

Self-Esteem and Health-Related Behaviors in College Students and Their Parents

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The present study investigated the relationship between the personality trait of self-esteem and the tendency to engage in healthful behaviors (e.g., diet, limiting alcohol consumption, physical self-examinations) in college students and their parents. Both students and parents completed the Multidimensional Self-Esteem Inventory and a survey assessing health practices. Correlations between the two measures showed that for students, high self-esteem was positively related to good health practices like exercise and responsible eating, reduced alcohol consumption, and not drinking and driving. Parents' self-esteem, on the other hand, was unrelated to those behaviors, and negatively correlated with frequency of physical checkups and likelihood of physical self-examinations.

RECENT RESEARCH IN THE FIELD OF HEALTH psychology is beginning to provide substantial empirical evidence for the relationship between individual personality dynamics and physical health (Friedman, Hawley, & Tucker, 1994). General health and susceptibility to disease have been linked to the Type A and B personalities (Miller, Turner, Tindale, Posavac, & Dugoni, 1991; Smith, 1992), depression and hostility (Friedman, 1991; Friedman & Booth-Kewley, 1987; Siegel & Brown, 1988; Stein, Miller, & Trestman, 1991), and an optimistic explanation of negative life events (Peterson & Bossio, 1991; Scheier & Carver, 1993; Scheier et al., 1989). Among the mechanisms which would presumably mediate these relationships between dispositional tendencies and physical health are physiological (e.g., sympathetic arousal and immunosuppression activation), behavioral (e.g., diet and exercise), and biological predispositions (e.g., genetic abnormalities and prenatal problems). The present study focuses on the relationship between a behavioral mechanism (the tendency to engage in health-enhancing behaviors) and the personality dimension of self-esteem.

The importance of considering personality traits in the area of health practices has been noted (e.g., Friedman, 1992; Friedman et al., 1994; O'Leary, 1986;

Peterson, 1988; Peterson & Stunkard, 1989). Friedman et al. suggest traits like self-esteem, conscientiousness, sensation seeking, ego strength, and hostility are important factors in whether or not one engages in behaviors which are conducive to health. For instance, in an earlier review of the literature, O'Leary notes feelings of self-efficacy and a belief in control over one's behavior are reliable predictors of drug-abuse relapses and success in dealing with eating disorders. People were found to follow healthful practices to the extent they believe they can pursue or refrain from behaviors pertinent to their health. Similarly, Peterson and Stunkard note self-efficacy is a critical factor in predicting who will succeed in adhering to diets and other health-promoting activities. High self-efficacy is associated with longer adherence to diets, more exercise, more sleep, not smoking, and reduced alcohol consumption. Peterson found a similar link between healthful activities (following a balanced diet, avoiding fat and salt, not smoking, and limiting drinking) in college students and their level of optimism. Students higher in optimism and confidence in their abilities were more likely to engage in healthful behaviors.

The studies noted above suggest personality traits can be an important factor in one's tendency to engage in healthful behaviors, and in the present study,

TABLE I

Components of Self-Esteem as Measured by the MSEI, and Characteristics of a High Scorer

Component	Abbreviation	Characteristics of a High Scorer
Global Self-Esteem	(GSE)	Pleased with self, feels significant as a person
Competence	(CMP)	Feels effective and capable of mastering new tasks
Personal Power	(PWR)	Assertive, seeks positions of leadership
Lovability	(LVE)	Worthy of love, able to express love
Likability	(LKE)	Popular, gets along with others
Self-Control	(SFC)	Self-disciplined, good at setting goals
Body Appearance	(BAP)	Pleased with appearance, pays attention to appearance
Moral Self-Approval	(MOR)	Has clearly defined moral standards
Body Functioning	(BFN)	Agile, in good physical condition
Identity Integration	(IDN)	Clear sense of identity, inner sense of cohesion
Defensive Self-Enhancement	(DEF)	Defensive, claims unlikely positive qualities

we investigated this relationship as it pertains to self-esteem. Mruk (1995) notes self-esteem is related to positive mental health and psychological well-being, as well as adjustments to aging and is negatively related to social deviance, anxiety, and depression. With these relationships in mind, we were interested in determining whether self-esteem is related to specific health practices. In our study, all participants were asked a series of questions covering health-related practices (e.g., smoking, sex practices, diet, physical checkups, alcohol consumption, drinking and driving), and they completed the Multidimensional Self-Esteem Inventory (MSEI) developed by O'Brien and Epstein (1988). This particular instrument was used because it is recognized as one of the best self-esteem assessment instruments (Mruk, 1995) and because it measures several components of self-esteem (e.g., body image, likability, competence, self-control, inflated self-enhancement), thus allowing a detailed analysis of potential relationships between self-esteem and the practice of healthful behaviors. That is, one component of self-esteem may be related to a particular health practice, but not to another. For example, a college student might follow a balanced diet and moderately consume alcohol to maintain good body appearance and body functioning (two components on the MSEI), but not necessarily to be likable or lovable by peers (two other components on the MSEI). Thus, although we had no specific predictions about which subscales of the MSEI would be correlated with the specific health practices surveyed, we did not expect every subscale would be related to every behavior measured.

A second feature of the present study is that we measured self-esteem and health practices in

both college students and their parents. Hooker and Kaus (1994) noted health becomes a more salient concern in middle age compared to the early years of adulthood. Life-threatening health episodes such as cancer and heart problems are more common with advancing age and produce thoughts of one's own mortality. In the present study, therefore, we expected the health concerns of the students and their parents would be different. College students, for instance, are inundated with messages about alcohol and underage drinking; middle-age individuals, however, are more cognizant of changes in body functioning and vulnerability to illness. The present exploratory study, therefore, investigated the pattern of correlations between level of self-esteem and health-related behavior in these two age groups.

Method

Participants

Data were collected from students at a small, private, 4-year liberal arts college. All students were enrolled in general psychology courses, and they completed (a) a questionnaire surveying their health practices and (b) the MSEI. They all received bonus credits toward their course grade for their participation. A total of 81 students (36 men and 45 women) between the ages of 19 to 25 (mean age for men was 20.75, and for women, 21.17) agreed to participate. The sample was 95% Caucasian. Additionally, the students were asked to seek the cooperation of one of their parents and to give the materials to that parent to complete. A total of 31 parents (13 men and 18 women) between the ages of 42 to 57 (mean age for men was 51.75, and for women, 48.08) filled out the

TABLE 2
Correlations Between MSEI Scales^a and Survey Items 1 through 16^b for Students

Item	MSEI Scale										
	GSE	CMP	PWR	LVE	LKE	SFC	BAP	MOR	BFN	IDN	DEF
1	.19	.16	.13	.05	.05	.18	.08	.10	.09	.02	.04
2	.14	.28*	.20	-.01	.15	.26*	.09	.21	.10	.22	.03
3	.17	.08	.23*	.15	.15	.10	.22*	.24*	.50**	.16	.08
4	-.12	-.03	.17	-.15	.02	-.01	-.06	.11	.10	.04	-.03
5	-.02	-.02	.06	-.02	.07	.03	-.03	.23*	.06	.04	.14
6	.04	.01	-.02	.00	.02	-.02	-.01	-.02	-.02	.01	.00
7	.13	.11	.16	-.02	.15	.06	.02	.07	.00	.16	.04
8	.03	-.01	-.12	-.06	-.07	-.02	.02	-.07	-.08	.00	.19
9	-.02	.11	.04	.02	-.02	.07	-.08	.38**	.00	.30*	.32**
10	.14	.17	.05	.04	.11	.28**	.13	.29**	.02	.26*	.16
11	.00	.06	.06	.03	.00	.02	-.12	.12	-.09	.16	.04
12	.12	-.04	.08	.03	.02	.04	.07	-.15	.12	.01	-.06
13	.01	.08	.01	-.07	.05	.10	-.13	.13	-.04	.15	.12
14	.11	-.07	-.01	.09	.06	.09	.16	.08	.00	.19	.17
15	-.07	-.08	.09	-.07	.07	.03	-.03	.25*	.08	.06	.05
16	.19	.22*	.23*	.14	.10	.30**	.05	.32**	.00	.24*	.17

^aSee Table 1 ^bSee Appendix

p* < .05 *p* < .01 (both *ps* two-tailed)

materials and returned them to the experimenters by mail.

Materials

The participants received a packet which contained (a) an informed consent form, (b) the MSEI, and (c) a 16-item survey which assessed the degree to which the respondent engaged in certain behaviors. The MSEI is a 116-item self-report inventory measuring 11 components of self-esteem. Table 1 provides a brief description of each scale. There are 10 items for each component, except for defensive self-enhancement which has 16 items. Participants respond to each item on a 5-point Likert scale to indicate increasing frequency or degree to which an item applies to them. Internal consistency reliability has been examined for each of the subscales of the MSEI, with alpha coefficients ranging from .80 to .90. The stability of MSEI subscales also has been examined by test-retest correlations over a 1-month interval. The correlations ranged from .78 to .89, suggesting MSEI scores are relatively stable over such a period. Convergent and discriminate validity evidence also has been found by statistically comparing MSEI subscale scores with other published personality scales, measures of academic achievement, and additional specially designed indices. See the test manual

for a more detailed review of validity evidence (O'Brien & Epstein, 1988).

The 16-item survey assessing health practices was devised by the authors and is presented in the Appendix. Each item used the same 5-point Likert format as the MSEI and assessed a variety of health-related behaviors. Items were worded to avoid a response bias (i.e., the "healthy" end of the scale was 1 for some items and 5 for others). The 16 items showed an acceptable level of internal consistency (alpha coefficient = .70), but for purposes of analysis and discussion, each of the 16 items was individually correlated with each of the 11 subscales of the MSEI.

Procedure

During a class session, students were asked to complete the inventories on a voluntary basis for bonus credit in the course. Completion of the two inventories required about 30–35 min. When students handed in the completed materials, they were asked to solicit the help of one of their parents in completing the same inventories. The student was given the materials in a stamped, self-addressed envelope to be returned by the parent. The students were asked not to say anything about the inventories or mention the fact they also had completed them until the parent finished.

Results

Tables 2 and 3 present the Pearson Product-Moment correlation coefficients between the MSEI scales and each question on the health inventory for students and parents, respectively. Perhaps the most striking feature of both tables is the small number of significant correlations. In fact, two of the scales, Lovability and Likability, show no significant relationship with any of the 16 inventory items for either students or parents. Also, Body Appearance and Body Functioning do not appear correlated in any consistent fashion with health practices. For students, the body scales are positively related only to exercising at least three times a week. For parents, body appearance also correlates positively with exercising (#3), but negatively with conducting regular breast/testicle self-examinations (#14) and using tanning beds (#8). Similarly, Global Self-Esteem correlates with none of the 16 items for students and with only 1 item (negatively with self-examinations) for parents. In spite of the paucity of significant correlations, however, closer inspection reveals definite patterns for both the students and the parents.

Correlational Patterns for Student and Parents

Students. Competence, Power, and Self-Control appear to be components of self-esteem related to

health practices. Students who scored high on these scales indicated they choose nonsmoking areas of public places (#2), exercise regularly (#3), are less likely to drink on a regular basis (#10), and are less likely to drink and drive (#17). A similar pattern is seen when considering the Morality and Identity Integration scales, which show positive relationships with exercising (#3), flossing (#9), diet (#5 and #15), reduced alcohol consumption (#10), and avoidance of drinking and driving (#17). Thus, in our sample of college students, self-esteem components involving competence, power, self-control, morality, and identity integration are positively related to exercise, good eating habits, less use of alcohol, and a reduced tendency to drive while drinking. In fact, avoidance of drinking and driving is positively correlated with 5 of the 11 self-esteem scales on the MSEI (Competence, Power, Self-Control, Morality, and Identity Integration).

Parents. Competence and Power are related to health practices in the areas of blood pressure checkups (#6), physical checkups (#12), and conducting self-examinations (#14). Item #14, for instance, concerning self-examinations, is related to 5 of the 11 self-esteem scales. The correlations, however, are all negative; parents who score high on Competence and Power are less likely to have their blood pressure

TABLE 3

Correlations Between MSEI Scales^a and Survey Items 1 through 16^b for Parents

Item	MSEI Scale										
	GSE	CMP	PWR	LVE	LKE	SFC	BAP	MOR	BFN	IDN	DEF
1	.24	.01	-.09	.04	-.09	-.10	.27	-.11	-.16	-.20	-.41*
2	.21	.00	-.02	.07	.01	.04	.10	.14	-.15	-.08	.07
3	-.06	-.14	.04	.00	-.04	.19	.41*	-.14	.15	-.03	.03
4	-.28	-.25	-.03	-.14	-.03	-.23	-.00	-.25	.00	-.18	-.08
5	-.11	-.14	.00	-.01	.08	-.08	-.04	.00	-.09	-.10	.06
6	-.19	-.34	-.44*	-.07	-.32	-.27	-.18	-.11	-.31	-.27	-.01
7	-.11	-.33	-.09	-.24	-.07	.11	-.03	.26	-.19	-.18	-.02
8	-.05	-.16	-.03	.02	-.19	-.05	-.26	-.05	-.37*	-.02	.15
9	-.03	.06	.02	.22	.16	.20	-.29	.52**	.06	.18	.43*
10	-.06	-.02	-.21	-.06	-.02	.02	.10	.04	-.11	-.16	-.07
11	-.16	-.22	-.11	.12	.14	.09	-.18	.32	.04	.00	.44*
12	-.09	-.26	-.40*	-.02	-.16	-.08	-.04	-.01	-.11	.06	.20
13	-.19	-.39*	-.30	-.02	-.07	.05	.17	.05	-.04	-.34	-.14
14	-.52**	-.43*	-.42*	-.19	-.19	-.35	-.52**	.17	-.22	-.40*	-.09
15	-.10	-.17	-.03	.04	-.15	.04	.18	-.09	.02	-.14	.23
16	.09	.32	.18	.01	.21	-.03	-.19	-.02	.12	.28	.02

^aSee Table 1 ^bSee Appendix

p* < .05 *p* < .01 (both *p*s two-tailed)

checked on a regular basis, less likely to have an annual physical, and less likely to give themselves a breast or testicle self-examination.

Discussion

The present results suggest the personality trait of self-esteem is related to the tendency to engage in certain health practices. The relationship, however, depends on the specific component of self-esteem being considered, the specific health-related behavior, and the age of the individual. In general, we found Competence, Power, and Self Control were related to certain health practices, a result consistent with other studies (e.g., O'Leary, 1986; Peterson & Stunkard, 1989; Scheier & Carver, 1993), which showed individuals who feel competent and in control of their lives are more prone to eat right, exercise, and generally take care of themselves. The present study, however, suggests that whereas college students show this relationship, their parents do not. For the parents, the Competence and Power components of self-esteem were not associated with exercise and dietary habits, but were associated (and in a negative fashion) with the tendency to monitor their physical well-being through physical checkups and self-examinations. For the parents, high Competence, Self Control, and Identity Integration were associated with less monitoring of health through such examinations.

The differences between students and their parents were expected, although as noted earlier, we were uncertain about which component of self-esteem or which specific behavior pattern would show the differences. The pattern of our results suggests power components of self-esteem are related to exercise, diet, and alcohol consumption for the students. Anecdotal observations by the authors show over the past several years, students at the institution in question have made formal requests through student government for less fatty foods in the cafeteria and for more salad, cereal, and vegetable selections. The growth and use of exercise facilities are also readily apparent. With respect to alcohol consumption, students are inundated with messages about underage drinking and about drinking and driving, and an informal survey of local bars and taverns made by one of the authors suggests alcohol consumption by students at the college in question has decreased in recent years. In view of the apparent importance of diet, exercise, and alcohol consumption in our sample, perhaps it is not surprising feelings of competence and self-control would manifest themselves in these areas. The causal direction of the relationship, of course, cannot be determined from our correlational data.

With respect to our sample of parents, who are turning or have recently turned 50, it is not surprising matters of health are becoming paramount (Hooker & Kaus, 1994). Why, however, would feelings of self-control and competence be negatively correlated with monitoring physical health through examinations? Perhaps being in excellent physical shape gives one feelings of power and control, and the belief that regular physical examinations are not a priority. A more detailed survey about reasons behind health practices could help uncover the basis for the correlations found in the present study and would be one fruitful area for further research.

Another possible reason for the negative correlation seen for the parents is suggested in data presented by Hooker and Kaus (1994). They found adults who had more health-related fears about the future were more likely to engage in good health practices. Although very speculative, it is possible the parents who scored high on the self-esteem scales of competence and self-control also had fewer fears about their future health, which would lead them to engage in fewer activities involving physical checkups. Mruk (1995), in fact, notes a downside to high self-esteem in that it can be related to a tendency for one to engage in risk-taking behaviors and for one to be less likely to evaluate life situations in a realistic fashion. Further research, therefore, would do well to include participants' fears about the future.

The above considerations, of course, are very speculative, plus it is important to note our results are based on a sample that is small (especially in the case of the parents) and certainly not representative of the general college population and their parents. It would be interesting to see similar research conducted on different samples of college students. If different patterns emerged, a comparison of the students and institutions studied might suggest some important dynamics in correlations between self-esteem and health practices. We definitely believe future research in this area should use instruments like the MSEI, which break a personality trait into separate components, and not restrict assessment to a global trait.

In spite of the limited external validity of our study, we believe our results raise some questions and concerns when the issue of health-promotion messages is considered. Friedman et al. (1994) point out the personality of the listener is often ignored when considering health-promotion messages. Presently, there is a great emphasis in the media on eliminating smoking and drug use, reducing fat and cholesterol, increasing exercise, using seat belts, following safe-sex practices, not drinking and driving, and con-

ducting regular self-examinations for breast and testicular cancer. Based on studies by Peterson and Stunkard (1989) and Peterson (1988), an effective advertisement should appeal to having listeners take control of their lives in order to achieve greater autonomous influence on their health. The present results also suggest it might be useful to structure media messages around the themes of personal control and self-efficacy, but the message might be cast in a different context for the college-age population versus the middle-age one. In the younger population, the message should not necessarily stress popularity or likability, but the usefulness of developing independent and autonomous behavior patterns. In the older population, however, the message should not create a false sense of security about physical well-being based on feelings of competence and being in control. Rather, the reality of the aging process and the increased risk of physical problems should be stressed, and middle-age individuals should be encouraged to exercise their sense of autonomy and self-efficacy by carefully monitoring their physical state through checkups and self-examinations. A current advertisement for Depends® ends with, "You've got a lot of living to do." Whereas this positive spin on aging may be effective in selling a product, health-promotion messages might do better to stress the realities of aging.

For instance, in a meta-analysis of the effectiveness of wellness programs, (e.g., exercise, smoking cessation) at reducing absenteeism in the business setting, Bonner (1990) found a relatively small effect size of only .18. It is possible the wellness programs failed to focus on increasing workers' feelings of competence and/or the risks of increased physical problems associated with feeling older which may be associated with increasing preventative health practices. The possible benefits of having more effective wellness programs both for the organization and the

employee represents a fruitful area for future research.

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APPENDIX
The Health Survey Given to Students and Parents

PLEASE ANSWER THE QUESTIONS BELOW
 ACCORDING TO YOUR PRESENT BEHAVIOR

CIRCLE THAT NUMBER WHICH BEST DESCRIBES YOU

1 = Completely False
 2 = Mainly False
 3 = Partly True and Partly False
 4 = Mainly True
 5 = Completely True

- | | |
|---|-------------------|
| 1. I smoke more than a half a pack of cigarettes per day. | 1 2 3 4 5 |
| 2. I choose to sit in nonsmoking areas of public places. | 1 2 3 4 5 |
| 3. I exercise at least three times a week. | 1 2 3 4 5 |
| 4. I take vitamin supplements on a regular basis. | 1 2 3 4 5 |
| 5. I only eat foods low in cholesterol. | 1 2 3 4 5 |
| 6. I have my blood pressure checked annually. | 1 2 3 4 5 |
| 7. I use sunblock protection when on the beach or other lengthy outdoor activity. | 1 2 3 4 5 |
| 8. I go to tanning beds. | 1 2 3 4 5 |
| 9. I floss my teeth daily. | 1 2 3 4 5 |
| 10. I drink more than three ounces of alcohol three days a week or more. | 1 2 3 4 5 |
| 11. I use a seatbelt when traveling in a car. | 1 2 3 4 5 |
| 12. I have an annual physical checkup with a physician. | 1 2 3 4 5 |
| 13. I engage in unprotected sex. | 1 2 3 4 5 |
| 14. I conduct breast or testicle self-examinations on a regular basis. | 1 2 3 4 5 |
| 15. I only eat foods low in fat content. | 1 2 3 4 5 |
| 16. My living accommodations should be checked for radon. | 1 2 3 4 5 |
| 17. I have driven while over the legal limit for blood alcohol level. | 1 2 3 4 5 |