CHARACTERISTICS OF WOMEN EXPERIENCING BULIMIA AND THE INCIDENCE OF THIS EATING DISORDER AMONG WOMEN AT A SOUTHERN UNIVERSITY CAMPUS

A Thesis

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CHARACTERISTICS OF WOMEN EXPERIENCING BULIMIA AND THE INCIDENCE OF THIS EATING DISORDER AMONG WOMEN AT A SOUTHERN UNIVERSITY CAMPUS. (October 1983)

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Research has indicated that the eating disorder known as bulimia may be taking on epidemic proportions among young women in this country. Bulimia has only recently become acknowledged as a specific, independent disorder, and as such; there has been relatively little direct study regarding this topic. Past research has suggested that the population of female college students may be at high risk for the development of this disorder. The present research was intended to provide information regarding the size of the problem of the Appalachian State University campus and also, to provide information relating to characteristics demonstrated by individual bulimics.

Research was conducted in the form of a self-report questionnaire distributed to a number of halls in campus dormitories for women. The 59-item survey contained a

set of questions designed to yield a score that would determine potential membership in either bulimic or nonbulimic groups. Membership in the bulimic group was confirmed by subject answers to critical items within the survey relating directly to reports of purge behaviors following binge episodes.

The present study indicated that 11.8% of the research sample of 348 females met the criteria for classification as bulimic. The 348 usable questionnaires represented a response rate of approximately 72.5% of the total number of subjects solicited. Contrary to indications in the literature, bulimics in the present study did not demonstrate a higher level of academic achievement than nonbulimics. As predicted and consistent with the literature, bulimics reported a higher level of weight concern and dieting practice than their nonbulimic counterparts, and also demonstrated a generally more negative self-evaluation than nonbulimics. Previous descriptions of the nature of the binge behavior as seen in the literature were not confirmed in the present study. Improvements in the research instrument and the need for further study were discussed.

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I am sure that I have left out a number of other individuals who have helped in the completion of this project, so, to everyone, thanks. I feel that my listing of those who have been of assistance to me in this project is just that, a list. I really have not expressed how important each one was to me and to this project. Regardless, I would like to say that everyone of you is important to me and that I feel that my association with you all has been tremendously to my benefit.

DEDICATIONS

I would like to dedicate this project to my parents, Mr. John W. Hazlett and Mrs. Ann P. Hazlett, who have continued to support me throughout my arduous education. Also, dedication is shared with my brother and his wife, Rick and Barbara Hazlett. Last but not least, I would like to dedicate this work to the bulimic women with whom I have had an opportunity to work during the past year. Thanks go to them for their support of what I was doing, for their criticisms and suggestions. It was especially for them that this project was undertaken.

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INTRODUCTION

Recently, there has been increasing awareness, generated through the press and television, about the condition known as anorexia nervosa. The general public and many professionals are now familiar with the syndrome; however, the "other" eating disorder, bulimia, is still largely unknown by the public and professional community (Domke, 1981).

Bulimia is described by the Diagnostic and Statistical Manual of Mental Disorders (DSM-III) as involving episodic binge eating often accompanied by a fear that the individual is not able to stop or control the episodes (American Psychiatric Association, third edition, 1980). Also, there is a realization of the abnormality of the eating pattern along with self-deprecating thought patterns and mood depression. In addition, at least three of the following features should be present: (a) consumption of high-caloric, easily ingested food during a binge; (b) inconspicuous eating during a binge; (c) termination of such eating episodes by abdominal pain, sleep, social interruption, or self-induced vomiting; (d) repeated attempts to lose weight by severely restrictive diets, self-induced vomiting, or use of

cathartics or diuretics; (e) frequent weight fluctuations greater than ten pounds due to alternating binges and fasts. The pattern cannot be attributed to anorexia nervosa or any known physical disorder. This information is less than complete in light of recent research (White & Boskind-White, 1981). Bulimia has been referred to by a variety of terms in the literature, including bulimarexia, bulimia nervosa, dysorexia, and dietary chaos syndrome (Brenner, 1980; Fairburn, 1981; Hawkins, 1982; Rosen & Leitenberg, 1982). For the purposes of the present discussion, the above terms are all considered to be names for the same syndrome.

Consistent with the DSM-III definition, bulimia here refers to a separate behavior pattern occurring in the absence of anorexia nervosa or any other known physical disorder. The behavior pattern is one that involves periodic binges that may last anywhere from a few minutes to several hours. These binges are most often followed by some method of purging the food, or its perceived effects, from the body. This purging may involve self-induced vomiting, laxative abuse, use of both prescribed and over-the-counter diet pills, use of diuretics, or periods following the binges involving severely restrictive dieting or fasting. The individual often suffers from bouts of depression and lowered self-esteem. There is often a strong sense of

helplessness and personal inadequacy. Bulimics often feel unable to stop or alter their behavior pattern. In addition to the other emotional components of this syndrome, there is often a strong sense that one is alone, isolated. As the eating pattern takes on increasingly greater frequency and severity, a sense of desperation and feelings of helplessness on the part of the individual increase.

Research carried out by the National Association of Anorexia Nervosa and Associated Disorders (ANAD) has estimated that between 20%-30% of college women are involved in a pattern of binge-purging (Rodriguez, 1981). Others offer estimates that range from 5%-25% for the population of women in the United States between the ages of 18-35 (Halmi, Falk, & Schwartz, 1981; Kubistant, 1982; Rodriguez, 1981), to 10% for a private college population (Schwartz, Thompson, & Johnson, 1982). It is likely that the level lies somewhere in between these estimates. A recent study on the incidence of bulimia among women on a college campus was carried out at Pennsylvania State University (Sinoway, 1982). In the Sinoway study she defines bulimic behavior as "an alternating pattern of binging on large quantities of food and then purging by self-induced vomiting and/or taking laxatives. Other behaviors which may alternate with binging include fasting or continuous, strict

dieting." In an extensive survey of females in the third term of their freshman year (sample size, 1172, with a response rate of 65%), Sinoway found that about 25% of the population surveyed could be classified as true bingers, with approximately 14% of the total sample reporting serious involvement in a bulimic eating pattern which included purging, fasting and/or prolonged, restrictive dieting.

Bulimia differs from anorexia nervosa in a number of important respects. While the major emphasis of anorexia is starvation, the key symptom of bulimia is recurrent eating behavior or binge eating. Unlike most anorexics, bulimics are able to function relatively effectively within the demands of daily living, requiring hospitalization only rarely (White & Boskind-White, 1981). Though approximately one half of all anorexics do sporadically engage in binge-purge behavior (Domke, 1981; Rosen & Leitenberg, 1982; Schwartz, Thompson, & Johnson, 1982), bulimics develop a more habitual, regular pattern of binge-purge behavior. While anorexics turn away from food as a primary behavior, the bulimic turns toward food and eating as a means of regularly coping with stressful events (Banks, 1981; Brenner, 1980; Domke, 1981; Johnson, 1982; Johnson, Schlundt, Kelley, & Ruggiero, 1982; Rodriguez, 1981; Sinoway, 1982; Young, 1979). Though some anorexics may become

bulimic after treatment for the anorexia, few bulimics develop anorexia nervosa (Kubistant, 1982). Finally, the female anorexic is usually involved in efforts to deny her femininity while female bulimics are caught up in attempts to live up to a perceived societal model of the ideal woman (Banks, 1981; Boskind-Lodahl & Sirlin, 1977; Kubistant, 1982; White & Boskind-White, 1981; Young, 1979).

Although each individual case of bulimia is somewhat unique, the typical bulimic is an attractive, well-groomed, and well-dressed young female (Young, 1979). Bulimics are usually within normal weight limits for their height, with a smaller percentage of individuals being somewhat overweight or underweight (Banks, 1981; Boskind-Lodahl & Sirlin, 1977; Johnson, 1982; White & Boskind-White, 1981). In a recent study, it was found that in a group of 80 bulimic women, 61.6% were within what was considered as normal range of weight for their height, 20.9% were judged to be thin normal or underweight, and only 17.5% of the individuals were classified as being overweight (110% or greater than normal weight estimate by height) (Johnson & Berndt, 1982). There is a strong drive in many of these individuals for high achievement and perfection in their personal endeavors (Brenner, 1980; Kubistant, 1982; Loro, 1982; Rodriguez, 1981; Sinoway, 1982). In many cases, these

women are indeed successful in a variety of areas in their lives and it is likely that in part, this achievement pattern is due to their strong motivation for achievement as a means of fulfilling in some way their needs for recognition, approval, and love from significant others (Kubistant, 1982). As mentioned before, bulimic individuals characteristically hold a low self-image and are often depressed emotionally (Boskind-Lodahl & Sirlin, 1977; Brenner, 1980; Johnson, 1982; Rodriguez, 1981; Sinoway, 1982). They are typically harsh in their judgements of themselves, holding unrealistic expectations for their own performance (Brenner, 1980; Kubistant, 1982; Loro, 1982; Young, 1979). There seems to be a lack among many bulimics of a strong self-centered evaluative system. Instead, they are very dependent on others' assessments of their worth or value as persons as reflected by the judged quality of their actions (Boskind-Lodahl & Sirlin, 1977; Rodriguez, 1981; Sinoway, 1982). Boskind-Lodahl and Sirlin (1977) also pointed out in their review of bulimic women, that a major concern among these individuals seems to relate to a strong fear of rejection by others, especially males. Two other fears are also in play often: (a) the fear that they cannot control or stop the cycle of binge-purging, and (b) that they will be discovered, found out by others that they are

involved in this "bizarre" practice (Kubistant, 1982). The fear of discovery is a principal reason for the withdrawal from friends and the self-determined, but tragically lonely, isolation of themselves and their habit from others.

The frequency with which bulimic individuals engage in the cycle of binge-purging varies significantly among cases. In a recent study, it was determined that some 27.2% of the sample binged on at least a daily basis and that 32.6% of the same sample binged at least on a weekly basis (Johnson, 1982). In another study, two-thirds of the bulimics in a sample reported binge eating more than once a week, with 16% reporting binge eating as a daily practice (Domke, 1981). As mentioned previously, the purging takes on several different forms. Research results have pointed to the fact that individuals vary in their chosen method of alleviating the effects of the food they have ingested. Johnson and Berndt (1982) found that some 77% of their research sample vomited as a purge method, 33% used laxatives, and some 25% of the sample used both methods. In a similar study, 57% of the bulimics in the study reported vomiting regularly as a purge method (Domke, 1981). Within the same study sample mentioned above, Johnson and Berndt (1982) found that the frequency of purging by vomiting varied among the subjects. Forty-five

percent purged on a basis of one or more times daily by vomiting, 22.2% vomited away their food on at least a weekly basis, and some 9.4% vomited their food as a weight control measure at least monthly. Use of laxatives within the same group varied with 14% using laxatives daily, 18.6% using them weekly, and 27.1% using laxatives at least on a monthly basis. Also, among that same research sample, the purging behavior had been going on for over four years on the average. These figures differ somewhat from the research of another group that found among their sample of bulimics an incidence of 50% of the individuals binge eating on at least a daily basis, 42% binge eating at least weekly, and 8% binge eating on a monthly basis (Johnson & Berndt, 1982). It has been suggested that many, perhaps even a majority, of individuals with bulimic eating patterns turn more often to simply fasting for extended periods or exercising in excess to alleviate the effects of the binge eating (Kubistant, 1982; Sinoway, 1982).

Although these individuals may vary in age considerably, it seems that the greatest incidence of bulimia is among late adolescents, and especially college age females (American Psychiatric Association, 1980; Kubistant, 1982; Rodriguez, 1981; Sinoway, 1982). Several researchers have identified the age range from

18 years to the early twenties as representing the largest number of cases (Johnson, 1982; Johnson & Berndt, 1982; Sinoway, 1982). It also appears that most individuals come seeking aid in getting over this eating pattern only after engaging in this behavior for a number of years. The purging pattern appears to begin about a year after the individual has gotten into the pattern of binge eating as a means of stress reduction (Johnson, 1982; Johnson & Berndt, 1982). Previously, it was thought that this pattern was relatively restricted to white females from families in the upper levels of economic status (Brenner, 1980); however, it now appears that this pattern cuts across socio-economic boundaries (ANAD & Boys Town Center, 1982).

It would seem that this pattern of controlling weight, though ineffective after a short period of time, might be relatively harmless. However, this is far from the case. Individuals that frequently purge or eliminate the food from binges in one manner or another, can, in addition to the psychological complications, experience a wide range of physical problems (Domke, 1981; Johnson, 1982; Kubistant, 1982; Rodriguez, 1981; Rosen & Leitenberg, 1982; Sinoway, 1982).

Reviewing what we mean by purging methods; these include self-induced vomiting, the use of diuretics,

diet pills (prescribed and over-the-counter), laxatives, and prolonged fasting or restrictive dieting.

The intensity and number of physical side-effects suffered by individuals depends upon the frequency with which they purge, the preferred purging method, their body's ability to handle the strain of these behaviors, and in some cases the specific types of foods that are involved in the binge phase. It is important to understand that when an individual forces the body to eliminate food quickly by use of laxatives, enemas, or gets rid of water from the body through vomiting and the use of diuretics, she is also eliminating important elements that the body needs in critical amounts to function normally and efficiently. Also, when an individual vomits, she is throwing up powerful digestive acids along with the food (Rodriguez, 1981).

Common among the side effects seen from purging behavior are the presence of dental decay to a degree greater than would be normally expected and frequent irritation and infection of the sinuses, salivary glands, and the tissue on the inside of the mouth and throat. Dehydration, feelings of weakness, dizziness, frequent headaches, stiffness in the extremities, muscular and stomach cramps, and associated digestive difficulties have also been reported as common. More seriously, the vomiting may cause esophogeal tearing or

scarring, burst blood vessels in the eyes, face, and lower digestive tract. Peptic ulcers and, in some cases, hernias may also result. The loss of potassium, in some severe cases, may lead to cardiac arrhythmia, even cardiac failure. Kidney damage or failure may develop from extreme or prolonged abuse of diuretics. All of the above side effects are reported in the literature (ANRED, March, 1982; Brenner, 1980; Center for the Study of Anorexia and Bulimia, 1981; Domke, 1981; Johnson, 1982; Kubistant, 1982; Rosen & Leitenberg, 1982; Sinoway, 1982; Young, 1979).

How do women fall into this pattern? There are several theories that have been offered from which individual therapists currently are working.

The psychoanalytic viewpoint, toward bulimia is generally borrowed from writings on anorexia nervosa. Little has been written to date regarding specific theoretical considerations of bulimia from a psychoanalytic perspective (White & Boskind-White, 1981). White and Boskind-White express the opinion that, to date, there does not seem to be much support for what has been assumed to be the psychoanalytic viewpoint on the etiology of bulimia. However, we are not familiar with any specific work in the literature claiming to be "the psychoanalytic viewpoint" on this disorder. Therefore, it may be premature to cast out the

possibility of understanding bulimia from this perspective.

Several behavioristically oriented hypotheses have been proposed as explanations for the development of the disorder (Johnson, 1982; Johnson, Schlundt, Kelley, & Ruggiero, 1982). One conceptualization proposed a weight phobic response model in which the individual has an extreme fear of weight gain. This fear is elicited by cues such as feelings of distention or fullness after eating, the eating of foods perceived as fattening or just eating a large meal. It is thought that the bulimic learns that the vomiting or elimination of food from the stomach reduces the feelings of being bloated, thereby alleviating or decreasing the anxiety aroused by a fear of weight gain. Purging allows the individual to control and manage her fear of becoming obese. It enables her to discharge feelings of anxiety, or being out of control, along with the actual food which is the source of the possible weight gain. A second hypothesis sees the bulimic as functioning inappropriately due to a lack of skill or knowledge with regards to the maintenance of proper nutrition, regulation of food intake and personal activity. The assumption is that these individuals fall unwittingly into this pattern or self-induced, premature elimination of

food as a means of handling the periodic breakdown of control of food intake.

Another model of how bulimia develops borrows in large part from work with anorexics. This approach comes from the perspective of a family-systems approach to therapy. According to this position, bulimia, like anorexia, develops in families that are functioning maladaptively in some manner, with the bulimic child becoming the identified patient. There seems to be some support for this conception, in that a distinctive pattern of family interaction is often reported in the literature (Boskind-Lodahl & Sirlin, 1977; Kubistant, 1982; Schwartz et al., 1982; Young, 1979). This information about family dynamics appears to be primarily anecdotal in nature. The father is often reported as not sharing equally in the responsibility of child-rearing, being seen as somewhat distanced from the rest of the family, but having a lot of power as perceived by the child. The major responsibility of raising the children and running the household is handled by the mother. The mother has been reported as overcontrolling and manipulative in her interactions (Young, 1979). The overall environment is typified by a lack of unconditional approval or approval for self-initiated behavior on the part of the children. The image of the mother as stated above is not unanimously supported in

the literature. Sinoway (1982) found that statements describing mother as being manipulative were more commonly rejected strongly by nonbulimics, while bulimic respondents were just more ambivalent about how they rated their mothers. Bulimic respondents selected the choice indicating that they neither agreed nor disagreed with the image of mother as manipulative, while nonbulimic women chose disagree and strongly disagree responses. The anecdotal evidence in the literature describes the overall family system as putting a premium on minimizing conflicts, being deeply enmeshed, and being rigid in their communication patterns (Schwartz et al., 1982). An alternative view on how and why individual women become bulimic, pinpoints societal pressures and expectancies as being important elements that predispose individuals to the development of an eating disorder (Domke, 1981; Schwartz et al., 1982; White & Boskind-White, 1981). It is argued that to disregard the role that societal expectancies play in the development of this disorder is a mistake, and that this consideration is a vital component in developing a theoretical stance that can explain the dramatic rise in the incidence of bulimia and anorexia in recent times (Schwartz et al., 1982).

A more recent conceptualization of bulimic behavior looks at its functional characteristics in relation to

the individual. In this model, the behavior pattern is seen as a coping strategy for handling stress (Hawkins, 1982). The bulimic episode may be triggered by a stressful situation or experience or even by just boredom (Banks, 1981; Domke, 1981; Hawkins, 1982; Johnson et al., 1981; Sinoway, 1982). The behavior can be seen as initially being an adaptive response to stress. The significance that this conceptualization has for clinicians is that this stance requires that substitute, more adaptive response patterns of stress coping, must be developed before the bulimic response pattern can be eliminated (Hawkins, 1982).

There is some support for the assumption that the incidence of bulimia and anorexia has risen significantly in recent years, although most of this support is anecdotal in nature. A number of factors could account for the seeming rise in the incidence of eating disorders. Better record keeping, more awareness in the professional community, and increased response by the eating disordered population due to the greater availability of specialized treatment centers, are some of the factors that may explain the apparent rise in incidence. Also, an absolute increase in the number of adolescents and young adults in the population, along with the possibility of the professional community being carried along with this latest "fad" are other

factors that must be considered as relating to this perceived rise in the incidence of bulimia and anorexia nervosa. Even so, Schwartz and his associates (1982) argue that even when these factors are taken into account, there is enough evidence to justify increased concern.

In a recent Neilson survey of American households, it was found that 45% of all homes had someone dieting during the course of the calendar year, 1978. It was also found that some 56% of women, ages 24-54, diet, and that of these women, 76% admitted that the dieting was principally for cosmetic, rather than health purposes (Schwartz, Thompson, & Johnson, 1982). The college population is rather unique in that it brings large numbers of young individuals together in a small area where they are subjected to a special set of pressures that are greater in that setting than in others (Kubistant, 1982). Kubistant points out that campuses have always been places where a premium is placed on attractiveness, personal experimentation, and where dating/socializing with the opposite sex is, for most, a constant agenda. Consequently, it can be hypothesized that the population of college-age individuals represents a high-risk group related to the development of eating disorders in general, and bulimia in particular. This assumption applies only if it seems reasonable that societal

pressures and standards have some role in the growth and development of eating disorders.

There have been a small number of studies published to date on the incidence of bulimia on college or university campuses (Halmi et al., 1981; Schwartz et al., 1982; Sinoway, 1982). A need for further research in this area is clearly evident, especially as concerned with exploring this problem behavior within the population of college-age women. Also, due to the fact that many of the characteristics used as descriptors of bulimic individuals have been borrowed from research with anorexic subjects, it would seem important to try to validate these assumptions with something more than anecdotal data.

The present study was designed to provide information regarding the incidence of bulimic behavior patterns among a sample of young women living on the campus of Appalachian State University, a public southern university with an enrollment (graduate and undergraduate) of between 10,000 and 10,500 students. Also, the survey instrument used in this study was designed to provide information that could be used to validate some of the assumptions made in the present body of research regarding some characteristics of the bulimic female. It was expected that this study would indicate that the level of bulimic behavior patterns

among the women students at Appalachian State University would be comparable to estimates obtained from previous research with similar samples. Also, it was hypothesized that (a) bulimic women would not report their mothers more negatively than nonbulimic subjects, (b) there would not be a significant difference in academic performance between bulimic and nonbulimic subjects, (c) there would be a significant positive correlation between bulimic behavior patterns and negative self-evaluation, and (d) the nonbulimic subjects would report less weight concern and practice of dieting than the bulimic subjects.

METHOD

Subjects

Subjects were 348 female students living on the campus of Appalachian State University during the fall semester of 1982. The determination of who would be used in the survey was made by the Residence Life Council staff in accordance to the limits set by the examiner before the surveys were distributed. The limitations set by the examiner were (a) that the surveys be distributed to women's halls; (b) that the halls used would predominantly house upperclass women; (c) that the surveys be distributed simultaneously to all involved halls, if at all possible; and (d) that the halls should represent a number of dormitories. Subjects were induced to participate in the study by being awarded a lottery ticket by the hall resident advisor according to the guidelines outlined in the survey cover letter (see Appendix A) and in the specific instructions given to the resident advisors (see Appendix B). Subjects were asked to remain anonymous, not signing their names to the survey materials or the lottery tickets.

Instrument

The present survey was designed to obtain a variety of information from the subjects. The need was to design a survey that (a) could differentiate between bulimic and nonbulimic subjects, (b) could attempt to validate some of the assumptions made in the existing literature regarding characteristics of bulimic individuals, and (c) provide information relevant to the magnitude of the problem on the campus concerned.

Specific items were developed, in part, from material in the literature, and in part from items previously utilized in survey instruments developed in previous studies (Garner, Olmsted, & Polivy, 1982; Sinoway, 1982; Stuckey, Jacobs, Johnson, & Schwartz, 1981).

The present survey instrument was revised several times prior to being administered in this study. Emphasis was placed upon obtaining a maximum of information with a minimum number of items. It was felt that excessive length would serve to decrease incentive among subjects to complete surveys and consequently, reduce the return rate, as well as add to the cost of the study. The final form for the present instrument consisted of a set of questions asking for 59 bits of data from each respondent (see Appendix C).

The survey concentrated on obtaining information relative to four broad areas: (a) general information

about the subject (term, class, age, weight, height, academic average); (b) weight concern and dietary practices and attitudes; (c) self-evaluation, the individuals' perspective on themselves and others; and (d) eating disorder behavior. This last general area of inquiry could be further broken down into questions relating to binge behavior and questions relating to assessment of purge practices, if present.

Eight questions constituted the set related to evaluations of others and self, and were assumed to look at a general factor, to be referred as the S-Factor in further discussion. Sample questions from this area include:

3. I believe that the opposite sex finds me physically attractive.
   A. strongly agree
   B. agree
   C. neither agree nor disagree
   D. disagree
   E. strongly disagree

7. When I am in a group of people and a decision is being made, my opinion influences the outcome _____.
   A. most all the time
   B. often
   C. sometimes

D. rarely

E. never

These questions tried to obtain an indication of how the subject felt about herself personally, physically, and how she judged others on physical attributes of weight. A further example of an S-Factor item:

11. I believe that what others think of me has a lot to do with how I value myself.

A. strongly agree

B. agree

C. neither agree nor disagree

D. disagree

E. strongly disagree

The second area related to weight concern and dietary practices and attitudes, the WT-Factor, was comprised of nine questions. Examples of these follow:

4. I feel that others perceive overweight individuals as _____.

A. very unattractive

B. somewhat unattractive

C. neither unattractive nor attractive

D. somewhat attractive

E. attractive

12. If I could, I would like to lose weight.

A. strongly agree

B. agree

C. neither disagree nor agree

D. disagree

E. strongly disagree

36. I have set myself a goal for my weight.

A. strongly agree

B. agree

C. neither agree nor disagree

D. disagree

E. strongly disagree

Within the set of questions relating to eating disorder behavior was a set of 16 questions that comprised a diagnostic factor, or D-Factor. These questions were designated to determine the presence of behaviors that would or would not categorize subjects as bulimics. These questions assessed the presence of behaviors designated as diagnostic characteristics, as described in the literature (American Psychiatric Association, 1980; Brenner, 1980; Sinoway, 1982). Responses to these questions were graded on a five-point scale with a low of one assigned to the response least indicative of bulimic behavior and a score of five assigned to the response most indicative of bulimia. In most cases a median response of three or four was indicative of bulimic behavior with higher score responses serving to indicate a greater severity of the symptom or behavior involved. Characteristics looked at

included the presence of binge eating practices and of purge behavior. Sample questions:

13. How concerned are you with your present weight?

A. very concerned

B. concerned

C. neither concerned nor unconcerned

D. unconcerned

E. very unconcerned

24. Have you ever binge eaten before?

A. yes, I do at present

B. yes, I did in the past but no longer do

C. no

38. I have in the past vomited after eating a meal, on purpose.

A. no

B. yes, once or twice

C. yes, more than 3 times but less than 10 times

D. yes, more than 10 times

E. yes, too many times to count

44. Do you ever use laxatives or diuretics after eating?

A. always or almost always

B. often

C. sometimes

D. rarely

E. never

45. Do you ever fast or attempt to fast after excessive eating?

A. always or almost always

B. often

C. sometimes

D. rarely

E. never

The remaining 26 questions related to general information as earlier described (age, weight, class, etc.), as well as information of special interest in later analysis of the bulimic group. Some of these items were designed to test some of the assumptions seen in the literature as described earlier. Some examples of this set of questions follows:

1. My mother can be described as _____ and my father as _____.

A. very obese

B. mildly obese

C. average

D. lean built

E. skinny as a rail

33. At what age did you begin your binge eating pattern?

A. younger than 10 years of age

B. 10-12 years

C. 13-15 years

D. 16-18 years

E. 19-21 years

48. How did you first get into the habit of throwing up or using laxatives and/or water pills to help control your weight?

A. by accident, I just stumbled onto the method

B. learned it from a friend

C. heard about others doing it

D. read about it or over the public media

E. other: _____

The method used to determine between nonbulimic group members (NB-Group) and probable bulimic group members (PB-Group) involved initially dividing the sample subjects into those whose D-Factor score (diagnostic factor) was greater than or equal to 48 and those with a score of less than 48. The score of 48 was selected as a cut-off score, as this would indicate a response of three or higher for the set of D-Factor questions. Once the separation of subjects into the nonbulimic (NB-Group) and probable bulimic (PB-Group) groups was established, the PB-Group was further separated into those considered truly bulimic (B-Group) by the significant presence of binge and purge behavior and those

who were not and could be considered high risk non-bulimics (HRNB-Group). Key responses included a three to five on question 47, a four or five response on question 45, and a four or five response on question 44. Three point responses on question 47 (Do you ever vomit after eating when you feel you have eaten too much?) were only accepted as representing a bulimic if it was validated by a four or five point response on question 38 (indicating that they had willfully vomited more than 10 times) or stood in combination with a four or five point response on question 44 and/or 45.

For later analysis, B-Group (bulimics) members were then categorized in terms of the most significant purge method, to allow a breakdown of this group for further comparison with previous studies (Johnson & Berndt, 1982; Johnson, 1982; Schwartz et al., 1982; Sinoway, 1982).

Procedure

Surveys were distributed to individual subjects through the cooperation of the Residence Life Council staff at Appalachian State University. Distribution of surveys to subjects involved two steps. First, 480 surveys were delivered to the Residence Life Office in 12 sets of 40 surveys. The Residence Life staff was instructed that the surveys should be distributed to halls that housed predominantly upperclass women and

that, if possible, the halls should represent several different residence dormitories. The rationale behind asking for surveys to be distributed to upperclass women, if possible, was to try to sample this behavior as it existed in the majority of the female student body versus only using freshman women, and to allow a comparison to previous studies of incidence levels that used primarily freshman women (Sinoway, 1982).

Instructions for each hall resident advisor were included with each set of surveys (see Appendix A). The instructions detailed the procedure for awarding one part of one of the tickets provided for each completed survey that one of their hall residents turned back in to them. The instructions also detailed the procedure for turning the completed and uncompleted surveys from their hall to the Appalachian State University Counseling and Psychological Services Center. The letter to each resident advisor described the special lottery for the resident advisors who returned the most surveys in the shortest amount of time. Instructions for how the prize from the lottery would be delivered was also covered in this letter to the resident advisors involved in this survey.

The resident advisors distributed the surveys to members of their halls. It was felt that since most of the halls house some 50-52 individuals on each floor,

the distribution of 40 surveys to each hall would guarantee the possibility of recovering surveys from the majority of the hall members while not requiring the return of a lot of uncompleted surveys. The individual hall members were instructed in the details of the lottery drawing in the cover sheet of the survey (see Appendix B) and in the closing letter which was the last page of the survey (see Appendix D). The closing letter detailed the purposes of the survey and included encouragement to bulimic individuals to come to the Appalachian State University Counseling and Psychological Center if they needed aid in trying to overcome this particular problem. The subjects were told to look in the school newspaper in the following weeks for publication of the winning lottery number and how to claim the prize in the cover sheet and closing letter of the survey.

RESULTS

A total of 480 surveys were distributed with 385 of these being returned for an overall return/response rate of approximately 80.2%. Thirty-seven of the surveys were not used in the analysis due to missing or blank pages in the returned survey, resulting in a usable return rate of 72.5%, or 348 survey subjects.

Subjects were all female, average age 20 years, with an age range of 18 to 24 years. A breakdown of the subject population in terms of age and class rank may be found in Table 1. Mean academic average for the entire sample was 2.65 on a four-point scale, with a standard deviation of .61. Mean academic average for the B-Group (bulimic) subjects was 2.63, with a standard deviation of .33.

The number of actual bulimics in the sample was evaluated by taking only those subjects who demonstrated high scores on the diagnostic factor and also reported a pattern of purging by vomiting, laxative and/or diuretic use, or persistent, restrictive dieting and fasting after eating in excess. The present sample contained 41 bulimics. This constituted 11.8% of the sample. Another 32 subjects fell into the high risk

Table 1

Sample Breakdown by Age and Class Rank

Class	n	Age	n
Freshman	9	18	8
Sophmore	112	19	104
Junior	119	20	107
Senior	106	21	98
Graduate	2	22	18
		23	8
		24	4

nonbulimic group and in combination with the B-Group members, formed the PB-Group with a total of 73 members.

There was no direct relationship between academic achievement and scores on the diagnostic factor. The computed regression correlation between increasing scores on the diagnostic factor and reported grade point average was -.04, for the members of the PB-Group. Correlation between increasing levels of academic achievement and D-Factor (diagnostic) scores for all subjects and for the PB-Group subjects was nonsignificant.

A breakdown of response patterns for nonbulimic and bulimic subjects on the question assessing subject perception of mother is represented in Table 2. For both groups, the modal response was to choose the option "other," with the majority of all subjects describing their mothers in positive terms.

Results for the sample as a whole indicated that the subject of weight control was a major concern for this set of subjects. Seventy-six and one-half percent of all subjects either agreed or strongly agreed that they would like to lose weight if they could and 71.2% reported engaging in dieting practices from occasionally to always or almost always. For the sample as a whole, 6.6% reported using diet pills often or always

Table 2

Response Rates in Percentage Form of Nonbulimic (NB), High Risk Nonbulimic (HRNB), and Bulimic (B) Groups on Question Concerning Subject Perception of Mother

Response	Groups		
	NB n = 275	HRNB n = 32	B n = 41
Other	48.9	18.7	41.5
Fights	12.0	25.0	7.3
Passive	21.5	18.7	12.2
Overcontrolling	12.8	28.1	9.7
Manipulative	4.7	9.4	29.3

or almost always, 10.9% reported at least occasional use of laxatives and/or diuretics, and 12.6% indicated that they fasted after binge eating often or always or almost always. Some 8.6% of the entire sample reported that they would sometimes or even more often, vomit willfully after binge eating.

Binge eating was common among the sample with 31.8% binge eating at least on a weekly basis. In Table 3 is a breakdown of the binge eating frequency reported by the sample as a whole and for the probable bulimic (PB-Group) group versus the nonbulimic (NB-Group) group. Modal length of binge eating period was from 30-60 minutes for the entire sample and for the PB-Group, with 3.7% of the NB-Group and 17.8% of the PB-Group binge eating daily and 20.1% of the NB-Group and 76.7% of the PB-Group binge eating on at least a weekly basis. The most frequent response to age range at which the binge eating pattern began was the 16-18 year range with 43.8% of the PB-Group reporting in this manner. For the age ranges of 13-15 years and 19-21 years, response frequence was 21.9% and 19.2% respectively for the PB-Group.

Figure 1 represents a comparison of the relative percentiles of group members engaging in diagnostically significant practices of laxative use, strict dieting, fasting, and vomiting as means of alleviating the

Table 3

Frequency of Binge Eating for Nonbulimics (NB), High Risk Nonbulimics (HRNB), and Bulimics (B) Expressed by Percentage Response

Response	Groups		
	NB n = 275	HRNB n = 32	B n = 41
Less than 1/week	80.0	9.4	34.1
1/week	16.4	78.1	43.9
Less than 1/day	2.2	12.5	9.7
1/day	1.0	0.0	2.4
More than 1/day	.4	0.0	9.7

effects of food ingestion, for the nonbulimic group (NB-Group) and the probable bulimic group (PB-Group).

On the assessment of the individual's mood state around the time of the survey, a chi-squared test for goodness of fit indicated that a significant difference did exist on subject ratings comparing the PB-Group and NB Group's response patterns. Only 5.8% of the NB-Group reported depression compared to almost three times that level, 17.8%, for the PB-Group. Also, 49.4% of the NB-Group rated themselves as happy or content, while only 17.8% of the PB-Group did so. The remaining members of each group indicated that their recent affective state could be described as "up or down."

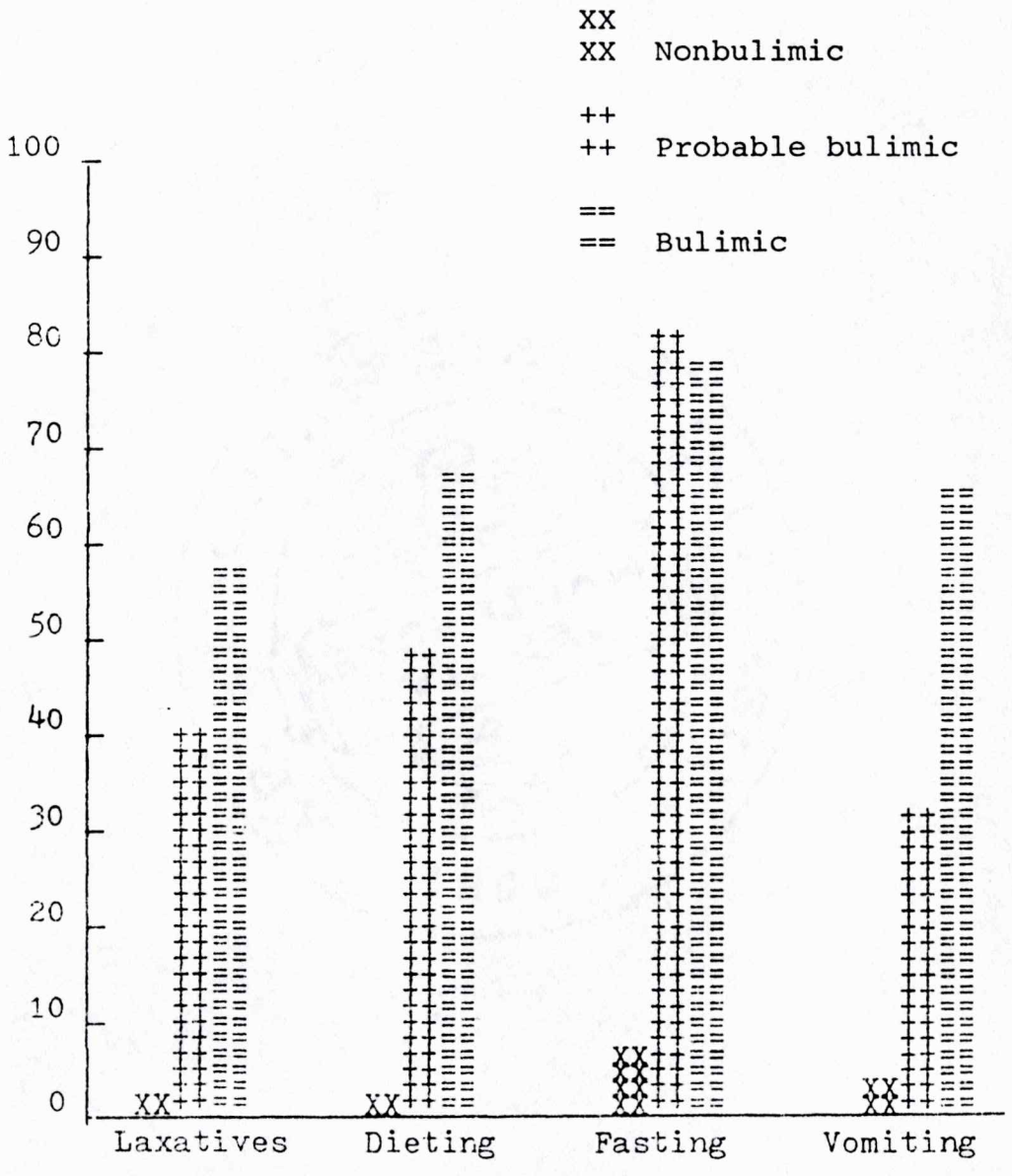

Figure 1. Comparison of relative percentage of participation in purge activities at diagnostically significant levels between the nonbulimic, probable bulimic, and bulimic groups.

DISCUSSION

The results of the present survey indicated that out of the 348 respondents who returned usable surveys, 41 subjects met the criteria to be considered bulimic. That number represents approximately 11.8% of the total sample. This figure is relatively consistent with recent studies with similar samples (Halmi et al., 1981; Schwartz et al., 1982; Sinoway, 1982). Among their respective samples, Sinoway reported an incidence level of around 14%, Halmi and her associates reported a level of around 19%, and Schwartz and his associates reported an incidence level of around 13%.

There were some methodological differences in the present study compared to that of Sinoway (1982) in that she may have been using a somewhat broader criteria for bulimics than was used here. In the Sinoway study, the criteria allowed for inclusion of individuals who binged in conjunction with restrictive dieting practices. This was not done in the present study and may account for the slightly lower incidence rate reported. In another study, membership in the bulimic category was based primarily on use of laxatives and self-induced vomiting after binge eating (Halmi et al.,

1981). Halmi and her associates found a 19% incidence rate among the sample studied; in excess of the present study estimates. Thus it seems that the present study is somewhat different from previous studies in methodology but that it yielded an incidence level estimate that is in relative agreement with previous estimates. If anything, the present estimate may be somewhat conservative.

The literature is relatively consistent in depicting bulimics as having a strong need for achievement and personal accomplishment (Boskind-Lodahl & Sirlin, 1977; Brenner, 1980; Domke, 1981; Kubistant, 1982; Loro, 1982; Rodriguez, 1981; Sinoway, 1982; Young, 1979). This assumption has been explicitly stated to include high achievement in academic endeavors (Boskind-Lodahl & Sirlin, 1977; Domke, 1981) and implicitly suggested by many others. The present study found no correlation between an individual's reported grade point average and whether or not she fell into a bulimic or nonbulimic category. The mean grade point average for the 41 bulimic subjects was nearly identical to that of the entire sample. It may be that bulimics are oriented toward high achievement for selective types of tasks that do not necessarily include academic work. It is possible that researchers in this area were addressing achievement in the context of more

directly social activities/behaviors. It is also possible that this assumption has been "borrowed" from the literature on anorexia nervosa where academic achievement has been shown to correlate with the anorexic behavior pattern. This is not unlikely as the amount of research on bulimia is minimal (Domke, 1981; Hawkins, 1982), with many of the existing articles using research on anorexia to enhance their discussions of bulimia.

One of the theoretical perspectives on bulimia that is often discussed in the literature involves a family/systems approach in which a particular constellation of family relations is thought to be common. This constellation presents the father as an often distant figure, but one imbued with power in the child's eyes, while the mother is often reported as manipulating and overcontrolling (Brenner, 1980; Young, 1979). A recent study (Sinoway, 1982) tried to validate this assumption and reported that bulimic subjects in that study were not significantly more negative in their description of their mothers, but that they did appear more ambivalent about rating their mothers positively or negatively than the nonbulimic subjects. In the present study it was interesting to note that only 4.7% of the nonbulimic subjects indicated that their mother was seen as manipulative compared to 29.3% of the

bulimic subjects reporting that the mother could be described as manipulative. However, since the results indicated that 7 out of 10 bulimic respondents would choose some other descriptor of mother other than "manipulative," it would seem premature to validate the claim that the bulimic mother is commonly seen as manipulative.

The factor score concentrating on weight concern and dieting practices, WT-Factor, was compared in a regression analysis to individual factor scores on the diagnostic (D-Factor) factor. It was hypothesized that bulimic subjects would demonstrate a greater concern regarding weight and dieting than nonbulimics. Excessive weight preoccupation is a cornerstone to the picture of the bulimic (Johnson, 1982; Schwartz et al., 1982; White & Boskind-White, 1981). The regression analysis was conducted in part to add validation to the factors involved and in part to add some direct validation to the assumption that bulimics are significantly more preoccupied with the issue of weight and diet than nonbulimics. A strong correlation (greater than $R = .80$) was found in the present study. In a recent Neilson survey, reported earlier in this study, it was found that 45% of all households had someone dieting during the course of 1978 (Schwartz, Thompson, & Johnson, 1982). Within this same study it was found that 56% of

the women 25-54 were dieting, 76% of whom did so for mainly cosmetic reasons. It was found that almost 40% of the total sample in the present study reported dieting often or always or almost always, and that 71.2% reported dieting at least "sometimes." Among the probable bulimic group (PB-Group), 91.8% of the subjects reported dieting often or always or almost always. It would appear that the college female represents a population at even greater risk of developing eating disorders than the general population. If this was an accurate assumption it would likely indicate that incidence estimates taken from college settings would be spuriously high if assumed to apply to the general population of women in this country.

Another analysis was made to determine the degree of relation shown by scores on the diagnostic factor (D-Factor) and scores on the self-evaluative factor (S-Factor). Although the correlation was significant for the entire sample and the PB-Group, the correlation was to a lesser degree within the PB-Group. Combined with the fact that the range of S-Factor scores was limited (Range = 16-35) the S-Factor score was not of any particular use in effectively predicting the subject's position on the diagnostic score axis. This was probably due to the fact that the items comprising the S-Factor were not uniformly directed toward one

particular aspect of subject self-perception. However, overall the correlation for the sample as a whole was significant ($R = .43$, $n = 348$) and the assumption that bulimics would rate themselves more negatively than nonbulimics was supported.

A review of research on bulimia stated that the incidence of overweight among the parents of bulimics was significantly higher than for the parents of nonbulimics (American Psychiatric Association, 1980; Domke, 1981). The present study did not find any major differences between the reported presence of obesity among the parents of bulimics and nonbulimics.

One of the common physical complications of bulimia reported in the literature is menstrual irregularity or cessation (ANAD, 1982; Domke, 1981; Johnson, 1982; Kubistant, 1982). In the present study, bulimics in this age range were about twice as likely to have some kind of irregularity in their menstrual cycle than nonbulimics, with about 4 out of every 10 bulimics reporting some menstrual irregularity.

One of the aspects most commonly cited as characteristic of bulimia has been its cyclical nature (Boskind-Lodahl & Sirlin, 1977; Brenner, 1980; Johnson, 1982). The cycle is typically outlined as: (a) emotional stress; followed by (b) eating as a means of reducing stress in the short term; (c) subsequent elevated

anxiety due to concern about the effect the eating will have on their weight; (d) some method of alleviating the foreseen effects of the ingested food is employed (vomiting, laxative abuse, diuretic abuse, diet pills, fasting); and (e) subsequent self-reproach for loss of control, for engaging in negatively valued behaviors, and feelings of depression which in turn increases the overall stress level of the individual and the cycle is set to repeat itself. In some ways, this pattern of stress coping/production appears similar to some patterns of substance abuse. Some research has pointed out the similarity between bulimia and bulimics and forms of drug abuse and drug abusers (Domke, 1981; Johnson & Berndt, 1982).

The present study, in retrospect, had a series of shortcomings. A number of questions that would have clarified some of the data and enhanced the findings of the present survey were missing. Specifically, in relation to the question of menstrual problems, there should have been a question on the use of birth control methods to determine how many women were being treated for past irregularities by use of prescribed birth control pills. Just as the frequency of binge eating was assessed, a question should have been included to assess the frequency of subjects engaging in different purge methods. It has been suggested that bulimia is

more common in individuals from upper level socio-economic backgrounds (Domke, 1981). Questions to determine ethnic and socio-economic background would have provided clinically useful information. An error of omission was the lack of a question relating to the known presence of a diagnosis of anorexia nervosa for the individual respondents, which would have precluded a diagnosis of bulimia. One previous study stated that only about 40% of bulimics sought treatment for their condition (Johnson & Berndt, 1982). Some assessment should have been included of the number of sample subjects who had previously or were presently seeking treatment for the eating disorder. Other questions that would have enhanced the usefulness of the present study related to the possible pattern of family dieting, patterns of drug and alcohol use, and the incidence of obesity among siblings. A further improvement would entail the use of more rigid psychometric standards in the construction of responses to questions, better question design, and employment of a consistent response set for all items of the survey.

Prior to the adoption of the third edition of the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 1980), bulimia did not exist as a diagnostic category. At the present time the amount of research that deals specifically

with samples of bulimic individuals is relatively minimal (Domke, 1981; Hawkins, 1982) with many of the papers on the subject using anorexia studies to a significant degree in the context of discussion of bulimia (Domke, 1981; Rosen & Leitenberg, 1982; White & Boskind-White, 1981). There are specific areas in which the information in the DSM-III is lacking or contains assumptions that do not appear to be independently validated by research with bulimics. No information exists regarding the prevalence of the condition or predisposing factors that would designate certain individuals as more prone to fall into this behavior pattern. The DSM-III presents information indicating that binge eating episodes are "rapid consumption of a large amount of food in a discrete period of time, usually less than two hours" and that "the food is usually gobbled down quite rapidly, with little chewing" (DSM-III, 1980, p. 69). There does not seem to be much empirical research that addresses the particular eating behaviors involved in a bulimic binge (i.e., data on rate of caloric ingestion, type of food typically selected, time duration of binge), with most information being basically supported by anecdotal evidence. The present study indicated that the large majority of individuals binged for less than an hour, but better research is needed before the true binge behavior of bulimics can be reported with

some degree of empirical backing. Although the DSM-III states there is no information regarding familial patterns for bulimics, it does state that obesity is frequently seen in parents or siblings of bulimics. The present study did not confirm the significant presence of obesity among parents of bulimics. However, any consideration of obesity within a family as being a type of predisposing factor, must take into account the percentage of parents reported as obese in relation to the incidence of obesity among people of similar ages within the general population of the country.

There has been some reference to the fact that bulimics may be subject to "intermittent Substance Abuse: in the DSM-III (American Psychiatric Association, 1980). It may be that this observation is accurate as it has received some support in the literature (Domke, 1981; Johnson & Berndt, 1982). However, the incidence of "intermittent Substance Abuse" among bulimics must be evaluated in light of the same behavior among the population of same age, nonbulimic subjects.

Two of the stated goals for the DSM-III are that the manual should have (a) "usefulness for educating health professionals," and (b) have "clinical usefulness for making treatment and management decisions in varied clinical settings" (DSM-III, 1980, p. 2). In light of these goals it would seem appropriate that

there be a much greater elaboration on the physical complications and risks involved with this behavior so that (a) health professionals will have a fuller understanding of the syndrome itself and know what to look for as possible signals of the condition, and (b) will have the necessary appreciation for the health complications in such a manner that help will be appropriately sought in case treatment and management from allied health professions (physicians, dentists, nutritionists). In light of what the goals of the DSM-III are, the information provided by the present edition is inadequate. This lack can be explained in part by the "newness" of the behavior as a diagnostic category, but for the working professional, especially one functioning in high risk settings (universities, high schools) some type of supplementary reference is needed.

The present study has looked at the incidence and some characteristics of women with bulimia, within a university setting. The results indicated that bulimia among females on the Appalachian State University campus is a significant problem and merits some concern. The study has also attempted to point out areas where the knowledge regarding this behavior pattern is ambiguous or incomplete. In light of the findings, a continued effort toward research in this area is indicated.

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APPENDIX A

Resident Advisor Instructions

Resident Advisor Instructions

Resident Advisor,

Distribute your copies of the survey to women on your halls. Please emphasize that no names are to be put on the surveys and that each person should read the first page entirely before deciding to go on. Also, emphasize that doing the survey is strictly voluntary. A premium should be placed on answering the survey honestly. As an incentive to the individuals on your hall, completion of a survey and its return to you will be rewarded by giving the person one-half ticket of one of the tickets provided to you with your surveys. The remaining one-half ticket should be returned in the envelope provided to you. On this envelope you should put your name. The one-half tickets will be drawn from and the winning number will be published in The Appalachian as well as being available at the Counseling Center desk at 3180. The winner who presents the matching one-half ticket will be given the $20.00 prize. If no one claims the prize within two-three days of publication, a new number will be drawn and publicized, and so on until the prize is claimed. Please do not fill out one of the surveys for yourself. The incentive for you to get the surveys out and back to us at the Counseling Center along with the one-half tickets, consists of a

drawing using the envelopes with each participating R.A.'s name on it. The drawing will be held among those envelopes that are returned with the most returned-completed surveys. Please make sure and return the unused surveys and tickets along with your completed surveys and one-half tickets in the envelope you put your name on. The winning R.A. will receive a prize of $15.00 and will be notified through the Residence Life office. The drawings will be held within about a week of the distribution of the surveys, so it is important that these surveys be given out and returned quickly. Remember these steps:

1. Give out the surveys with the above instructions stressing honesty, completing all of the questions, prize.

2. Give a one-half ticket for the return of each completed survey.

3. Gather up all unused surveys.

4. Only one survey per girl is allowed.

5. Return all unused and completed surveys and unused and one-half tickets in your envelope with your names on it to the Counseling Center within one week.

6. Watch for the winning number in The Appalachian or call the Counseling Center to find out.

7. Your prize (R.A.'s) will be delivered via the Residence Life office.

If you have any questions, call Gary Hazlett at the Counseling Center at 3180. Thank you for your cooperation.

APPENDIX B

Cover Letter Subject Instructions

Cover Letter Subject Instructions

This is a survey sponsored by the Appalachian State University Counseling and Psychological Services Center. This particular survey is primarily concerned with assessing a set of specific health problems among female college students.

Please do not sign your name on this survey, all participants are to remain anonymous.

As an incentive, a condition has been made such that, for the return of your completed survey to your R.A. you will be issued a ticket with a number on it. Soon after the surveys have all been given out and had sufficient time to return, a drawing will be held and the winning ticket holder will receive a prize of $20.00 upon bringing the ticket to the Counseling Center. The winning number will be advertised in The Appalachian If the winning number is not presented within two days of publication of the winning number, subsequent drawings will be held until the prize is claimed.

You are in no way under any obligation to participate. If you do not wish to participate in this survey, please, do not mark on your copy and turn it in to your R.A. Thank you for your cooperation.

Richard Levin, Ph.D.
Gary Hazlett, Graduate Intern
A.S.U. Counseling Center

APPENDIX C

Survey Questionnaire

Survey Questionnaire

Please answer the following questions as best you can. Answer all of the questions.

Term _____ Class _____ Academic Average _____

Age _____ Height _____ Weight _____

If you are presently having any physical problems, please list them below:

1. My mother can be described as _____ and my father as _____.
   A. very obese
   B. mildly obese
   C. average
   D. lean built
   E. skinny as a rail

2. I would rate my present physical health/condition as _____.
   A. exceptionally healthy
   B. healthy
   C. fair health
   D. unhealthy
   E. very unhealthy

3. I believe that the opposite sex finds me physically attractive.
   A. strongly agree
   B. agree
   C. neither agree nor disagree
   D. disagree
   E. strongly disagree

4. I feel that others perceive overweight individuals as _____.
   A. very unattractive
   B. somewhat unattractive
   C. neither unattractive nor attractive
   D. somewhat attractive
   E. attractive

5. I feel that my parents would in general look upon overweight individuals _____.
   A. very positively
   B. positively
   C. neutrally
   D. negatively
   E. very negatively

6. I believe that if other people knew what I am really like they would _____.
   A. think less of me
   B. think more of me
   C. their opinion would probably not change

7. When I am in a group of people and a decision is being made, my opinion influences the outcome ____.
   A. most all the time
   B. often
   C. sometimes
   D. rarely
   E. never

8. I feel that I am physically _____.
   A. very attractive
   B. attractive
   C. neither attractive nor unattractive
   D. unattractive
   E. very unattractive

9. When I see models in magazines or on television I _____.
   A. become acutely aware of how I compare to them physically.
   B. sometimes become conscious of how I compare to them physically.
   C. recognize the difference between them and myself but I don't find myself concerned much about it.
   D. never have thought about setting myself up in comparison to them in any fashion.
   E. other: _____

10. I am concerned with how others are impressed with my appearance.
    A. strongly agree
    B. agree
    C. neither agree nor disagree
    D. disagree
    E. strongly disagree

11. I believe that what others think of me has a lot to do with how I value myself.
    A. strongly agree
    B. agree
    C. neither agree nor disagree
    D. disagree
    E. strongly disagree

12. If I could, I would like to lose weight.
    A. strongly agree
    B. agree
    C. neither disagree nor agree
    D. disagree
    E. strongly disagree

13. How concerned are you with your present weight?
    A. very concerned
    B. concerned
    C. neither concerned nor unconcerned
    D. unconcerned
    E. very unconcerned

14. When I look in the mirror I often feel badly about all of the food I've recently eaten.
    A. strongly agree
    B. agree
    C. neither agree nor disagree
    D. disagree
    E. strongly disagree

15. How often do you count calories?
    A. always or almost always
    B. often
    C. sometimes
    D. rarely
    E. never

16. How often do you diet or try to diet?
    A. always or almost always
    B. often
    C. sometimes
    D. rarely
    E. never

17. Do you ever take pills to help stay on a diet (diet pills)?
    A. always or almost always
    B. often
    C. sometimes
    D. rarely
    E. never

18. How often do you take diuretics (water pills) to aid weight loss efforts?
    A. always or almost always
    B. often
    C. sometimes
    D. rarely
    E. never

19. How often do you weigh yourself?
    A. more than once a day
    B. daily
    C. almost every day
    D. infrequently
    E. almost never, a few times a year

20. I feel bloated after eating a meal.
    A. always or almost always
    B. often
    C. sometimes
    D. rarely
    E. never

21. I find myself eating, even though I am not really hungry.
    A. much of the time
    B. frequently
    C. sometimes
    D. rarely
    E. never

22. How often are you bothered by unwanted thoughts of food or eating?
    A. all the time
    B. most of the time
    C. some of the time
    D. very little of the time
    E. never

23. Do/did you ever binge eat? (Binge eating has been defined as a considerable excess of eating, well beyond the point of normal satiation, often in the absence of hunger.)
    A. less than once a week
    B. once a week
    C. almost every day
    D. once a day
    E. more than once a day

24. Have you ever binge eaten before?
    A. yes, I do at present
    B. yes, I did in the past but no longer do
    C. no

(For the following questions, if they do not apply to you at all disregard. However, please read all the questions before passing on to the next ones.)

25. What is the average length of a single binge eating period?
    A. less than 30 minutes
    B. 30 minutes to 1 hour
    C. 1-2 hours
    D. 2-3 hours
    E. more than 3 hours, estimate how long _____.

26. Which of the following best describes your bingeing behavior?
    A. I am certain I could stop at any time.
    B. I am pretty sure I could stop at any time.
    C. I don't think I could stop.
    D. I am sure that I could not stop.
    E. I have never thought about wanting to stop.

27. Which of the following best describes your bingeing behavior?
    A. I plan all of my binges.
    B. I plan most of my binges.
    C. I plan some of my binges and the rest seem to happen without any prior planning.
    D. All of my binges just seem to happen without any prior planning.

28. How much are you concerned about your bingeing behavior?
    A. very concerned
    B. concerned
    C. neither concerned nor unconcerned
    D. unconcerned
    E. very unconcerned

29. Which of the following best describes your feelings after a binge?
    A. I feel relieved.
    B. I feel guilty.
    C. I feel disgusted with myself.
    D. I feel numb.
    E. Other, or more than one of the above:_____

30. Which of the following best describes your feelings during a binge?
    A. I feel that I could control the eating if I chose.
    B. I feel that I have at least some control.
    C. I feel completely out of control.

31. Which best describes your frame of mind while binge eating?
    A. a euphoric experience
    B. a really pleasant experience
    C. don't really enjoy the food, don't know why I do it
    D. no particular thoughts or attitudes while eating
    E. other, please describe: _____

32. Which best describes your feelings after a binge?
    A. very depressed
    B. moderately depressed
    C. mildly depressed
    D. not at all depressed
    E. a pleasant feeling

33. At what age did you begin your binge pattern?
    A. younger than 10 years of age
    B. 10-12 years
    C. 13-15 years
    D. 16-18 years
    E. 19-21 years

34. Certain things or events seem to trigger my binge eating.
    A. strongly agree
    B. agree
    C. neither disagree nor agree
    D. disagree
    E. strongly disagree

35. How much do you want to stop binge eating?
    A. very much
    B. somewhat
    C. I'm not sure
    D. I don't want to
    E. I don't binge

36. I have set myself a goal for my weight.
    A. strongly agree
    B. agree
    C. neither agree nor disagree
    D. disagree
    E. strongly disagree

37. My general emotional condition over the past few weeks could be described as _____.
    A. happy
    B. content
    C. up and down
    D. depressed/sad or unhappy
    E. other: _____

38. I have in the past vomited after eating a meal, on purpose.
    A. no
    B. yes, once or twice
    C. yes, more than 3 times but less than 10 times
    D. yes, more than 10 times
    E. yes, too many times to count

39. Recently my menstrual cycle has been _____.
    A. regular
    B. irregular, but I've always been that way
    C. irregular
    D. I menstruate rarely these days
    E. I don't menstruate any more.
    If you answered either D. or E., how long has this been _____?

40. One of my major fears related to my social life is that I might be rejected by a member of the opposite sex.
    A. strongly agree
    B. agree
    C. neither disagree nor agree
    D. disagree
    E. strongly disagree

41. Check the following which apply and give a brief description of your relationship (the quality of it) with your mother. My mother is _____.
    A. manipulative
    B. overcontrolling
    C. passive
    D. occasionally involved in fights with me
    E. other: _____

42. After eating I often have feelings of guilt that I shouldn't have eaten what I did because of what it might do to my weight.
    A. strongly agree
    B. agree
    C. neither disagree nor agree
    D. disagree
    E. strongly disagree

43. How often do you eat in response to feelings or emotions?
    A. almost always
    B. often
    C. sometimes
    D. rarely
    E. never

44. Do you ever use laxatives or diuretics after eating?
    A. always or almost always
    B. often
    C. sometimes
    D. rarely
    E. never

45. Do you ever fast or attempt to fast after excessive eating?
    A. always or almost always
    B. often
    C. sometimes
    D. rarely
    E. never

46. Do you try to go onto a strict diet, especially after you feel that you have eaten too much?
    A. always or almost always
    B. often
    C. sometimes
    D. rarely
    E. never

47. Do you ever vomit after eating when you feel you have eaten too much?
    A. always or almost always
    B. often
    C. sometimes
    D. rarely
    E. never

48. How did you first get into the habit of throwing up or using laxatives and/or water pills to help control your weight?
    A. by accident, I just stumbled onto the method
    B. learned it from a friend
    C. heard about others doing it
    D. read about it or over the public media
    E. other: _____

49. Which of the following best describes your experience while vomiting?
    A. a pleasant experience
    B. no particular thoughts or attitudes
    C. I don't really enjoy it
    D. a very negative experience
    E. other: _____

50. Which of the following best describes your feelings after vomiting?
    A. very depressed
    B. moderately depressed
    C. mildly depressed
    D. not depressed at all
    E. other: _____

51. Which of the following best describes your feelings after vomiting?
    A. I feel relieved
    B. I feel disgusted
    C. I feel guilty
    D. I feel numb
    E. other, or more than one of the above apply: _____

APPENDIX D

Closing Letter Subject Instructions

Closing Letter Subject Instructions

As you may have guessed, this survey has been mainly about problems with eating patterns. The name of the condition that we are concerned with is bulimia, sometimes also called bulimarexia. This condition has been found to have serious consequences for those who have it. Accordingly, the Counseling and Psychological Services Center is attempting to find out more about the condition. Keeping with that concern, the Center will be conducting a group that will be devoted to working with this condition. The name of the group will be the "Gorgers and Purgers Group." It will be starting up sometime in October or early November. If you are interested in obtaining more information about this area or have identified yourself as having a personal concern relative to eating behaviors, you are encouraged to inquire about our program at the Counseling Center, phone number: 262-3180. Life-style changes are possible.

Don't forget about the chance to win the $20.00 prize by completing the survey and turning it in to the Counseling Center. The sooner you get it back to us, the better your chance of winning.

Thank you again for your cooperation.

Gary A. Hazlett, Graduate Intern

VITA

Gary Allen Hazlett was born in Munich, Germany on November 26, 1957. He attended elementary schools in Fayetteville, North Carolina; Stuttgart, Germany; and Wurzburg, Germany. He attended E. E. Smith Senior High School in Fayetteville, North Carolina, graduating in June, 1976. The following school year he attended Davidson College in Davidson, North Carolina, graduating in May, 1980 with a Bachelor of Arts degree in Psychology. In the spring of 1981, he was officially admitted into the graduate school of Appalachian State University and began studying towards a Master of Arts degree in Clinical Psychology. In 1982, he was awarded an Alumni Scholarship for academic achievement and in the summer of 1983 also worked as a graduate research assistant.

In April of 1983, he was accepted into the doctoral program at Indiana State University leading towards a doctorate in Psychology. He was awarded a full teaching assistantship and began working and studying at Indiana State University on the 24th of August, 1983.

Mr. Hazlett's current address is 1440 First Avenue, Terre Haute, Indiana 46204.

His parents are Mrs. Ann P. Hazlett and Mr. John W. Hazlett of Fayetteville, North Carolina.