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**ABNORMAL EATING PATTERNS AND THE RELATIONSHIP TO  
DISSOCIATIVE EXPERIENCES**

By  
Gionna Arielle Botto

A Thesis

Submitted to the  
Department of Psychology  
College of Liberal Arts and Sciences  
In partial fulfillment of the requirement  
For the degree of  
Master of Arts in School Psychology  
At  
Rowan University  
May, 2011

Thesis Chair: Roberta Dihoff, Ph.D.

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## **Abstract**

Gionna Arielle Botto

### **ABNORMAL EATING PATTERNS AND THE RELATIONSHIP TO DISSOCIATIVE EXPERIENCES**

2010/11

Roberta Dihoff, Ph.D.

Master of Arts in School Psychology

The purpose of this investigation was to determine if a relationship exist between abnormal eating patterns and dissociative experiences, as well as if a relationship exist between bulimia nervosa and food preoccupation symptomatologies. This study used a non-clinical non-diagnosed population of university students (n=100) to determine results. The participants were given two self-report scales, the Eating Attitudes Test and the Scale of Dissociative Activities in order to provide data to the researcher. The data was correlated, using Pearson's Correlation to determine results. The results in this study indicated that there is a statistically significant relationship between dissociative experiences and abnormal eating patterns, as well as, a statistically significant relationship between bulimia nervosa and food preoccupation symptomatologies and dissociative experiences.

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## **Chapter 1**

### **Introduction**

In this study, the relationship between abnormal eating patterns and dissociative experiences was examined. This relationship was examined because there is prior research that indicated that there is a possible relationship between abnormal eating patterns, specifically bulimic specified abnormal eating patterns and dissociative experiences. In completing this research, the researcher looked further into the relationship of abnormal eating patterns and dissociative experiences. Finding a supportive relationship could benefit the diagnosis and treatment of abnormal eating patterns by having found a relationship and determining a specific and effective form of treatment for both eating disorders in conjunction with the dissociative experiences that may be co morbid. Having proper methods to treat dissociative experiences may help with the treatment of eating disorder due to dissociative experiences may induce symptomatic episodes. Treating the dissociative experiences may lead to a better method to coach eating disorder patients away from their symptoms, especially patients diagnosed with bulimic specified disorders. Everill and Waller (1995) suggested that the state of dissociative experiences may be a form of a defense mechanism, or dissociation, as a way to reduce awareness of behaviors.

### **Purpose**

This study examined a possible relationship between dissociative experiences and abnormal eating patterns. The purpose of this study was to lend support to previous research acknowledging a relationship between abnormal eating patterns and dissociative experiences. The main focus of the present research was to investigate if there was indeed

a relationship, either supporting the idea that there was a relationship between abnormal eating patterns and dissociative experiences, or not supporting, by indicating that there was not a relationship between abnormal eating patterns and dissociative experiences. Based on previous research, dissociative experiences may be a symptom inducing experience and can result in a higher frequency in the use of abnormal eating patterns and symptoms of eating disordered behavior. This study looked to indicate that this relationship does indeed exist, based on the questionnaires used within the Rowan University student population.

### **Hypothesis**

In the present study, the researcher tried to determine if there was indeed a relationship between abnormal eating and dissociative experiences, the research obtained this information by assessing the eating behaviors and dissociative experiences of the participants. It was expected that participants with abnormal eating patterns, especially bulimia specified abnormal eating patterns, would have higher levels of dissociative experiences. The researcher was looking for any relationship that either supports this idea or does not support this idea. It was expected; by the researcher that there was a relationship between dissociative experiences and abnormal eating patterns, as well as a relationship between dissociative experiences and bulimia nervosa symptomatology. The researcher believed that this relationship would be a positive correlation; this would indicate that both dissociative experiences and abnormal eating patterns exist together and correlate with one another, both occurring together.

## **Background**

The classic research orchestrated by Valdiserri and Kihlstrom (1995a) found that diagnosed bulimic eating disorder patients, suggested that they felt their binges were not voluntary and were accompanied with the *amnesia* like lose of time. The results yielded in this research revealed a modest relationship between dissociative experiences and abnormal eating patterns in the populations used, a normal, undiagnosed, college population. Valdiserri and Kihlstrom also found that there were significant correlations between the drive for thinness, bulimic tendencies, and body dissatisfaction and the frequency of dissociative experiences. This significant correlations lent itself to the idea that dissociative experiences may not only be a symptom of abnormal eating, dissociative experiences may also be a symptom of abnormal or obsessive thoughts about issues regarding weight and body image/body satisfaction. There have been significant amounts of previous research that has also lent the support to Valdiserri and Kihlstorm's classic research, that there is a relationship between abnormal eating patterns and the existence of dissociative experiences in individuals who engage in abnormal eating patterns.

## **Definitions**

Dissociation is defined as, "A lack of the normal integration of thoughts, feelings, and experiences into the stream of consciousness and memory." (Bernstein & Putnam, 1986). As well as, "As a disruption in the usually integrated functions of consciousness, memory, identity or perception of the environment" (Beato, Cano, & Belmonte, 2003).

Anorexia nervosa is defined as a "refusal to maintain a minimally normal body weight (American Psychiatric Association [DSM-IV-TR], 2000)." This definition also

includes the intense fear of weight gain, disturbance in perception of body shape and size. The criteria based on the DSM-IV-TR, states symptoms of refusal to maintain a minimal body weight (less than 85% of expected for age and height.) Intense fear of weight gain, disturbance in one's own perception of one's own body, and amenorrhea. There are two types of anorexia nervosa, *Restricting Type* and *Binge-Eating/ Purging Type*. *Restricting Type* is defined as during Anorexia Nervosa episodes, the individual does not engage in binge-eating or purging behaviors; these individuals typically just restrict food. *Binge-Eating/Purging Type* indicates that during an Anorexia Nervosa episode, the individual regularly engages in binge-eating or purging behaviors. These individuals may not binge, rather purge after consumption of any amount of food.

Bulimia Nervosa is defined as “repeated episodes of binge eating followed by inappropriate compensatory behaviors such as self-induced vomiting; misuse of laxatives, diuretics, or other medications; fasting, or excessive exercise (American Psychiatric Association [DSM-IV-TR], 2000).” Based on the DSM-IV-TR, the criteria for Bulimia nervosa is defined as, reoccurring episodes of binge eating. Binge episodes are considered eating in a larger amount of food that is larger than most people would consume over the same period of time, as well as, a feeling of lack of control when eating. Along with binge eating, Bulimia Nervosa must include “recurrent inappropriate compensatory behaviors” which occur at least twice a week for 3 months. The criteria also includes that there is an inaccurate self-evaluation of one's own body or shape, as well as, there not being an occurrence of Anorexia Nervosa. Bulimia Nervosa has two subtypes, *Purging Type* and *Nonpurging Type*. *Purging Type* Bulimia Nervosa, is described as individuals whom regularly engage in purging behaviors such as self-

induced vomiting, misuse of laxatives and diuretics during the current Bulimic episode. *Nonpurging Type* is described as individuals whom regularly engage in inappropriate compensatory behaviors during a current bulimic episode, such as fasting or excessive exercise. This individual does not engage in behaviors such as the *Purging Type*.

### **Assumptions**

The researcher was aware that the population was not completely a random sample, as Rowan University students enrolled in undergraduate studies in undergraduate Psychology classes were used. The researcher is also aware that these students may have had prior experience and/or knowledge of the measures that were used, which may have resulted as a confounding variable. The participants chosen may or may not be classified eating disorder participants, or may or may not experience dissociative experiences. Due to the lack of knowledge of these diagnoses on the researchers behave; this may have been a confounding variable as well.

### **Limitations**

The limitations in this study were that the population is not an identified eating disorder population; the participants were Rowan University students that are enrolled in undergraduate Psychology courses. These factors limit generalizability because the population may not represent all aspects of the population. Participants were also responding to self-response questionnaires, this may not have given an accurate picture of the participants' actual behaviors in the scope of eating behaviors, whether normal or abnormal, or if there was a presence of dissociative experiences. Finally, the participants were given the option to decline to answer a question as many times as they wish. This,

though ethically sound, could have affected the quality of the data, due to participant having the option to not respond to questions that are highly emotional or personal.

## **Summery**

The following chapters in this study will elaborate on previous research and references. This will be completed as a literature review of all possible research to support the hypothesis of this study; there is a relationship between abnormal eating patterns and dissociative experiences. Following the literature review, the later chapters will outline the present research through; the materials used, the participants, procedure and results. Finally there will be a discussion that will discuss the limitations and confounding variables found upon executing the research as well as discussing the results and how they either support or do not support the hypothesis of the present study.

## Chapter 2

### Introduction

The current research looked at historical theories and approaches to delve into the idea that there is possibly a relationship between abnormal eating patterns and dissociative experiences. This idea was presented by the current research by looking at very similar, specific previous studies in the beginning of this paper and continuing towards more general studies towards the end. The historical figures and ideas will be discussed initially to lay a framework of the relationship between abnormal eating patterns and dissociative experiences.

### Historical Figures

Pierre Janet was the first psychologist to postulate about the idea of dissociative experiences. During Janet's exploration into the idea of dissociation he coined the term, "Fixed Ideas." These *fixed ideas* were facts that were not produced voluntarily, they were innate ideas that an individual construed in their own mind, through subconscious thought. Janet believed that dissociation was a result of mental trauma that enabled the *fixed ideas* to evolve. (Heim& Buhler, 2006). These *fixed ideas* have the ability to manifest themselves into many different forms, one such form as described in the example of paroxysm, by Bob (2003), is when *fixed ideas* transform themselves into hallucinations or body movements as a representation of psychological trauma. The main concept of Janet's findings was completed with the idea that there are states of consciousness that many be enacted after psychological trauma. When these states of

consciousness are being used, they are out of what we would consider conscious thought, as though they happen in a type of lapse of time in conscious thoughts. The symptomatology of what was to be considered dissociative disorders were amnesia like states, hallucinations, derealization, and changes personality such as depersonalization (Bob, 2003).

### **Dissociation and Dissociative Experiences**

Dissociation is described as a failure to integrate information and experiences in their authentic and natural way, rather, manifesting the information and experiences as amnesia, depersonalization, derealization, and absorption (Waller et al., 2001). Other symptoms of dissociation that have been noted are ignoring pain, auditory hallucinations, and memory loss. Dissociative experiences have also been determined to be a defense mechanism, which all individuals whether they have a mental illness diagnosis or not, use to some extent (Everill et al., 1995). It has been hypothesized that individuals whom have been diagnosed with an eating disorder, both anorexia nervosa as well as bulimia nervosa, which higher levels of dissociative experiences are noted, in reference to dissociations use as a defense mechanism. Due to the defense mechanism nature of dissociation, it is determined that these experiences could allow the individual experiencing dissociation to be protected from emotions that may be painful. These emotionally painful states may be triggered by distress and automatically allow the dissociative experience to take over and protect the individual from the painful state (McManus, 1995). Li and Spiegel (1992) describe dissociation as a representation of ideas and thoughts that would typically be connected, to be separate. Dissociation “exist along a continuum from such normal experiences as daydreaming and transient lapses in

attention, to pathological failure to integrate thoughts, feelings, memories, and actions into a coherent and unified sense of consciousness” (Deitrack, Putnam, Brewerton, Brandt, & Gold, 1990). According to Putnam (1991), history of traumatic experiences may trigger and increase, significantly, in the frequency of dissociative experiences in adults. The frequency of dissociative experiences may be evidence of the reduction of the awareness of the triggers that initiate the eating disorder symptomatology in individuals whom are diagnosed with either bulimia nervosa or anorexia nervosa. Dissociative experiences may be a defense mechanism to deaden the feelings and emotions the individual may have while the individual is participating in the eating disorder symptomatology. Due to this idea, this may be the link between dissociative experiences and eating disorders, as eating disorders may have an onset after emotionally or physically traumatic experiences.

### **Abnormal Eating Patterns and Eating Disorders**

Eating disorders are characterized into two major categories according to the *Diagnostic and Statistical Manual of Mental Disorders*, fourth edition, text revision, (DSM-IV-TR), are anorexia nervosa and bulimia nervosa. Anorexia nervosa is described as a failure to maintain a determined minimal body weight, accompanied by an intense fear of weight gain. Bulimia nervosa is described as reoccurring episodes of binge eating with inappropriate compensatory behaviors to purge. A third category of eating disorders outlined in the DSM-IV-TR is eating disorder not otherwise specified. Eating disorder not otherwise specified is described as an individual exhibiting eating disorder symptoms, but does not meet criteria for anorexia nervosa or bulimia nervosa. It has been determined that in recent years, many individuals diagnosed with an eating disorder do not meet the

criteria for anorexia nervosa or bulimia nervosa, and rather, they are diagnosed as eating disorder not otherwise specified (Fink, Smith, Gordon, Holm-Denoma, & Joiner, 2009). Due to the high quantity of individuals diagnosed with eating disorder not otherwise specified, it has been noted that many individuals have been known to have mixed symptomatology, such as engaging in compensatory behaviors such as purging without engaging in a previous binge, as well as the opposite, engaging in a binge, without a compensatory behavior following the binge (Fink et al., 2009). This symptomatology has been categorized as binge eating disorder, and is believed to be more common than anorexia nervosa and bulimia nervosa (Grilo, White, & Masheb, 2009).

In relation to abnormal eating patterns and eating disorders, it was suggested that Janet had the idea that symptoms of eating disorders are related to dissociative experiences through distortions of body image as well as eating disordered symptoms (Covino, Jimerson, Wolfe, Franko, & Frankel, 1994). Dissociative experiences may work as a defense mechanism to enable the individual to protect themselves from harmful thoughts and feelings. Janet's research indicated that there was a link between anorexia nervosa and dissociative experiences other researchers have indicated that there is not a difference in levels of dissociation between anorexia nervosa and bulimic nervosa (McManus, 1995; Schumaker, Warren, Carr, Schreiber, & Jackson, 1995; Schumaker, Warren, Schreiber, & Jackson, 1994; Tobin, Molteni, & Elin, 1995), but more current data has suggested that there is a greater link between bulimia nervosa and dissociative experiences or binge-purge eating patterns and dissociative experiences (Beato, Cano, & Belmonte, 2003; Lyubomirsky, Casper, & Sousa, 2001; Covino et al., 1994; De Berardis et al., 2009; Engelberg, Steiger, Gauvin, & Wonderlich, 2007; Everill & Waller, 1995;

Everill, Waller, & Macdonald, 1995; Grave, Rigamonti, Todisco, & Olios, 1996; Hallings-Pott, Waller, Watson, Scragg, 2005; Groth-Marnat & Michel, 2000; McCarthy, Goff, Baer, Cioffi, & Herzog, 1993; McShane & Zirkel, 2008; Vanderlinden, Vandereycken, van Dyck, & Vertommen, 1993; Vanderlinden, Wandereycken, & Probst, 1995). Valdiserri & Kihlstrom, (1995a, 1995b) have determined that there is a relationship between dissociative experiences and abnormal eating patterns, which could be compared to the DSM-IV-TR diagnosis of Eating Disorder Not Otherwise Specified, which would indicate that the individual does not fit complete criteria for anorexia nervosa or bulimia nervosa.

Individuals with the diagnosis of bulimia nervosa have lead to the conclusion that many individuals reported dissociative symptoms such as depersonalization and derealization during a binge-purge cycle (Russell, 1979). This symptomatology can be defined as alexithymia, meaning, “no words for mood.” Some characteristics of alexithymia in relation to eating disorders are, “difficulty with identifying and describing feelings, difficulty distinguishing feelings from bodily sensations, diminution of fantasy and concrete and poorly introspective thinking, (De Berardis et al., 2009).” It is believed that individuals with eating disorders have a difficulty in describing and distinguishing their feelings, this being a main issue and concern in the treatment of eating disorders. Due to the existence of alexithymia as a symptom of bulimia nervosa, it can be concluded that there may be a relationship between eating disorders, or abnormal eating patterns and dissociative experiences. This relationship has been supported in the past through individuals with bulimia nervosa having an easy ability to adapt to hypnotherapy. Vanderlinden and Vandereycken (1988) found that individuals diagnosed with bulimia

nervosa, and individuals diagnosed with anorexia nervosa with purging symptoms were highly hypnotizable compared to individuals diagnosed with anorexia nervosa without purging symptoms. This has allowed the researchers to believe that due to the highly hypnotizability in individuals with bulimia nervosa as well as anorexia nervosa with purging symptoms, there was a relationship to dissociative experiences. This belief was determined because it is also believed that hypnosis is a dissociative mechanism. Due to the impulsivity of bulimia nervosa eating disorders might lead to the presence of dissociative experiences. This could occur, as the dissociative experiences could be a short-term blockage of awareness. In an editorial written by Waller (1995), described through an individual that when asked to describe what the individual was thinking and feeling prior to a bingeing, the individual was unable to recall anything. Waller determined that this amnesia like state was a result of a dissociative experience as a symptomatology of the bingeing.

### **Similar Studies**

Similar studies have looked at the same relationship as the present study. These studies have looked to determine if there is indeed a relationship between abnormal eating patterns or eating disorders and dissociative experiences. These studies have not all used the same materials to gain data as the present study, but all have used a similar dissociative experiences scale and an eating disorder scale. Demitrack et al. (1990) found in their research that individuals with eating disorders both, bulimia nervosa and anorexia nervosa, scored higher on the Dissociative Experiences Scale (DES; Bernstein & Putnam, 1986) than sex-and age-matched non-eating disorder individuals.

Valdiserri and Kihlstrom (1995b) determined that there was a relationship between abnormal eating patterns and dissociative experiences in a normal population. “Specifically, there were significant correlations between drive for thinness, bulimic tendencies, and body dissatisfaction on one hand, and the frequency of dissociative experiences on the other. (Valdiserri and Kihlstrom, 1995b).” For their research, Valdiserri and Kihlstrom used the Eating Disorder Inventory (EDI) as a scale to measure abnormal eating, as well as using a modified version of the Dissociative Experiences Scale (M-DES). They also found that there was a relationship between individuals who scored high on the EDI, reporting more frequent dissociative experiences compared to those who scored low on the EDI. Subsequently, individuals who scored high on the M-DES reported more symptoms of abnormal eating. In a later study Valdiserri and Kihlstrom (1995a), the researchers were able to confirm the results of Valdiserri and Kihlstrom (1995b), indicating that the presence and symptomatology of abnormal eating patterns correlated with the frequency of dissociative experiences. The later research done by Valdiserri and Kihlstrom (1995b) used the same materials of measurement as the earlier research done by Valdiserri and Kihlstrom (1995a), the M-DES and the EDI, along with an addition, The Beck Depression Inventory (BDI). Valdiserri and Kihlstrom (1995b) also looked at the variable of depression in the individuals that were not diagnosed with eating disorders and its relationship to dissociative experiences. The researchers found that there was a stronger relationship between abnormal eating patterns and depression, that the relationship between abnormal eating patterns and dissociative experiences. This indicated that there was a more closely relation to depression in

abnormal eating patterns. Though, the relationship between abnormal eating patterns and dissociative experiences was significant.

A similar study to Valdiserri and Kihlstrom (1995a, 1995b) also found that there is a relationship to anorexia nervosa and bulimia nervosa to dissociative experiences, compared to a non clinical sample, as well as the anorexia nervosa and bulimia nervosa having higher levels of depression than a non clinical sample (Schumaker, Warren, Carr et al., 1995).

Schumaker, Warren, Schreiber et al. (1994), suggested that dissociation may be a psychopathological symptom of other syndromes other than just dissociative disorders. This theory was suggested due to their findings that there was a relationship between dissociative experiences and both eating disorder diagnoses, anorexia nervosa and bulimia nervosa. The researchers noted that their findings differ from previous studies, indicating that their findings of both bulimia nervosa as well as anorexia nervosa having similar levels of dissociative experiences. The researchers stated that there may have been a difference in sampling that caused this difference. The sampling difference suggested by Shumaker et al. was that there were a disproportionate number of chronic anorexics in their study compared to others, which has lead to the higher level of dissociative experiences in individuals with anorexia nervosa in this study compared to other studies. The participants in this study were diagnosed with anorexia nervosa and bulimia nervosa, the instrument to measure dissociation was the Questionnaire of Experiences of Dissociation (QED).

Everill et al. (1995) found in their research that individuals with eating disorders indicated that there were significantly higher levels of dissociative experiences than non-eating disorder individuals. The relationship found between dissociative experiences and eating psychopathology in this study indicated that individuals with either bulimia nervosa or anorexia nervosa had higher levels of dissociative experiences, as well as, an overall trend leaning towards individuals diagnosed with bulimia nervosa having the highest levels of dissociative experiences in comparison to individuals diagnosed with anorexia nervosa and the non-eating disorder individuals. These findings indicated that there may be a specific link between the occurrences of dissociative experiences and bingeing specified eating disorders, such as bulimia nervosa, anorexia nervosa with bingeing-purging symptoms, and eating disorder not otherwise specified. The conclusion of Everill et al.'s research coincided with the idea that bulimia nervosa, and bulimic eating disorder behaviors and patterns, such as binge-purge cycles, and the addition of dissociative experiences act as a defense mechanism to reduce awareness of painful or unpleasant emotional states.

Everill and Waller (1995) suggest that dissociative experiences may shape the bulimic symptomatology of individuals with bulimia nervosa. While experiences a dissociative episode, the individual is shielded from the emotionally painful and unpleasant thoughts and feelings. These dissociative experiences may mask any guilty feelings that may also be associated with the symptomatology of bulimia nervosa.

In a study with individuals who were patients in treatment for an eating disorder, Vanderlinden, Vandereycken, and Probst (1995), found, "There seems to be a relationship between a rather stable and high degree of dissociative experiences and poor

outcome in the majority of anorexia nervosa patients who also binge, vomit and/or purge.” This determined that there was a strong relationship between dissociative experiences and abnormal eating, especially when there was a binge-purge cycle present to some degree.

Some research has indicated that the dissociative experiences may be an expression of the compensatory behavior which occurs after a binge, such as purging, rather than being an expression of the binge episode. One such study, conducted by Waller et al. (2001), indicated that there were higher levels of dissociative experiences in individuals diagnosed as binge-purge anorexics, in comparison to individuals who only engaged in binge episodes without compensatory behavior, or individuals whom were diagnosed with binge eating disorder.

Though the present study was not looking at the relationship between eating disorders, dissociative experiences and traumatic experiences, it is a relationship that is worth noting. It has been indicated that there also may be a relationship linking eating disorders, particularly bulimia nervosa to dissociative experiences by way of traumatic experiences. McShane and Zirkel (2008) examined this relationship and found that it is possible that dissociation may possibly have a relationship between early trauma and later eating disorders. “Dissociative experiences were more common among bulimia women overall and were particularly high for those bulimia women who reported experiencing sexual abuse as children (McShane and Zirkel).” This study has also noted that current bulimics scored significantly higher on dissociative scales compared to past bulimics. This is an important finding for the present studies purposes because it can be inferred through this finding that current bulimics have more dissociative experiences. The

dissociative experiences seem to be linked to the symptomatology of bulimia nervosa, which would help explain why there were higher levels amongst the sample of individuals who were currently symptomatic compared to individuals who were previously diagnosed with bulimia nervosa, but were not currently symptomatic.

Of the past research that many indicate that there may be a relationship between abnormal eating patterns or eating disorders and dissociative experiences. This relationship is the relationship that was being examined in the present study.

### **Summery**

Majority of the previous studies that have been reviewed for comparison in the present study have determined that there may be a relationship between abnormal eating patterns or eating disorders and dissociative experiences. The link between abnormal eating patterns or eating disorders and dissociative experiences, in most of the previous studies have indicated that the relationship between the two are apparent in binge-purge cycles whether the individual is diagnosed with anorexia nervosa, bulimia nervosa, eating disorder not otherwise specified, as well as individuals who were not among a diagnosed population, but displayed abnormal eating patterns to some degree, according to an eating attitudes or eating disorder scale. The present research looked at the possible relationship between abnormal eating patterns and dissociative experiences in a non-clinical sample. This sample was not a diagnosed sample, though, the instrument used to measure abnormal eating patterns has a subscale to indicate whether the individual participants in such abnormal patterns as dieting, bulimia nervosa and symptoms, as well as, anorexia nervosa symptoms. Due to the findings in previous studies, that a relationship does

indeed exist between abnormal eating patterns and dissociative experiences, lends some optimism on the present studies hypothesis. The findings of McShane and Zirkel's (2008) study also found that significantly higher levels were present in individuals diagnosed with bulimia nervosa, during a binge-purge episode. The relationship between dissociative experiences and eating disorders were found to be the strongest when the participants were physically bingeing, as well as just after the binge. This could indicate that the dissociation occurs during a binge, which has been a theme in previous studies. The dissociative experiences seem to occur during a binge or just after a binge episode has occurred. Though the present study did not working with a clinical sample, the research can be duplicated with the expectation that there were some individuals in the sample that possibly displayed abnormal eating patterns associated with binge episodes and binge-purge cycles.

## Chapter 3

### Method

#### Participants

The participants in this study were undergraduate students enrolled in a Psychology course at Rowan University. The students were volunteers through the student participant database, all of which agreed to complete the study. The student's participation was completely anonymous, enabling the researcher to maintain confidentiality throughout the entire research process. This study included 100 students ages 18-65, including all races, ethnic background and both genders. The participants were made aware that they were participating in a study that investigates their eating habits and daily experiences that may occur to be dissociative in nature. The participants were instructed to complete two self-response surveys to the best of their knowledge.

#### Materials

*EAT-26.* The Eating Attitudes Test is an eating disorder assessment scale developed by Garner & Garfinkel (1979). This assessment is the most widely used standardized measure used in the evaluation of eating disorders. The EAT-26 is a 26-item questionnaire that relies on self-report from the participating individual. The questions are on a six point likert scale. For example, a comment, *I find myself preoccupied with food*, with the instructions to circle a response that best matches the individuals feelings based in the comment, the options are, *Always, Usually, Often, Sometimes, Rarely, Never*. The minimum score on the EAT-26 is zero, whereas, the maximum score is 78.

The EAT-26 also has three subscales, including, *Dieting subscale*, *Bulimia and Food Preoccupation subscale*, and *Oral Control subscale*. Each subscale had select questions on the questionnaire that was associated with each scale. The *Dieting subscale* included questions 1, 6, 7, 10, 11, 12, 14, 16, 17, 22, 23, 24, and 25. The highest possible score for the *Dieting subscale* is 39 and the lowest possible score for the *Dieting subscale* is zero. The *Bulimia and Food Preoccupation subscale* included questions 3, 4, 9, 18, 21 and 26. The highest possible score for the *Bulimia and Food Preoccupation subscale* is 18 and the lowest possible score for the *Bulimia and Food Preoccupation subscale* is zero. The *Oral Control subscale* included questions 2, 5, 8, 13, 15, 19, and 20. The highest possible score for the *Oral Control subscale* is 21 and the lowest possible score for the *Oral Control subscale* is zero. For the purposes of this study, the *Bulimia and Food Preoccupation subscale* (EAT-26*Bulimia*) will be used to determine if there is a relationship between the subscale and dissociative experiences.

*SODAS*. The Scale of Dissociative Activities is a scale that assesses dissociative experiences, which was developed by Mayer and Farmer (2002). The *SODAS* questionnaire includes 35 self-report items, for example, *I have periods when I feel like I am detached or separated from my body*. The instructions ask the participating individual to indicate the frequency of these statements happening as being; *Never, Rarely, Occasionally, Frequently, Very Frequently*. The minimum score for the *SODAS* is 35, whereas the maximum score is 175.

## Procedure

The research procedure began by the research handing the participants a packet, which contained a statement of alternative consent, the EAT-26 and the SODAS. The participants read an Alternate Consent statement prior to the collection of data, this statement indicated that their participation in the study was completely optional, and they may opt out of the study at any point during the study, as well, the participants were given the option to *decline to answer*, if they felt uncomfortable answering any question on both the *EAT-26* or the *SODAS*. This consent statement also indicated that participation is anonymous, as there were not any identifying factors being revealed. Once the participants read the consent form and agreed to participation in the study, they began the data collection process. Consent was given upon reading the consent statement and continuing on to answer the questions on both questionnaires. Participants were asked to only continue on to the questionnaires if they were 18 years old or older, in order to avoid contacting individual's parents for proper consent if they were under the age of 18 years old. Participants were asked to complete an assessment of abnormal eating habits in the form of the EAT-26.

The EAT-26 gave the participants the instructions to; *Please circle a response for each of the following statements*. The responses given to the participants to select are “A” if the statement occurs *Always*, “U” if the statement occurs *Usually*, “O” if the statement occurs *Often*, “S” if the statement occurs *Sometimes*, “R” if the statement occurs *Rarely*, “N” if the statement occurs *Never*. The participants were then given an opportunity to complete the EAT-26. The participants, while completing the EAT-26 are also answering the questions to allow for collecting data for the EAT-26 *Bulimia*. After completion of this

assessment, the participants were asked to complete a scale that looks into the existence of dissociative experiences.

All of the participants were given the same instructions, for the *SODAS* questionnaire, which were to; *Indicate the frequency by circling the “N” if the statement NEVER happens to you, “R” if the statement RARELY happens to you, “O” if the statement OCCASIONALLY happens to you, “F” if the statement FREQUENTLY happens to you, or “VF” if the statement VERY FREQUENTLY happens to you.*

After the participants complete the two scales, the participants were given a Feedback form which the participants were thanked for their participation, the names of the assessments used in the study, information as to how the study is going to be conducted, as well as where they can gain information about the study once it is completed, and finally, information to contact, as well as encouragement to use the Counseling Center at Rowan University if any of the subject matter during this study has effected them emotionally, as some of the questions on the questionnaire may elicit some emotional thoughts and experiences for some individuals participating in this study.

## **Analysis**

Once the raw data is collected, the scores for each the EAT-26, SODAS, and EAT-26 *Bulimia and Food Preoccupation subscale* will be calculated. Once the score for each scale is calculated, Pearson’s’ Correlation will be used to analyze the EAT-26 scores and the SODAS scores, as well as the EAT-26*Bulimia* and SODAS to determine if a relationship does exist.

## **Chapter 4**

### **Results**

#### **Introduction**

The following sections will exam the results of the present data. The results are based on the hypothesis, stated in the initial portion, which states: The researcher will try to determine if there is indeed a relationship between abnormal eating and dissociative experiences, the research will be obtained by assessing the eating behaviors and dissociative experiences of the participants. It is expected that participants with abnormal eating patterns, especially bulimia specified abnormal eating patterns, will have higher levels of dissociative experiences. The researcher is looking for any relationship that either supports this idea or does not support this idea.

Following the explanation of the found results, the researcher will present graphs which provide a visual representation of the results found.

#### **Results**

In the current study the researcher was interested in determining if there is a relationship between abnormal eating patterns and dissociative experiences. The results of the current study were determined by scoring the performance of the participants on the questionnaires they completed. The EAT-26 was scored with each possible answer having a score of zero to three. The raw score of each participants' questionnaire was determined by adding the number that was associated with each of the participants' answers. The highest possible score on the EAT-26 is 78, indicating that there a high

indication that the individual has abnormal eating patterns and may indicate that the individual is at risk of having an eating disorder. The lowest possible score on the EAT-26 is zero, indicating that the individual does not display and abnormal eating patterns and is not at risk for having an eating disorder. From the raw scores for each of the EAT-26, EAT-26 *Bulimia and Food Preoccupation subscale*, and the SODAS, the descriptive statistics were determined. The descriptive statistics include the mean and standard deviation of the EAT-26, EAT-26 *Bulimia and Food Preoccupation subscale*, (see Table 1). The mean score and standard deviation for the *EAT-26* based on the participants' answers to the questionnaire were 10.03(8.74). These scores indicate that there was overall, a low score on the *EAT-26*.

Table 1. *Descriptive Statistics of EAT-26, SODA, and EATBulimia.*

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Scale	Mean	Standard Deviations
EAT-26	<i>M</i> =10.03	<i>SD</i> =8.73
SODA	<i>M</i> =66.25	<i>SD</i> =18.72
EAT <i>Bulimia</i>	<i>M</i> =1.42	<i>SD</i> =1.94

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The SODAS was scored with each possible answer having a score of one to five (*Never* = 1, *Rarely* = 2, *Frequently* = 4, and *Very Frequently* = 5.) the raw score of each participants' answers were determined by adding the number that was associated with each of the participants' answers. The highest possible score for the SODAS is 175 indicating that there is a frequency in dissociative experiences the individual experiences. The lowest possible score for the SODAS is 35 indicating that the individual does not experience dissociative experiences frequently. The mean score and standard deviation for the *SODAS* based on the participants' answers to the questionnaire were 66.25(18.72). These scores, as well, indicate that overall there was a low score on the *SODAS*. The mean score and standard deviation for the *Bulimia and Food Preoccupation subscale* were 1.45(1.94).

The results indicated that there was a relationship between abnormal eating patterns and dissociative experiences based on the EAT-26 responses and the SODA responses. This relationship was a statistically significant relationship,  $r(100) = .32, p = .001$ (two-tailed). This relationship yielded a medium effect size, indicating that the significant relationship interpretation was on a medium scale, not too weak, but not exceptionally strong. This relationship was determined by comparing the scores two of each individual, to determine if as one score increased, the other increased as well. There was also a statistically significant relationship between the *Bulimia and Food Preoccupation subscale* of the EAT-26 and dissociative experiences,  $r(100) = .32, p = .001$ (two-tailed). These results yielded a medium strength effect size. These results yield that there is a relationship between abnormal eating patterns and dissociative experiences, as well as a relationship between bulimic tendencies and dissociative experiences. These

results coincided with previous research, indicating that individuals that engaged in bulimia nervosa symptomatology may have higher rates of dissociative experiences, than individuals who just engaged in abnormal eating patterns, though those rates were not examined in the present study. The figures below show the participants scores for each scale, providing a visual assessment of the statistically significant results. These figures represent the correlation between participants' EAT-26 and SODAS scores, indicating that the both occur together (see Figure 1) and the correlation between participants' EAT-26*Bulimia* and SODAS scores, indicating that they also occur together (see Figure 2).

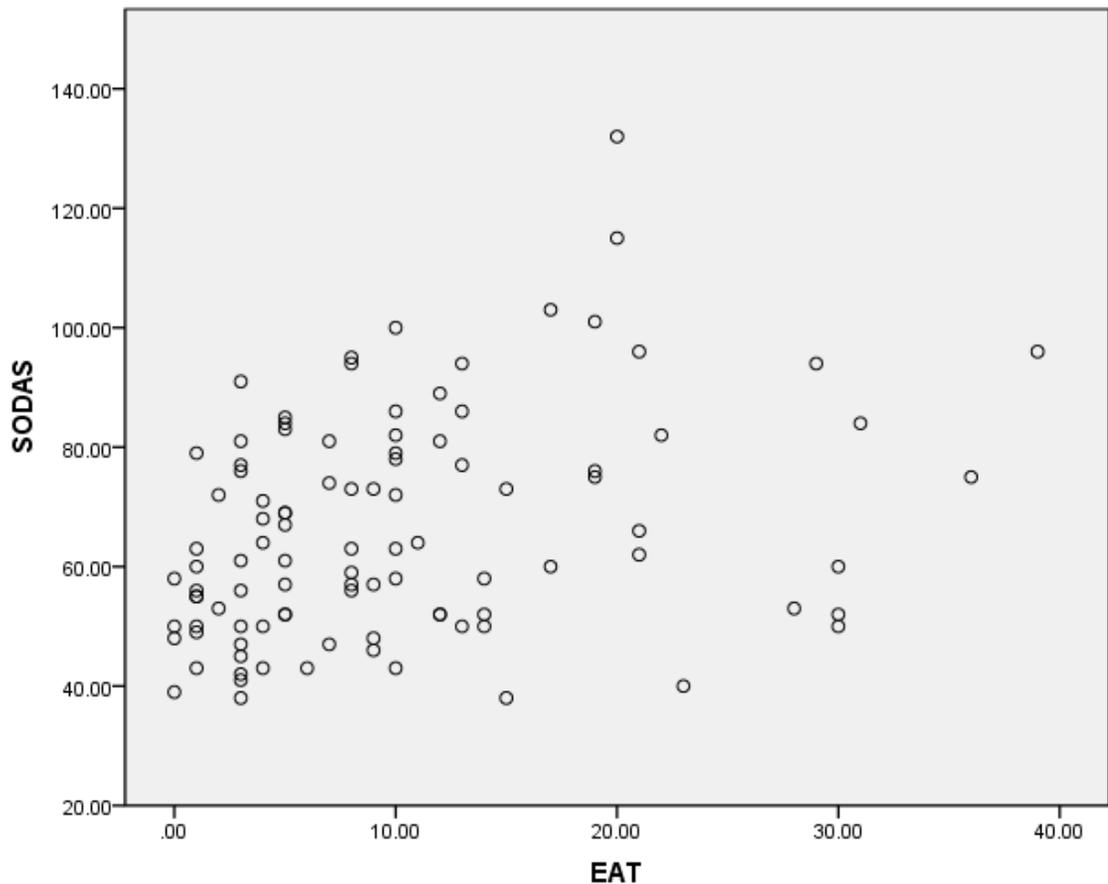


Figure 1. SODAS and EAT-26 correlation.

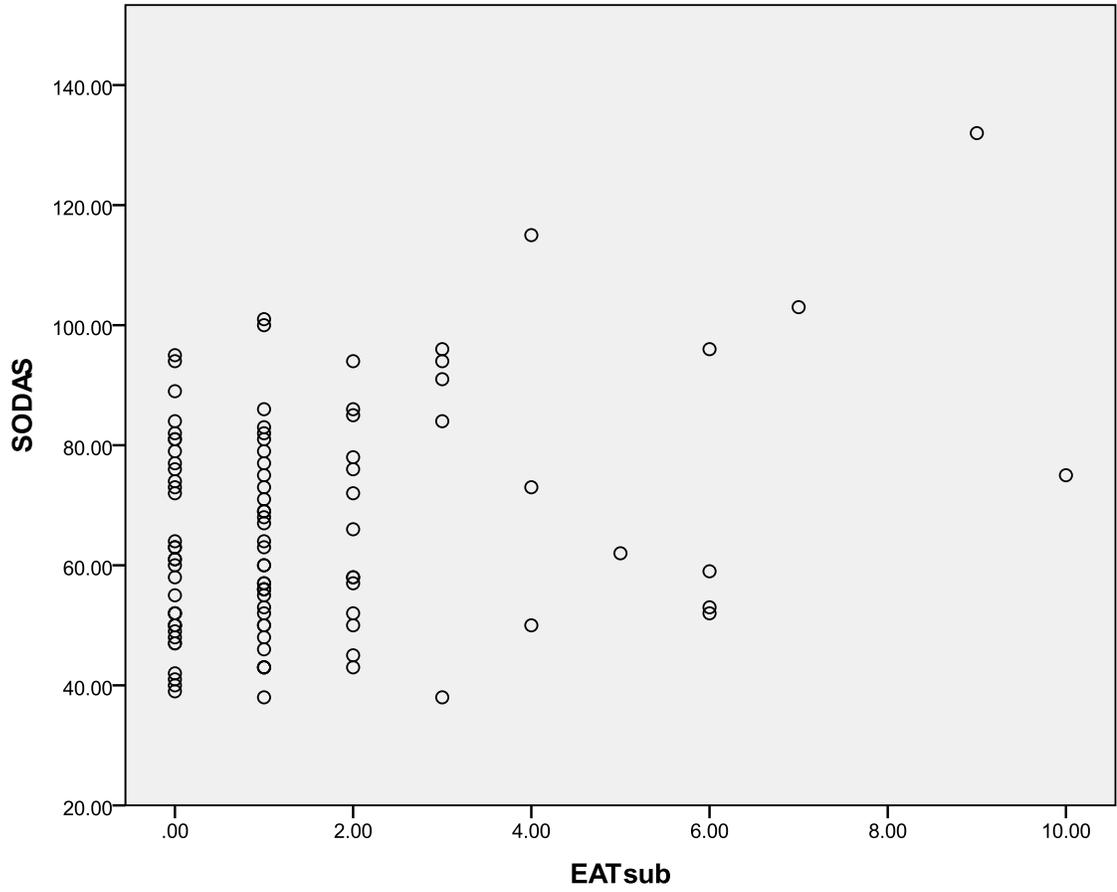


Figure 2. SODAS and EAT-26Bulimia correlation.

## **Chapter 5**

### **Discussion**

In all of the past studies, it has been determined that there is indeed a relationship between abnormal eating patterns and behaviors and dissociative experiences. It has also been determined that there is a stronger relationship between bulimic eating-disorders and dissociative experiences than with anorexic eating-disorders and dissociative experiences. These past studies were typically done in a clinical setting with diagnoses eating-disordered patients, (Valdiserri & Kihlstrom ,1995a; Everill & Waller,1995; Demitrack et al.,1990; Everill, Waller, & Macdonald, 1995; Everill and Waller,1995) which enables the researcher to eliminate the chance that non-eating-disordered individuals would skew the results of the experiment if they had higher rates of dissociative experiences in comparison to the participants abnormal eating behaviors and patterns. Due to the lack of non-eating-disordered individuals in these past studies, researchers were able to get an extremely focused view on the relationship between abnormal eating behaviors and patterns and dissociative experiences. This focused view enabled the researchers to find significant results within the researcher's diagnosed population. These significant results were replicated in the present study which indicated that there is a relationship amongst individuals with abnormal eating patterns and dissociative experiences, as well as, individuals who had higher rates of bulimia nervosa and food preoccupation symptomatology, in a non-diagnosed population. This relationship represents a relationship based on a correlation, which provides the information that dissociative experiences and abnormal eating patterns, as well as dissociative experiences and bulimia nervosa and food preoccupation symptomatology occur together, as predicted by the researcher. Due to the ability to find similar results

amongst a non-diagnosed, non-clinical setting, where previous researchers were able to find results in diagnosed and clinical populations, the results in this present study are able to be generalized, indicating that there is a relationship between abnormal eating patterns and dissociative experiences.

Everill and Waller's (1995) idea that dissociative experiences shape symptomatology of Bulimic-eating disordered individuals is a very interesting point of view that is associated with the current research. If indeed this association is true to some extent, then potentially in future research following the current research model, researchers could possibly find that there is a strong statistically significant relationship between individuals whom score high on the *EAT Bulimic and Food Preoccupation subscale* and the *SODAS*. The finding of a statistically significant correlation would indicate that Everill and Waller's theory is possible and that there are potentially greater levels of dissociative experiences amongst those who engage in bulimic and food preoccupation symptomatology.

### **Limitations**

Some limitations of this research were that the sample being used in the analyses is not a clinically diagnosed eating disorder population, due to this, any participants that may fall into the category of abnormal eating patterns, may or may not have actually been considered as having an eating disorder. The sampling of this research is based on participants whom have an interest in participating in this specific research, which may have lent itself to some discretion. These individuals had to participate in a research study for semester credit, and were given the option of choice. The participant's choice to

choose this study may lead the study to some bias data. The participants may or may not have felt that they have abnormal eating patterns or dissociative experiences. This may have skewed the results because the participants may have had an interest in this study, because they have previous knowledge of the results, may or may not have had abnormal eating patterns, and may or may not have had high levels of dissociative experiences.

The research only allowed 100 participants to sign up for the study. This may have led to a limitation. Although this is a strong number of participants, the participants were not screened in any way, and were the first 100 individuals to sign up. Though this did give a somewhat randomized sampling, the individuals may have chosen this study because they had some personal connection to the topic of abnormal eating patterns or dissociative experiences, or because it was an online questionnaire. Due to the fact that this study was an online questionnaire it allowed for minimal time and allowed the participants to complete the study as well as their requirement for semester credit easily.

Finally, the participants were given the option to decline to answer as many questions as they felt necessary at any time during the study. Though most people did not take advantage of this option, there were a few that did use this option. This did not allow the researcher to get a complete picture of all of the participant's actual raw scores because there was no score given to answers that were declined. This option, though ethically sound, did not provide the research with completely accurate results; however, these results were still used in the research model. Using this data may or may not skew the results. Had the researcher discarded the participant's scores if the participant declined to answer even once, the results may have been different. The research took into consideration that in a clinical setting, the participants would also have the option to

decline an answer, and that man may decline to answer question, primarily dealing with abnormal eating patterns that made the participant feel uncomfortable.

Some strengths of this research may include that because this is not a clinically diagnosed eating disorder population, the participants may not feel they need to answer the questions a certain way because they may or may not have an expectation of their eating patterns. Participants whom have not been in any type of treatment for an eating disorder may not have ever seen the *EAT-26* before, because it is widely used as a tool for diagnosing eating disorders, therefore, being new material to the participant.

In conclusion a statistically significant relationship was found between the *SODAS* and the *EAT-26*, as well as between the *SODAS* and the *EAT-26Bulimia*, as predicted by the researcher. It is believed that there is indeed a relationship and that this relationship would exist to some extent despite the participant size and population. It is believed that through this relationship, a correlation, that as the implications of abnormal eating patterns increase, as do the implications that dissociative experiences do exist as well. This relationship exists because there are higher levels of abnormal eating patterns in individuals whom also have higher levels of dissociative experiences. Further studies may be encouraged in order to try and duplicate these results to fine parsimony in the current research results. Further research would determine if the population used was subjective in the results found in the preset study. It would be interesting to see that if the current research were to be duplicated within a similar population if the results would yield the same or similar results.

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