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Prevention Mechanisms for Clinical and Sub-Clinical Eating Disorders: A Proposal Study

Introduction

Research conducted on the epidemiology of eating disorders reveals a spectrum of symptoms and risk factors. While the percentage of the population having anorexia nervosa or bulimia nervosa is relatively low (that is, individuals who receive a clinical diagnosis), the estimated percentage of the population who fall in the category called, "Eating Disorders Not-Otherwise-Specified" (ED-NOS) is around 40-80% (Rosen, D. 2006, October). Consequently a majority of the population does not meet full diagnostic criteria for an eating disorder, but contain partial symptoms. Analytic criteria in the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.; *DMS-IV*; American Psychiatric Association [APA], 1994) for anorexia nervosa includes weight loss (or refusal to gain weight), fear of being fat even if the individual is underweight, body image distortion, and amenorrhea. Criteria for bulimia includes binge eating, and a lack of control of binges, abnormal behavior related to weight management, over-concern with body weight or shape and symptoms that occur twice per week for at least three months. Those receiving sub-clinical diagnoses of either anorexia nervosa or bulimia might meet only two or three criterions listed above (Rosen, D. 2006, October). Clearly having one or more of these symptoms proves detrimental to one's physical and mental health. Because a majority of the population is afflicted by these symptoms, it is necessary to understand the consequences of the partial diagnoses.

Although analysis is extensive, comprehensive prevention methods remain ineffective. Recovery time for bulimics and anorexics can take a decade or longer, and even with extensive treatment, subjects commonly relapse (Rosen, D. 2006 October). Studies show that, "so as far as we know, effective prevention programs for eating disorders still do not exist. The simple fact that eating disorder prevention programs exist does not mean that the problem is being

adequately addressed," (Mann, et al., 1997). More focus and, "additional effort should be devoted to designing interventions that affect multiple health and mental health outcomes because this would greatly improve the yield of prevention efforts," (Stice, et al., 2006). Additionally research is more commonly directed at identifying culprits of this disease. Common identifiers include fashion magazines, Hollywood, pressure from peers, the Internet, etc. Most commonly "Western concepts of beauty and attractiveness as being ultra thin, [encourage individuals to] become more dissatisfied with their own bodies and engage in dieting or purging behaviors to attain that unrealistic "thin ideal," [causing] increased risk of developing maladaptive eating patterns and ultimately eating disorders," (Walcott, Pratt, Patel, 2003).

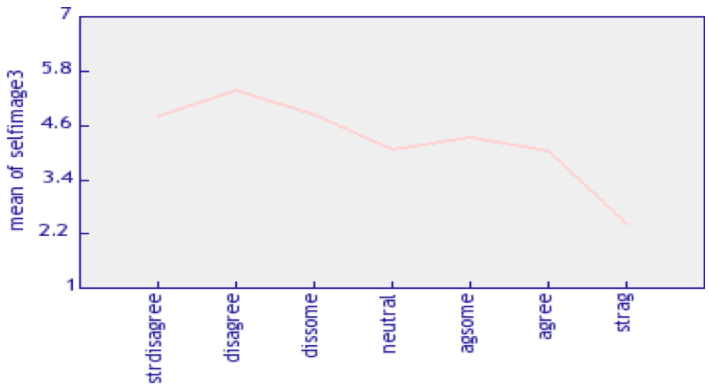
Instead of focusing the attention on whom or what is to blame, I want to pose a different question. How can we prevent this behavior? How can we decrease the number of females who have clinical and sub-clinical diagnoses of eating disorders and create more positive self-worth and self-concept? My proposal is to teach girls about nutrition and how to decipher food. My hypothesis is that teaching younger girls about nutrition will eliminate a host of anxieties that accompany eating issues and could potentially act as a preventative measure to eating disorders. Because the average Smart Girl member is a pre-adolescent female, they are the most at risk group for the onset of eating disorders.

Methods

The goal of the survey on smartgirl.org was to evaluate the interest in body image, nutrition and surrounding issues. Because it is estimated that 40-80% of the population have symptoms that could lead to a full-blown eating disorder, it is quite likely that some of the Smart Girl members are afflicted by food related maladies.

A survey was conducted on smartgirl.org concerning body image that contained five questions or statements. The five questions or statements of interest were, "I worry about gaining weight," "When I make healthy food choices, I feel good about myself," "When I think about my body I feel _____ with my appearance," "How often do you skip a meal in a typical week?" and "Would you be interested in using a health plan tailored to your individual needs of health, wellness, and nutrition?" Responses to the first survey came from 180 smart girl members. To the statement, "I worry about gaining weight," 32% answered strongly agree, 18% answered agree, and 30% agreed somewhat. Clearly a majority of Smart Girl members are preoccupied with gaining weight. A correlational analysis was conducted between "I worry about gaining weight," and "When I think about my body, I feel _____ with my appearance." Members were instructed to respond to varying degrees from very uncomfortable to very comfortable to how they feel about their appearance. A Pearson correlation coefficient of -.49 between the two continuous variables reveals a relatively strong correlation to girls worrying about weight gain and how comfortable they are with their bodies (Table 1). A negative correlation reveals that the more the girls agreed to worrying about weight gain, the less comfortable they were with their bodies. Results suggest some Smart Girl members have negative body image.

Table 1



Additionally 80% of Smart Girl members displayed interest in using a health plan tailored to individual needs of health, wellness, and nutrition. 53% requested a flexible plan, 14% wanted an exact plan, and another 13% responded "yes" to wanting a health plan in general. Overall there is evidence to support a need to deal with food-related issues that lead to poor body image.

In addition to a survey concerning body image, another survey included questions and statements specifically aimed at interests in nutrition. The five survey questions or statements included, "I am interested in learning more about nutrition," "I find it difficult to understand terms on a food label," "Who is the best resource to obtain information on eating healthier?" "I am interested in learning about what specific foods are harmful to my body through smartgirl.org," "How would you like to learn about eating healthier on smartgirl.org?" The sample consisted of 222 Smart Girl members who voluntarily answered the survey.

Some of the survey results reveal the desire for Smart Girl members to have access to information about nutrition. In response to the question, "I am interested in learning more about nutrition," 118 girls answered "agree" to varied extents. Forty-six responded "neutral" and fifty-eight respondents disagreed to varying extents. Thus out of the respondents that had an opinion on whether or not they wished to learn more about nutrition, 67% agree that they want to learn more. A correlational relationship was analyzed for the question, "I am interested in learning more about nutrition," and "I am interested in learning about what specific foods are harmful to my body through smartgirl.org." With a Pearson correlation coefficient of .56, the data infers that the more a Smart Girl mentor agreed to want to learn more about nutrition, the more likely they were to agree to want to learn more about nutrition through the Smart Girl website.

Additionally a Chi-Square test was conducted between the questions, "Who is the best resource to obtain information on eating healthier?" and "How would you like to learn about eating healthier on smartgirl.org." Survey results show that most smartgirl.org members would like to obtain information on eating healthier through the help of health experts. The respondents who prefer a health expert compared to a Smart Girl mentor, a peer, and an adult reveal that if they had access to expert nutritional advice on smartgirl.org, they would want it primarily through a question and answer section. The second most common response to learn about nutrition was by reading facts, then through healthy recipes, followed by a food dictionary, and lastly through information on vitamins and other concepts related to nutrition (Table 2). Through the Chi-Square analysis, a desire to have access to health experts through smartgirl.org in a question and answer format as well as an opportunity to read facts about nutrition is clearly evident.

Table 2

Health5 Health3	Q and A	Read facts	Health recipes	Food dict.	Vit. and Min	[row totals]
Smart Girl Mentor	6	6	3	3	1	19
Health Expert	82	82	76	44	37	321
Peer	3	9	9	3	3	27
Adult	31	42	28	20	17	138
[column totals]	122	139	116	70	58	505

Discussion

Both surveys give insight into the needs and curiosities of Smart Girl members in relation to body image and nutrition. Prospective studies of pre-adolescent and adolescent groups drawn from nonclinical populations, such as smartgirl.org, are essential for many reasons. Researchers and investigators are enabled to identify patterns that relate to larger issues. Many of the survey

questions served as an initial evaluation of symptoms that could lead to eating disorders. Due to the nature and brevity of this survey, many limitations and drawbacks are apparent. Participants were not representative of the entire Smart Girl member website. Less than 300 members answered the survey questions, and because the survey is anonymous, ages and even gender (some members are male) are unknown. Thus the sample size might not be representative of the opinions of smartgirl.org. Additionally those that answered might not have answered honestly or may have answered differently from how they usually feel. No validity scales were built into this survey to measure how accurate respondents were. Despite these drawbacks the study gives insight into information regarding nutrition as well as a need to prevent unhealthy behaviors relating body image.

As a result of this survey I plan to tailor my final project accordingly. Making an alliance from health experts at The University of Michigan through The University of Michigan Health Systems (UMHS) as well as The Depression Center to smartgirl.org will allow members to engage in a discussion about nutrition and body image. Based on the desire to see a question and answer format as well as reading about interesting facts related to nutrition, I will include both facets within my final project. The project will be multi-faceted in that both the science of nutrition will be addressed as well as the mental anxieties that accompany food. Example topics include emotional eating, the stresses of dieting, and ways to make individuals feel better about the foods they choose to eat. Prevention methods should attempt to highlight the positives rather than scare off members by warning them of potential vulnerabilities to eating disorders and the like. Providing this medium will begin the process of preventing girls from developing a harmful relationship with food. By understanding what happens to our bodies when we eat

certain foods, as well as the emotions we feel while we eat them, girls will be more prepared to tackle harmful pressures in the future.

References

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