style to their environment and personal relationships whereas the dermatological patients displayed a nonresponsive style to their environment and personal relationships. The question of etiology is not one that can be answered in this type of study. However, consideration should be given to the possibility that innate predispositions interact with environmental experience to produce a tendency toward one or another personality style.

CHAPTER III

Methodology

This chapter is comprised of a description of the subjects studied, the design of the study, the instruments used, and the data analysis.

Subjects

The target population studied was 92 students recruited from a university with ten thousand students. Subjects were recruited from cooperating instructors teaching sections of Psychology, Educational Psychology, Health, and Senior Seminar during the spring and intersession of 1989. Participation in the study was voluntary and not a requirement for successful completion of any course.

Instrumentation

Personal Orientation Inventory

The Personal Orientation Inventory (POI) was developed by Everett L. Shostrom in 1962 and is available through the Educational and Industrial Testing Service. According to Buros (1972, 1978 & 1985) the POI is appropriate for administration to grade nine through adult. The test produces twelve scores: Time competence, inner directed, self-actualized value, existentiality, feeling reactivity, spontaneity, self regard, self acceptance, nature of man,



synergy, acceptance of aggression and capacity for intimate contact.

According to the test manual developed by Shostrom the POI "...consists of 150 two-choice comparative value and behavior judgements. The items are scored twice, first for two basic scales of personal orientation, inner directed support (127 items) and time competence (23 items) and second for ten subscales each of which measures a conceptually important element of self actualization" (Shostrom, 1966, p. 4).

The POI can be self administered individually or in groups. Estimated completion time is usually about 30 minutes. It can be computer scored or hand scored. Raw scores for each scale can be converted into standard scores or a profile sheet, which was constructed from adult norms. (Shostrom 1962-1968).

#### Cornell Medical Index

The Cornell Medical Index (CMI) was developed in 1949 at the Cornell University Medical College. Revisions were made in 1986 in order to update the medical terminology. It was developed for use by physicians in collecting pertinent medical and psychiatric data in a standardized and efficient manner. It provides information regarding a person's present symptoms, medical history, and family history. The CMI

contains over 200 questions, which are answered by circling a "yes" or "no" response. A "yes" answer indicates that the patient claims to have the symptom. Technical terms are avoided, but when their use is necessary, an explanation is added in parentheses (Brodman, Erdmann, Wolff & Miskovitz, 1949/1986).

The CMI contains four types of questions: Those relating to bodily symptoms; those relating to past illnesses; those relating to family history; and those relating to behavior, mood, or feeling. Related questions are grouped in sections, each headed by a letter of the alphabet. Separate forms are available for male and female respondents. The tests are identical with the exception of questions contained in the genitourinary section (Brodman et al. 1949/Miskovitz, 1986).

The CMI is self-administered and can be given to people singly or in groups. It is necessary only to hand the form to the respondents and ask them to complete it. The printed directions to circle the "yes" or the "no" after each question are easily followed. Completion time is esimated at ten to thirty minutes (Brodman et al. 1949/Miskovitz, 1986).

When the CMI was developed many variations of the form of each question were devised and tested on more

than 1,000 individuals in several geographic areas. The wordings that yielded answers substantiated in oral interviews were selected for inclusion on the form (Brodman et al., 1949).

No special training or experience with the CMI is necessary in order to interpret responses effectively. The number of "yes" responses are determined by examining the form. Reporting twenty-five or more symptoms on the CMI is regarded as indicative of a serious disorder (Brodman et al. 1949/Miskovitz, 1986). Therefore, the chi square analysis uses twenty-five "yes" responses as the categorical division.

#### Procedure

Subjects were administered two testing instruments during one session. Tests were administered by this researcher. All students received the following instructions,

"Research is being conducted in order to determine the predictive validity of two testing instruments, the Personal Orientation Inventory and the Cornell Medical Index. Your participation in this research is voluntary. Identification of test results will be limited to age and sex of each participant. Each of your answer sheets

will be marked with an identification number which will assist us in correlating the data.

You will not be notified of the results."

The researcher then read the instructions for each test. No time limit was given. It was found that both tests can be administered in one hour.

#### Data Analysis

A statistical study was designed to determine if personality measures obtained from the Personal Orientation Inventory can accurately predict the number of symptoms of physical disease determined from the Cornell Medical Index. Multiple regression analysis, using SPSS, was used to test the first hypothesis. The independent variable was the subject's obtained scores on the twelve scales of the POI. The dependent variable was subject's obtained physical health scores on the CMI. Chi square analysis was used to test the second hypothesis by sorting CMI scores into two groups using twenty-five "yes" responses as the cutoff. The personality variables were dichotomized by using the standard score of forty as the cutoff for each scale. An analysis of variance was used to compare CMI and POI scores for males and females. The results were used to test null hypothesis three. The significance level was set at the .05 level for each test.

## Chapter IV

## Results

Hypothesis I

The first hypothesis was that multiple regression analysis will fail to find a significant relationship between Cornell Medical Index values and the twelve Personal Orientation Inventory scales. Table 1 presents the results of the analysis. The table includes t scores, beta results, and significance levels. As can be seen from the table, multiple regression showed the CMI values and the POI seven scale (self regard) to be significantly related  $F(1,92) = 18.82, p < .0001$ . Low scores on the CMI correlated with high scores on the POI for this scale. No other significant relationships were found. Therefore, the first hypothesis is retained for eleven of the twelve scales. The hypothesis is rejected for scale seven of the POI.

Hypothesis II

The second hypothesis was that chi square analysis would show no significant relationship between each of the POI subscale scores (standard scores above or below forty) and the CMI (scoring below or above twenty-five "yes" responses). Table 2 presents the results of the chi square analysis. The table includes chi square

Table 1

Summary of the relationships found between Cornell Medical Index values and Personal Orientation Inventory scales as indicated by multiple regression analysis.

---

N = 92            Males = 35            Females = 57

---

POI Scale	t score	beta	significance level
1	-.95	-.102	.344
2	-.42	-.055	.678
3	2.15	-.055	.034
4	-1.30	-.132	.196
5	.37	.043	.714
6	.06	.007	.949
7	-4.33	-.416	.000
8	-1.61	-.164	.112
9	1.81	.209	.074
10	2.08	.209	.040
11	.53	.057	.594
12	-.10	-.010	.922

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EPIDEMIOLOGICAL SURVEILLANCE

results, degrees of freedom, significance levels and sample size. As indicated in the table, a significant relationship exists between low CMI health scores and high POI seven scale (Nature of Man)  $\chi^2 (1, N = 92) = 7.95, p < .005$ . Fifty-four percent of the subjects scoring below twenty-five on the CMI scored above forty on the POI scale seven (self regard). No other significant chi square relationships were found. Therefore, the second hypothesis is retained for eleven of the twelve scales. The hypothesis is rejected for scale seven on the POI.

### Hypothesis III

The third hypothesis was that there would be no significant difference between the scores obtained for males and females on the POI and the CMI. A one way analysis of variance (ANOVA) was performed to determine significant differences. The results of the ANOVA are reported in table 3. The table includes number of subjects in each group, mean scores, standard deviation and standard error of measurement, as well as significance levels. As reported in the table, analysis of POI scale nine resulted in a significant difference in scores. Males obtained lower scores on the nature of man scale ( $M = 43.8$ ) than did females ( $M = 47.8$ ),  $F(1,92) =$

Table 2

Summary of the relationships found between the Cornell Medical Index values and Personal Orientation Inventory scales as indicated by chi square analysis

Degrees of freedom = 1                      N = 92

POI Scale	Chi square	Significance level
1	3.070	.0798
2	1.902	.1679
3	.008	.9780
4	.019	.8888
5	.001	.9708
6	.045	.8311
7	7.950	.0048
8	3.754	.0527
9	.089	.7646
10	.000	1.0000
11	1.748	.1862
12	.000	1.0000



Table 3

Summary of differences between male and female scores on the Personal Orientation Inventory and the Cornell Medical Index as indicated by one way ANOVA.

---

N = 92      Male = 35      Female = 57

---

POI Scale	Sex	Mean	SD	Se	Sig. Level
1	M	39.20	13.31	2.25	.303
	F	41.89	11.31	1.49	
2	M	45.20	9.56	1.61	.5143
	F	46.47	8.73	1.15	
3	M	46.31	11.88	2.00	.1846
	F	49.37	9.80	1.29	
4	M	45.37	9.35	1.58	.6660
	F	46.15	7.86	1.04	
5	M	49.05	9.79	1.65	.8002
	F	49.59	9.95	1.31	

---

Table 3 (Continued)

POI Scale	Sex	Mean	SD	SE	Sig. level
6	M	51.42	11.16	1.88	.3077
	F	53.56	8.66	1.14	
7	M	49.62	10.07	1.70	.6441
	F	48.52	11.63	1.54	.6441
8	M	42.80	7.56	1.27	.4890
	F	41.47	9.60	1.27	
9	M	43.77	10.54	1.78	.0537
	F	47.82	9.07	1.20	
10	M	41.57	13.18	2.22	.0659
	F	45.87	8.98	1.19	
11	M	48.00	9.68	1.63	.8900
	F	47.71	10.22	1.35	
12	M	45.02	9.72	1.64	.2235
	F	47.49	9.12	1.20	

3.8,  $p < .05$ . Therefore, the third hypothesis is rejected for the POI on scale nine.

A significant difference in scores was also found from obtained CMI health scores. Males reported significantly fewer health problems ( $M = 17.6$ ) than did females ( $M = 29.1$ ),  $F(1,92) = 12.0$ ,  $p < .0008$ . Therefore the third hypothesis is also rejected for CMI scores.

#### Summary

The hypothesis that statistical analysis would fail to find a significant relationship between health status scores (Cornell Medical Index) and the twelve self-actualization scores (Personal Orientation Inventory) was retained for eleven of the twelve scales. Those eleven scales retained were time ratio, support ratio, self-actualizing value, existentiality, feeling reactivity, spontaneity, self acceptance, nature of man, synergy, acceptance of aggression, and capacity for intimate contact. However, a significant relationship was found to exist between health status scores (CMI) and POI scale seven, self regard. This scale measures a subject's affirmation of self due to their worth or strengths. This scale differs from self acceptance which measures acceptance of self in spite of weaknesses.

The chi square analysis complemented and verified the Analysis of Variance. A positive significant relationship was found to exist between health status (CMI) scores and self-actualization scores (POI) on scale seven, self regard.

The hypothesis that no difference would be found for female and male scores on the POI and the CMI was rejected for scale nine on the POI. Males scored significantly lower on scale nine than did females. This scale measures subjects constructive view of the nature of man. Results of the health status scores indicate that males reported significantly fewer health problems (M=17.6) than did females (M=29.1). A raw score of twenty-five or higher indicates further need for analysis of physical health status.

Chapter V

Discussion

The first part of the chapter presents implications of the study. The second section describes the limitations of the study. Suggestions for further research are included in the third section.

Implications of the Study

The present study indicates that those who obtain high self regard (are able to accept themselves because of their worth or strength) also report better physical health. This is similar to findings reported by Petosa (1984), who found that subjects who scored higher on the Personal Orientation Inventory also reported significantly more practices supportive of physical health. It is likely that subjects who hold themselves in high self regard would also utilize practices supportive of physical health.

The difference in male and female scores on scale nine of the POI indicate that males score significantly lower on the constructive view of the nature of man. However, neither the male nor the female scores fell in a range that would be considered below the norm.

The difference in male and female scores on the CMI health status report indicates that males report significantly fewer health problems than females. This

may be a result of the design of the Cornell Medical Index itself, which contains five additional questions for women in the genitourinary section. Further analysis would need to be completed in order to indicate which sections of the CMI may yield higher scores by women.

#### Limitations of the Study

A limitation of the study was the nature of the sample, because all were college students and not representative of older adults. According to Maslow (1954) self-actualization occurs over a life time and generally increases as a function of age. However, since health may also deteriorate with age, one might expect a low correlation between scores on the CMI and the POI with older adults.

The CMI scale used included several questions which would not be considered indications of illness, for example, "Do you get regular (daily) exercise?" If questions such as these were omitted, different results may have occurred. Another problem with the CMI is the additional opportunity for "yes" responses on the womens' form. Women have five additional questions regarding menstrual cycles that do not apply to men, thus possibly increasing women's scores on the CMI.

Future Research

Future research is needed in order to indicate what types of coping mechanisms are related to physical health status. This study did not show a significant relationship between self-actualization and health status. One problem may be the lack of available instruments which can adequately determine such information. The following studies are suggested as a means of providing more conclusive evidence.

1. Development or identification of an instrument which measures healthy coping mechanisms to be correlated with a physical health status instrument.
2. Development of a physical health status instrument which includes items associated only with physical illness. This instrument could then be correlated with a personality assessment instrument.
3. A correlational study with a wider age range of adults, for example those aged twenty to eighty.
4. Personal interviews which would provide more detailed information. A physician's interview could be used to indicate health status.
5. The use of a third instrument that would measure stress levels.

6. A longitudinal study that could monitor a subject's physical health and emotional health and/or coping strategies.



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