

## Women's Perceptions of Body Image, Dieting, Exercise and Self-Concept in an Undergraduate Residence Center

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The Briscoe Wellness Center (BWC) is a living learning residence hall on the Indiana University - Bloomington campus. A task force developed the mission of the center based on the "wellness" model:

Wellness is a process (a way of life) whereby the individual assumes responsibility for making healthy choices regarding the enhancement of the body, mind and spirit. Through this integration of the total being, wellness recognizes that everything a person does, thinks, believes or feels has an impact on his/her state of health. (Briscoe Wellness Residence Center: A Proposal, 1992, p.1)

The BWC promotes wellness through six components of health: emotional, intellectual, social, physical, values, and life planning. Its philosophy states that residents' "attention and energies must be focused on all dimensions for the whole self to function most effectively" (*Briscoe Wellness Residence Center: A Proposal*, p.1).

Given that the BWC's mission is based on the wellness model, one might expect that BWC residents maintain a healthier lifestyle compared with other students on campus. However, several instances of women displaying behavior associated with eating disorders had been reported (A. Cornell, personal communication, September 9, 1994). This incongruence prompted the researchers to question whether factors related to eating disorders are more or less prevalent in BWC students compared to other college students. This study was not designed to identify whether a student has an eating disorder but rather to determine individual perceptions of BWC climate and how these perceptions relate to behaviors.

The purpose of this study was to compare two residence hall floors of BWC with two non-BWC floors to determine whether perceptions of residents vary concerning issues of exercise, dieting, body image, and self-

concept. The relevance of these factors is explained in the following paragraph.

### Review of Relevant Literature: The Four Constructs

The four constructs -- body image, dieting, exercise, and self-concept -- have been cited in the literature as factors related to eating disorder. In a study of 12-14 year old girls, Nassar, Hodges, and Ollendick (1992) identified several factors which may encourage the development of an eating problem. These include low self-concept and an ardent involvement and intense interest in dieting. They found both low self-concept and an interest in dieting were related to poor body image. Walters and Sedlacek (1984) confirmed clinical studies that women, age 25 and younger, were likely to have an eating problem or a distorted image of their body shape. They studied college student attitudes about dieting and exercise and found women were more likely than men to use exercise and dieting as a way to obtain their ideal body type.

Research has shown a relationship between a distorted body image and eating disorders. Rawlings' study (cited in Moriarty, Ford, & Rawlings, 1991) observed that there was a relationship between women who had a highly distorted image of their body and a high score on the Eating Disorder Inventory.

Additional studies have illustrated a relationship between excessive exercise and eating disorders. The authors of *The role of sport/fitness and eating disorders: Cosmetic fitness from starvation to steroids* (1990) discovered that an exercise environment alone does not cause an eating disorder. Anthony, Wood, and Goldberg (cited in Moriarty, Moriarty, Moriarty, & Ford, 1990) found that college students who were majoring in physical education scored lower on the Eating Assessment Test compared to individuals majoring in dance or drama. They suggest that people who may be at risk for an eating disorder may choose activities or environments which stress body image rather than healthy exercise. Perry (cited in Moriarty et al., 1990) describes people who take exercise too far:

[Behaving] in a way similar to eating disordered athletes in that they must have an exercise fix before they allow themselves to eat anything, use exercise to burn off calories, and won't stop even if they are exhausted or injured. For them, exercise is an excessive and compulsive pursuit of the ideal body, not an activity that enhances well-being. (p.10)

Research that examines these four constructs in a college-aged population was not available.

Strange (1991) states that "environments are defined by the perceptions of the individuals within them" (p. 176). Stern's needs-press model (cited in Strange) will be used to compare women's self-perceptions of body image, diet, exercise, to what they perceive their floormates' behaviors are, thus illustrating whether the floor's press is healthy or unhealthy with respect to the four constructs.

Pervin's transactional approach (cited in Huebner, 1989) focuses on "the discrepancies that exist between the individual's perceived actual and ideal selves" (p. 170). This perceptual model illustrates how students may choose an environment which offers opportunities for them to move toward their ideal selves. When comparing BWC perceptions with non-BWC, one might expect to find BWC actual perceptions closer to their ideal perceptions. In other words, is the environment moving them closer to their goal?

Moos (cited in Walsh, 1978) believes the way people perceive their environment affects how they behave in the environment. Describing the human aggregate model, Holland (cited in Strange, 1991) states that "environments are distinguished by their degree of differentiation and consistency. A highly differentiated (or focused) environment is characterized by the dominance of one type of individual" (p. 167). Based on Anthony et al. (cited in Moriarty et al., 1990), it can be inferred that if the environment emphasizes body image, then residents in that environment will most likely have similar characteristics.

#### Methods

This study was conducted in Shoemaker Hall, Briscoe Residence Center, Indiana University - Bloomington. Shoemaker is a non-smoking residence hall of eleven single-sex floors, each with approximately forty residents. The residents are predominantly first-year students.

#### Participants

The study was limited to females, due to numerous research studies which indicate that females are at greater risk for eating disordered behavior and body image distortion (Walters & Sedlacek, 1984). The sample consisted of four floors of approximately 43 students each ( $N=175$ ), between the ages of 17-25, representing all class standings and

racial/ethnic backgrounds. Two floors consist of residents in Briscoe Wellness Center, and two consist of resident from other floors in Shoemaker.

Four important distinctions exist between the two groups. First, there is an application process for BWC, whereas non-BWC residents need not apply to live on other floors in Shoemaker. Second, a \$50 fee, used for additional programming and activities, is paid each semester by BWC residents. Third, BWC houses fitness equipment and an exercise mat, which are easily accessible to residents. Finally, BWC residents are required to take a one-credit course called "Community Living and Wellness" (U211).

All Briscoe residents must purchase a campus meal ticket and have access to the Briscoe dining facility. Briscoe provides more healthy, low-fat menu choices than other dining facilities on campus.

#### Instrument

A questionnaire was developed by the researchers. Information on the four constructs was collected through library searches and interviews with four experts: a psychologist specializing in eating disorders, the BWC trainer, the Associate Coordinator of BWC, and the Director of Health and Wellness at the University's Health Center. Questions were derived from several sources: (1) prior research on attitudes toward body image and dieting (Nassar et al., 1992), attitudes toward wellness (Archer, Probert, & Gage, 1987), and body image distortion among college females (Klemchuk, Hutchinson, & Frank, 1990); (2) published assessment tools such as the Eating Disorder Inventory (Garner & Garfinkel, 1979) and the Body Image Quiz (Urbanska, 1994).

The 52-question survey used Likert-type items of always, frequently, occasionally, seldom, and never. A 20-question, fill-in sheet was attached. To ensure content validity, the instrument was reviewed by three university professionals: a professor of Applied Health Science, the Director of Health and Wellness at the I.U. Health Center, and an instructor of a research methods course within the School of Education. After field testing the instrument on six college students, final adjustments were made using results from the field test and suggestions from reviewers.

*Procedures*

Resident Assistants (R.A.s) were approached and asked to hold a floor meeting during which residents completed the survey. Flyers were posted and incentives for participation (coupons for free ice cream) were advertised. During floor meetings, representatives from the research team assured participants that their responses would be kept confidential. To increase reliability, a standard paragraph was read verbatim. Consent forms were distributed, signed, and returned. Residents completed the surveys in approximately ten to fifteen minutes. R.A.s followed up with non-attending residents within one week of the floor meeting.

*Data Analysis*

A total of 137 surveys were returned for a 77% response rate. Measures of central tendency and percentages were calculated. For consistency, responses were recorded within Statistical Analysis System so all negative responses would fall toward the always end of the scale. Therefore, always, frequently, and occasionally responses are considered negative; seldom and never responses are positive. T-tests determined statistical significance of the four constructs.

**Results**

The majority of the participants were between 18 and 20 years old. Residents were 2% Hispanic, 3% Black, 4% Asian and 87% Caucasian. Close to 75% of the participants were currently living at either I.U. or Briscoe for the first time. Approximately 96% of BWC residents had taken the U211 course.

Sample questions comparing frequency of responses between BWC and non-BWC residents are reported in Table 1. For body image questions, analysis indicated more frequently and always responses for BWC. Combining always and frequently percentages for each question and comparing both groups, the largest difference between BWC and non-BWC was 14% for question number 22 (*I am self conscious about the way I look*). T-tests revealed no statistical significance for any individual body image question. However, statistical significance was shown for the overall body image construct for both BWC and non-BWC: BWC:  $t(68) = 2.57, p < 0.05$  and non-BWC:  $t(68) = 2.87, p < 0.05$ .

For dieting questions, analysis indicated more frequently and always responses for BWC. Combining always and frequently percentages, the

largest difference between BWC and non-BWC for this group of questions was 19% for question number 26 (*I feel pressure to lose weight*). No statistical significance was found for individual questions or the dieting construct.

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**Table 1: Responses for the Constructs: Body Image, Dieting Exercise and Self-Concept**

Constructs	Frequency					
	BWC			Non-BWC		
	A	F	O	A	F	O
<i>Body Image</i>						
I put down the way I look to others.	22%	13%	34%	16%	16%	28%
I'm self conscious about the way I look.	33%	33%	20%	24%	28%	27%
I feel pressure to be thin.	30%	26%	22%	28%	15%	28%
<i>Dieting</i>						
I worry about gaining weight.	49%	30%	15%	42%	25%	17%
I diet to lose weight	27%	25%	21%	27%	16%	25%
I read magazines to find diet information.	10%	24%	27%	10%	13%	22%
<i>Self-Concept</i>						
I am inclined to feel that I am a failure.	0%	11%	18%	7%	6%	16%
At times I think I am no good at all.	4%	6%	10%	5%	6%	17%
<i>Exercise</i>						
I exercise to burn calories.	43%	29%	12%	32%	26%	29%
I feel as if I'm overweight.	29%	30%	26%	28%	15%	27%
I feel guilty if I miss a scheduled exercise.	25%	20%	23%	19%	13%	19%

Note: A=Always; F=Frequently; O=Occasionally

For self-concept questions, little variance existed between BWC and non-BWC responses. Analysis indicated more frequently and always responses for non-BWC on most questions. No statistical significance was

found for individual questions or the self-concept construct.

For exercise questions, analysis indicated more frequently and always responses for BWC. Combining always and frequently percentages, the largest difference among this group of questions was 14% for question number 11 (*I exercise to burn calories*). No statistical significance was found for individual questions or the exercise construct.

Table 2 shows a comparison of always, frequently, and occasionally percentages for BWC and non-BWC responses. Frequency of responses in these areas was high for both groups. However, for most self-concept questions, response frequency was higher for non-BWC than for BWC. For all questions listed in Table 2, more than half of the respondents answered in the occasionally, frequently, and always categories.

**Table 2: Combined Always, Frequently, Occasionally Responses Along the Four Constructs**

Constructs	Frequency	
	BWC	non-BWC
<i>Diet and Exercise</i>		
I worry about gaining weight.	94%	84%
I feel pressure to lose weight.	81%	66%
<i>Body Image</i>		
I feel pressure to be thin.	78%	71%
I am self conscious about the way I look.	87%	78%
I am uncomfortable being seen in tight fitting clothes.	83%	77%
I feel as if I am overweight.	86%	69%
<i>Self-Concept</i>		
I wish I could have more respect for myself.	60%	72%
I feel I have a number of good qualities	87%	94%

Table 3 reports percentages for BWC and non-BWC perceptions of actual versus ideal self. A 46% difference was observed between BWC's actual and ideal responses for question numbers 2 (*I have a regular plan of exercise*) and 3 (*I would like to have a regular plan of exercise*).

**Table 3: Combined Always and Frequently Responses for Actual versus Ideal Questions**

Actual versus Ideal	Frequency	
	BWC	Non-BWC
Actual: I have a regular plan of exercise.	44%	27%
Ideal: I would like to have a regular plan of exercise.	90%	72%
Actual: I eat 3 balanced meals per day.	45%	27%
Ideal: I would like to eat 3 balanced meals per day.	73%	56%
Actual: I considered the caloric/fat content in the food I eat.	68%	48%
Ideal: I would like to consider the caloric/fat content in the food I eat.	84%	65%

A 45% difference was observed between non-BWC's actual and ideal responses for these questions. Comparing differences between BWC and non-BWC, the variance is only 1% for each of the three sets of questions. However, BWC residents' responses show a higher actual and higher ideal percentage for all questions.

Table 4 displays BWC and non-BWC responses to questions comparing perceptions of self with perceptions of floor members. Analysis indicated that both BWC and non-BWC show a high percentage of frequently and always responses for the "I" questions and a low percentage of frequently and always responses for the "floor" questions. One exception to this finding was the results from the paired questions numbered 29 (*I diet to lose weight*) and 30 (*Women on my floor diet to lose weight*), which show a higher percentage of frequently and always responses for the floor questions.

**Table 4: Combined Always and Frequently Responses for "I" versus "Floor" Questions**

"I" versus "Floor"	Frequency	
	BWC	Non-BWC
I feel guilty if I miss a scheduled exercise time.	45%	32%
Most women on my floor feel guilty if they miss a scheduled exercise time.	30%	16%
I worry about gaining weight.	80%	67%
Most women on my floor worry about gaining weight.	68%	60%
I am self conscious about the way I look.	68%	52%
Most women on my floor are conscious about the way they look.	49%	45%
I diet to lose weight.	52%	43%
Women on my floor diet to lose weight.	55%	45%

### Discussion

This study was designed to assess whether perceptions differed between two groups of residents for four constructs: dieting, body image, exercise and self-concept. Results show that BWC residents had more negative perceptions regarding three of the four constructs: body image, dieting, and exercise (see Table 1). These high negative responses indicate a high differentiation of these characteristics for the BWC. Results do not show much variance in perceptions between groups for the self-concept construct. However, BWC residents appear to have a more positive self-concept. Given the high negative perceptions of BWC residents with regard to body image, dieting, and exercise, it is surprising that responses were different for self-concept. In fact, in a study of 158 women, Davis (1990) found that greater body dissatisfaction was related to poor emotional well-being in women who exercise regularly. Davis also cites several studies which have shown a relationship between women's high emotional reactivity and body image preoccupation.

Responses across all floors revealed a high rate of frequency on several questions (see Table 2). This indicates both BWC and non-BWC residents had high negative perceptions overall, thus representing a differentiated environment, perhaps due to human aggregate factors. Irrespective of the

living environment, many women appeared preoccupied with their weight, bodies, and exercise habits. Residents seemed dissatisfied with their physical appearance and with their level of commitment to healthy behaviors. If left unattended, this preoccupation could lead to negative consequences. Silverstone (1992) proposed that chronic low self-concept is a prerequisite for the development of an eating disorder. Williamson, Kelley, Davis, Ruggiero, and Blouin (1985) cite several studies showing negative self-evaluation to be closely tied to eating disordered behavior. Based on this information and combined with our results, we assert that all women surveyed are at risk for developing eating disordered behaviors.

Given that BWC residents perceived higher ideals and higher actuals for every question of this type (see Table 3), two findings are particularly interesting: (1) BWC residents had heightened awareness of body image, dieting and exercise; and (2) BWC residents had more ambitious goals (see Table 3). It was surprising that BWC residents were no closer to their ideal selves than non-BWC residents. By living in a wellness environment, BWC residents could be expected to perceive themselves as closer to their goals, yet results do not support this conclusion. Given that BWC goals (ideals) were approximately 20% higher than non-BWC, one might question whether BWC goals were reasonable and attainable. It is possible BWC residents have a heightened awareness and higher goals because they have taken the wellness course and have easy access to fitness facilities.

This study was also designed to discover whether an environmental press, as described by Stern (cited in Strange, 1991), exists. It was assumed that women would perceive a press from floormates (alpha press) with regard to dieting, body image, exercise, and self-concept. However, results did not support this assumption (see Table 4). Findings indicated that participants exerted a press upon themselves (beta press).

For questions addressing women's perceptions of their own needs compared to the needs of their floormates, six of seven questions yielded a higher negative response for the individual's perception of herself, rather than of her floormates (see Table 4). BWC women's perceptions were more negative in all seven cases. The existence of a beta press is consistent with research. Moriarty et al. (1990) stated that family, sociocultural, and individual factors are related to eating disordered behavior. Although results indicate the presence of a beta press for BWC, conclusions cannot be made with great certainty, due to the inability to measure factors outside

the residence hall environment that may contribute to the press. Other influences may stem from American cultural standards for thinness (Davis, 1990), the widespread belief that a perfect body symbolizes control and personal achievement (Brownell, 1991), or media portrayal of extremely lean women as being very successful.

Limitations to this study exist. First, student responses may have been affected by floor meeting conditions. Residents were required to fill out an R.A. evaluation form in addition to the survey during the same meeting. Students may have been anxious to finish and perhaps did not give sufficient thought to answering the questions. Due to crowded floor lounges not conducive to complete privacy, some students may not have answered truthfully. Second, some research questions may be applied to more than one of the four constructs. The overlapping relationship between constructs did not allow for differentiation among some questions. Finally, since little research exists on college students who participate in wellness residence centers, no studies were available with which to compare results.

Future studies should include males to determine whether gender-based differences in perceptions exist. In addition, a longitudinal study could measure the effect that a wellness environment may have on residents over time. Several valid and reliable inventories are available that have been designed to identify individuals who have eating disorders. Using these inventories may provide information to help reduce risk of more serious health problems and lead to early intervention. Additional studies should be created to measure perceptions of women of all ages from various environments. Characteristics of women who choose to enter a wellness environment could also be examined. Finally, the BWC could be examined as a behavioral setting to observe the effect the environment has on residents.

### Conclusions

Based on the findings, several recommendations for student affairs practitioners can be made. First, incoming expectations of residents should be assessed prior to acceptance into BWC. R.A.s and Wellness Center staff should work with students to ensure their expectations are moderate, and their goals are realistic and attainable. Second, more information should be provided about general women's health issues. Women who consistently scored at the negative extreme of the four constructs may be at

greater risk of developing an eating disorder. Educational programs should be targeted toward these women to encourage them to achieve balance among the six components of health. Third, R.A.s and Wellness Center staff should be selected for a specialized focus on wellness. These staff members should be trained to use the wellness model as a basis for practice. Fourth, regular, proactive programming for women, which could include setting attainable goals and emphasizing balance among the six components of wellness, should be provided. Finally, this study was designed to obtain perceptions of students at one moment in time. A pre-test and post-test should be designed to measure change, thus helping staff determine whether student perceptions are becoming more positive or negative as a result of their participation in the wellness environment.

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