Emotional Eating and Spiritual Well-Being: A Possible Connection?

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ABSTRACT

The purpose of this exploratory study was to evaluate the relationship between emotional eating and spiritual well-being. It was found that among college women lower levels of spiritual well-being correlated with higher levels of emotional eating (r=-.22, p=.0015). In other studies emotional eating has been found to contribute to higher caloric intake, binge eating, and bulimic eating attitudes. A better understanding of the correlates of emotional eating may lead to health education strategies for preventing or managing overweight, obesity, and eating disorders—which may be some of the major public health issues of the future. Implications for health education are discussed, and research needs are suggested.

Emotional eating is broadly defined as food consumption that occurs in response to various emotional states or cues such as boredom, loneliness, or anxiety (Timmerman & Acton, 2001). Ongoing research supports the hypothesis that there is a relationship between this type of eating and such negative outcomes as ineffective weight control (Blair, Lewis, & Booth, 1990), binge eating (Waters, Hill, & Waller, 2001), bulimic eating attitudes (Waller & Osman, 1998), and higher caloric intake (Braet & Van Strein, 1997). Emotional eating therefore may be an underlying factor that contributes to rising rates of overweight and obesity in the United States. A better understanding of emotional eating and its determinants may be useful in planning health education interventions that can contribute to obesity prevention efforts (Hawks & Gast, 1998).

As early as the 1950s, psychosomatic theory was used to suggest that emotional eating may arise from confusion between internal arousal states and hunger—a condition learned in early childhood (Bruch, 1961; Kaplan & Kaplan, 1957). It was hypothesized that this misinterpretation of internal states might be a primary factor in the development of obesity for some individuals (Blair et al., 1990; Robbins & Fray, 1980). Others have concluded that there are two dimensions of emotionality: diffuse (e.g., restless) and clearly labeled (e.g., frightened), and that experiences with diffuse emotions are most associated with overeating. It has been further determined that obese individuals may experience clearly labeled emotions as being diffuse and respond by overeating to both clearly labeled and diffuse emotions (Van Strien, Frijters, Bergers, & Defares, 1986). Other studies also have found that overweight participants have more difficulty than normal weight participants in describing or labeling specific emotional experiences (Slochower, 1983).

But rather than confusion between emotional arousal and hunger, a more recent hypothesis suggests that emotional eating may arise from unmet basic needs such as the need for belonging or the need for self-esteem (Timmerman & Acton, 2001). In support of this theory one study found that 27.7% of the variance in emotional eating scores could be explained by self-esteem scores—with higher self-esteem resulting in less emotional eating (r=-.49; p<.001) (Timmerman & Acton, 2001).

It has been argued in the health education literature that spiritual well-being, like self-esteem, is a basic human need (Hawks, 1994). Various authors have defined spiritual health in slightly different ways, but the spiritual dimension is generally thought to include such components as a unifying force within individuals, purpose and meaning in life, a common bond between individuals, individual perceptions of faith (Banks, 1980), personal fulfillment (Pilch, 1988), and a strong personal value system (Seaward, 1991). In an attempt to combine many of these elements into a single definition, one author suggests that spiritual health is a "high level of faith, hope and

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commitment in relation to a well-defined worldview or belief system that provides a sense of meaning and purpose to existence in general, and that offers an ethical path to personal fulfillment with includes connectedness with self, others, and a higher power or larger reality" (Hawks, 1994, p.6).

In support of the importance of spirituality as an interactive dimension of health, preliminary research findings have demonstrated a positive relationship between spiritual well-being and the practice of a variety of health behaviors (Waite, Hawks, & Gast, 1999). Other research has found that spiritual well-being positively correlates with self-esteem, finding meaning and purpose in life, high assertiveness, physical health, hope, and emotional adjustment. At the same time, spiritual well-being is negatively associated with depression, ill health, emotional maladjustment, and dissatisfaction with life (Bufford, Paloutzian, & Ellison, 1991; Ellison & Smith, 1991). Based on these definitions and findings, there is growing support for the argument that spiritual well-being is an essential dimension of holistic health that should be studied more fully and integrated into the practice of health education (Hawks, Hull, Thalman, & Richins, 1995). From this perspective it seems plausible that low levels of spiritual well-being, like low self-esteem, might be related to poor emotional responsiveness—with emotional eating and excessive caloric intake as possible outcomes.

The aim of this exploratory study was to seek insight about the nature and possible origins of emotional eating by evaluating the relationship between emotional eating, spiritual well-being, and body mass index (BMI). It was hypothesized that a negative correlation would be found between spiritual health and emotional eating, but that no correlation would be found between spiritual health and two other motivations for eating (i.e. physical hunger, environmental prompts). It was further hypothesized that BMI, an indicator of overeating, would correlate positively with emotional eating. Pursuing this line of research may have implications for understanding some types of overeating and for promoting healthy weight management.

METHODS

Subjects

This study was approved by the appropriate institutional review board and used informed consent. A cross-sectional, correlational research design was used to measure relationships among the variables of emotional eating, spiritual well-being, and BMI. The priority population for this study was female college students.

Instrument

The Motivation for Eating Scale (MFES) was used to measure various motivations for eating, including emotional, physical, and environmental motivations (Merrill, 1997). The MFES is a 43 item, Likert-type scale that includes five possible responses for each item (from *strongly agree* to *strongly disagree*). The emotional subscale (22 items) measured the degree to which eating was motivated by various emotional states such as loneliness, boredom, or anxiety. The physical subscale (9 items) measured responsiveness to hunger cues as a primary motivator for eating. The environment subscale (12 items) measured the degree to which cues in the environment (e.g., food advertisements, watching TV, seeing a plate of cookies) influenced food consumption. Higher scores on each subscale represent a stronger motivation for eating in that area. The MFES was particularly well suited for this study in that it was capable of evaluating the relationship between emotional eating and spiritual health, while additional subscales (physical, environmental) were useful in assessing the specificity of the relationship.

Initial construction of the scale involved expert reviewers and pilot testing to ensure face and content validity (Merrill, 1997). For the present study, Chronbach's alpha coefficients were calculated and a factor analysis was completed to assess the reliability and validity of the MFES. Cronbach's alpha coefficients for subscales ranged from .77 (physical), to .81 (environmental), to .92 (emotional), indicating an acceptable level of internal consistency. Factor analysis demonstrated validity with individual items loading on intended subscales. These findings are consistent with those obtained during initial reliability and validity testing (Merrill, 1997).

Spiritual health was measured using the Spiritual Well-Being Scale (SWBS) (Ellison & Smith, 1991). The SWBS is a 20 item, six-point Likert-type scale that measures many elements of spiritual health as defined in the introduction. For example, the SWBS contains items that assess personal fulfillment, purpose and meaning in life, connectedness with a higher power or larger reality, and individual perceptions of faith. Higher scores represent higher levels of well-being. Numerous studies using the SWBS have consistently yielded test-retest reliability above .85, and alpha coefficients above .84 have been obtained in relation to internal consistency (Bufford et al., 1991). Initial construction of the SWBS insured good face validity, and subsequent research has shown that the scale is a good general index of well-being (Bufford et al., 1991).

BMI was calculated from self-report height/weight data. Although self-report height and weight data are known to be respectively over- and underreported, they are nevertheless used extensively in the research literature, including such national surveys as the Behavioral Risk Factor Surveillance Survey (Nelson, Holtzman, Bolen, Stanwyck, & Mack, 2001). Accurate self-reports are most typical of younger, lean participants such as those involved in this study (DelPrete, Caldwell, English, Banspach, & Lefebvre, 1992). Given that self-report inaccuracies are likely to be normally distributed, and that this is a cross-sectional, correlational study (as opposed to a prospective, pre- and posttest study), the use of self-report height/weight data seems warranted. Pencil and paper questionnaires were used to collect data. The normality assumption was reasonably satisfied for data distributions. Pearson correlation coefficients were used to evaluate the strength and direction of relationships between study

variables. Two-tailed tests were used to establish statistical significance.

RESULTS

The selected convenience sample included 225 female students and yielded a 96% response rate for a total of 216 participants. Students were enrolled in introductory, general education courses at a regional, western university in the United States. The mean age of participants was 22 (*SD*= 4.2), most were single (84%), and most were White (88.4%). The *n* for responses ranged from 203 to 210 on different subscales due to missing data in some categories. Mean values, standard deviations, and correlation coefficients for study variables are reported in Table 1. Two of the MFES subscales, emotional and environmental eating, demonstrated statistically significant correlations with spiritual well-being. Although the strength of correlation for emotional eating was only moderate, the level of statistical significance was high, and the negative relationship was in the predicted direction. A somewhat weaker correlation between environmental eating and spiritual well-being also was negative.

The only correlation between an MFES subscale and BMI that approached significance occurred in relation to emotional eating. The strength of the correlation was relatively weak, but the relationship was again in the predicted direction.

DISCUSSION

Health promotion programs that encourage weight management through cognitive control over diet composition, caloric intake, and activity levels have had little success in reducing the prevalence of obesity at the population level (Kassirer & Angell, 1998; Miller, 1999). Not surprisingly, there is growing interest in new approaches that try to identify and address the underlying factors that may have created poor eating habits in the first place (Gast & Hawks, 1998). Research demonstrating the validity and importance of such constructs as emotional eating seems to lend support to this direction (Waller & Osman, 1998).

To date, most of the research dealing with emotional eating has focused on establishing emotional eating as a valid construct (Arnow, Kenardy, & Agras, 1995; Waller & Osman, 1998), and then identifying relationships between emotional eating and various outcomes such as overeating (Telch & Agras, 1996), obesity (Riva, 1996), and eating disorders (Drobes et al., 2001; Waters et al., 2001). There was only one study identified in the literature that attempted to identify a potential determinant of emotional eating. In that study it was found that low self-esteem was related to high levels of emotional eating (Timmerman & Acton, 2001).

In an exploratory effort to identify other potential correlates of emotional eating, this study evaluated relationships between emotional eating, spiritual well-being, and BMI. As hypothesized, a statistically significant relationship between emotional eating and spiritual well-being was found. The moderate negative correlation was in the predicted direction and supports the possibility that lower levels of spiritual well-being may be a factor associated with inappropriate emotional responses, including overeating. This preliminary finding lends support to other research that links unmet needs (e.g., self-esteem) to patterns of emotional eating (Timmerman & Acton, 2001). Self-esteem scores predicted 27.7% of the variance in emotional eating scores in an earlier study (Timmerman & Acton, 2001), whereas this study found that spiritual well-being scores predicted 4.8% of the variance in emotional eating. In combination, these findings begin to build a case for the possibility that unmet needs in the areas of self-esteem and spiritual well-being may be contributing factors in the development of emotional eating.

It also was found in this study that environmental eating (e.g., impulsive eating in response to advertising, social gatherings, proximity to appetizing foods) was negatively linked to spiritual well-being (albeit weakly). As argued elsewhere, it seems more than probable that environmental eating, like emotional eating, contributes to overeating and obesity (French & Jeffery, 2001). As hypothesized with emotional eating, it is possible that fulfillment of basic human needs such as self-esteem and spiritual health may also serve as a buffer that can protect individuals against the impulsiveness of environmental eating (Gast & Hawks, 1998). If so, the potential link between spiritual well-being and environmental eating discovered in this study seems worthy of future investigation.

Although failing to achieve statistical significance, this study also found a positive

Table 1. Values and Correlations for Motivation for Eating Scale (MFES), Spiritual Well-Being Scale (SWBS), and Body Mass Index (BMI) Measures (M, SD)

		MFES Subscales		
		Emotional (47.7, 13.5)	Environmental (48.4, 8.6)	Physical (30.8, 6.2)
SWBS (96.4, 11.5)				
	n	203	207	208
	r	-0.2211	-0.1647	-0.0575
	p	0.0015**	0.0177*	0.4092
BMI (22, 3.4)				
	n	204	209	210
	r	0.1340	-0.0605	0.0699
	p	0.0560	0.3840	1.9600

* Significant at the .05 level
** Significant at the .01 level

trend between emotional eating and BMI. Other research has demonstrated that emotional eaters experience more difficulty in achieving a healthy target weight (Blair et al., 1990). Responding to emotional states without turning to food may be a key skill required by some individuals to achieve and maintain weight loss. The possible role of such psychosocial constructs as self-esteem and spiritual well-being in mediating this process is intriguing.

The nature of this research is preliminary, and it is bound by limitations including a relatively small sample that was nonrandom and somewhat homogenous. At the same time, limited diversity within a small sample would make the identification of significant correlations more difficult, not easier. The fact that significant results were found suggests that identified relationships may be real. To increase generalizability, randomized samples with greater diversity will be necessary elements of future research. For example, it would be interesting to determine whether the findings would remain consistent with a noncollege sample that included a broad representation of married and minority women. Such efforts may be able to clarify the nature of these relationships, the direction of causality (if any), and the possible implications for theory and practice in relation to healthy weight management and obesity prevention (Hawks & Gast, 1998). Given the possible relationship between spirituality and religiosity, future research in this area may also identify new avenues for faith-based approaches to healthy weight management.

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