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WESTERN MICHIGAN UNIVERSITY

# Residential Treatment of Adult Women with Eating Disorders

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Honors Thesis Research

Chelsea Cook

4/18/2013

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## **Abstract**

A qualitative-type study was done in which residents of a residential eating disorder facility were interviewed about their eating disorder and daily life in the treatment center. The Academy of Nutrition and Dietetics uses the Nutrition Care Process which includes Intervention amongst its four steps. This study will look at the intervention of nutrition education and counseling on these residents and relate it back to Social Learning theory.

Eight residents agreed to the study. All participants were female, and ages ranged from 18-38 with an average age of 24.75. The registered dietitian serving the residents was also interviewed. Interviews were semi-structured open answer questions covering topics from a typical day at the facility, meals and snacks, events leading up to the stay, and one's relationship with food. In addition, the registered dietitian was asked how the residents are prepared for entering the real world after treatment.

Residents at this facility showed motivation to recover and improve their relationship with food. This was expected because most residents were at the facility by choice. The long term outcome of residential treatment was not investigated; however this study lays the ground work for a great deal of further research.

## **Introduction**

An eating disorder is when individuals have major disturbances in his or her eating behavior, resulting in the deterioration of physical and mental health (1). It is estimated that 13.5 million people suffer from this disease (2). In 2009 a study done by Crow et al. found the mortality rate for individuals with anorexia nervosa, bulimia nervosa, and eating disorder not otherwise specified to be 3.9% to 5.2% (3). This relatively high mortality can be attributed to suicide, severe malnutrition and medical complications such as vital organ failure (4). Typically,

eating disorders develop in females during puberty, but it is by no means exclusive to young women. The National Association for Males with Eating Disorders found that the number of males with eating disorders is close to 25% of all individuals suffering from eating disorders (5). One study done by Swanson et al. found that most adolescents, age 13 to 18, were not properly treated for eating disorders (6).

There are various classifications of eating disorders. The Diagnostic and Statistical Manual of Mental Disorders, fourth edition, text revision (DSM-IV-TR) recognizes “two clearly defined syndromes of adult eating disorders, anorexia nervosa and bulimia nervosa” (7).

*“Anorexia nervosa is characterized by the refusal to maintain body weight at or above a minimally normal weight for age and height, intense fear of gaining weight, disturbance in one’s body weight or shape, and amenorrhea (the loss of one’s menstrual cycle)” (1, 7).*

There are two subtypes of anorexia nervosa, restricting type and binge eating-purging type (7). The restricting subtype is characterized by restricting foods while the bingeing/purging subtype is characterized by regular episodes of binge eating and purging behavior during current episodes of anorexia nervosa (1).

*“Bulimia nervosa as defined by the DSM-IV-TR is the recurrent episodes of binge eating (eating in a relatively short amount of time an amount of food that is definitely larger than what most people eat in the same period of time) followed by inappropriate compensatory behaviors (self-induced vomiting; misuse of laxatives, diuretics, enemas or other medications; fasting; or excessive exercise) to prevent weight gain, a sense of lost control during episodes, self-evaluation based on body shape and weight, and frequency of episodes occurring on average twice a week for 3 months” (1, 7).*

The most prevalent eating disorder surprisingly does not fall into one of these categories (2). Eating disorder not otherwise specified or EDNOS is the most common eating disorder (8). According to the DSM-IV-TR it is the “catch all” category for individuals that do not meet all of the criteria for anorexia nervosa, or bulimia nervosa but are still significantly impaired (7, 8). An example of EDNOS is a person that meets all the criteria for bulimia nervosa, but episodes of binge eating followed by inappropriate compensatory occur less than two times per week. The individual is significantly impaired, but is not considered “full syndrome” unless the binge-purge episodes occur twice a week or more.

Proper treatment for an eating disorder is crucial. If a person is not treated right away, the disorder can get out of hand very quickly and put the person in serious danger (9). When a person’s eating disorder reaches the point where it becomes life threatening, acute-care hospitalization or residential treatment is highly recommended (1). Individual treatment is different for every person, and these individual differences should be taken into account when treating the client.

The treatment for an eating disorder requires a multidisciplinary team of professionals. Typically this team consists of a psychiatrist, therapist, nurses, physicians and a registered dietitian (1). It is important to note that eating disorders are not about food; individuals often use food or control of food to mask the deep rooted feelings and emotions that are really driving their behavior (10). Because eating disorders are related to unhealthy eating habits, nutritional therapy is a key piece in an individual’s recovery (2). As mentioned before, many times an eating disorder becomes life threatening and that is when an intervention is most needed. Medical stabilization is the first step, then psychotherapy and weight restoration happen simultaneously

(2). The amount of time this takes varies depending on the severity of the disease in the individual.

The Academy of Nutrition and Dietetics has established a standardized process for providing care to patients including those with eating disorders (11). This standardized process, known as the Nutrition Care Process (NCP), has four parts: Assessment, Diagnosis, Intervention, and Monitoring and Evaluation. Since this study is focused on the treatment of eating disorders, it will primarily look at the intervention component of the NCP (11). Nutrition intervention can be further divided into four domains: Food and/or Nutrition Delivery, Nutrition Education, Nutrition Counseling, and Coordination of Nutrition Care (11). Within the Nutrition Counseling domain, the social learning theory is one of several recommended counseling theories and strategies (11). The social learning theory identifies a “dynamic, reciprocal relationship between environment, the person and behavior.” Concepts like reciprocal determinism, behavioral capability, expectations, self efficacy, observational learning, and reinforcement help to explain the social learning theory (11).

### **Research Questions**

How does residential treatment help women with eating disorders improve their relationship with food and drive for recovery, and how is the registered dietitian involved in helping them achieve this goal?

### **Methods**

#### **Background**

The majority of the data collected was obtained from confidential one-on-one interviews between the researcher and the subject over the course of four days. However, prior to conducting the interviews, the researcher completed a literature review on the topic of eating

disorders. The researcher utilized the Western Michigan University library and online databases such as The Academy of Nutrition and Dietetics Evidence Analysis Library and the National Institutes of Health to acquire the necessary scholarly articles. Other websites from creditable organizations such as Anorexia Nervosa and Associated Disorders (ANAD), and the National Eating Disorder Association (NEDA) were also used.

### Recruitment

The researcher contacted several residential eating disorder facilities in the United States to see if any would allow student research. Only facilities specializing in eating disorders were considered. Once an appropriate facility had agreed, the researcher began the recruitment process via the facility's staff. After the Western Michigan University Human Subjects and Institutional Review Board (HSIRB) approval was obtained, the facility's executive director dispersed the introductory letters to all residents at the facility, approximately one month prior to the researcher's arrival. These introductory letters included a brief description of the study's goals and what would be required of the subjects. Introductory letters can be reviewed in Appendix 1 and 2. Once she arrived at the facility, the researcher met with the potential subjects in a group and discussed the study in detail as well as verbally explained the informed consent document. After the subjects had the opportunity to review the informed consent documents, including consent to audio record the interviews, they were invited to sign the forms and return them to either the intake coordinator at the facility or the researcher herself. Informed consent documents can be reviewed in Appendix 3 and 4. Participation in the study was completely voluntary, and subjects were aware of their right to refuse to take part in the study as well as withdraw at any time.

### Data Collection



After consent forms were gathered from the participants, individuals were interviewed by the researcher and audio recorded. Semi-structured interviews were held in a private, quiet room at the facility away from the subject’s peers. The interviewer asked each participant a series of preliminary questions regarding age, diagnosis, co-morbidity, duration of eating disorder, duration at facility and number of residential eating disorder treatment admissions. The remainder of the interview consisted of open ended questions regarding a typical day in treatment, social history, relationship with food, recovery and willingness to change. Questions asked can be seen in Table 1: Patient Interview Questions and Table 2: Registered Dietitian Interview Questions. Each interview lasted approximately 20-30 minutes. All information obtained was self reported by the residents. The researcher was not authorized to observe any groups, meals personal charts, or private sessions. All audio recordings of the interviews will be disposed of upon completion of the study, approximately six months after the initial interviews.

**Table 1: Patient Interview Questions**

1. Take me through a typical day in treatment.
2. Describe the events that led up to your stay here.
3. Describe your relationship with food.
4. Describe to me what meals are like to you.
5. Describe to me what snacks are like to you.
6. What does recovery mean to you?
7. On a scale of 1-10 how willing are you to change your disordered behaviors? Why?

**Table 2: Registered Dietitian Interview Questions**

1. Describe a typical day here and how you as the dietitian are involved.
2. How do the majority of residents find themselves at this treatment center?
3. How do you help your clients become comfortable around food and eating?
4. How are meals and snacks regulated?
5. How are residents prepared for discharge

Subjects

The study examined eight females at an adult residential eating disorder treatment facility. All participants were 18 or older. The average age of the subjects was 24.75, and ages ranged from 19-38 years [n=8; SD=5.6]. To be included in the study, subjects had to be patients at the facility for at least 5 days. The average length of stay for the subjects interviewed was 33.4 days and ranged from 5-80 days [n=8; SD=25.3] (the day they were admitted to the time of the interview). The final requirement for participants was having one of the following diagnosed eating disorders: eating disorder not otherwise specified (EDNOS), anorexia nervosa (AN), or bulimia nervosa (BN). Of the eight patients interviewed three had a diagnosis of EDNOS, three with BN, and two with AN– bingeing/purging subtype. Four of the patients had received residential treatment for their eating disorder prior to being at the current facility, while four were receiving residential treatment for the first time. The co-morbidities this group of subjects experienced included: drug abuse, alcohol abuse, depression, anxiety, self-injury, suicidal, co-dependence, and compulsive exercise. The most common of these co-morbidities was self-injury. All diagnoses were self-reported. The duration of each individual’s eating disorder ranged from 1-20 years, with the average duration being 10.7 years [n=8; SD=6.6].

### Facility

The facility where the data was collected was located in rural Alabama. It is certified by the State of Alabama Department of Mental Health and Accredited by the Joint Commission. At this facility, patients typically are admitted to the residential treatment program and eventually move to a more independent partial hospitalization program (PHP); all patients are required to spend at least 15 days in PHP before being discharged. Patients admitted directly to the residential treatment program are required to stay for a minimum of 30 days. No more than eight patients are admitted to each program at a time for a total of less than 16 people at one time. The

facility treats only females over the age of 18. The approach the facility takes to treating individuals is one that is recovery based as opposed to addiction based. The dietitian treating the individuals at the facility had completed her master's degree as well as a dietetic internship accredited by the Accreditation Council for Education in Nutrition and Dietetics (ACEND) and passed the registration examination for dietitians given by the Commission on Dietetic Registration. All residents, regardless of the program they are in meet with their dietitian once a week.

### Data Analysis

This project exploring the impact a residential eating disorder treatment facility has on patient's attitudes toward food. Because the emphasis is on attitudes and ultimately the patients' willingness and ability to change, in-depth interviews from a small number of participants and use of qualitative data analysis methods are appropriate. The Constant Comparative Method used in qualitative research was used to analyze data, and this determined if the pool of participants with their range of experiences was large enough to capture a full range of responses (12). According to an article written by Martin N. Marshall an appropriate sample size for a qualitative study is one that adequately answers the research question (13). As Marshall stated in 1996:

*“Quantitative researchers often fail to understand the usefulness of studying small samples. This is related to the misapprehension that generalization is the ultimate goal of all good research and is the principal reason for some otherwise sound published qualitative studies containing inappropriate sampling techniques”* (13).

Data analysis was assisted by using NVivo 10 software by QSR International, Doncaster, Australia which was designed for use in qualitative research (14). Each interview was transcribed by playing back the interviews at slow speed and manually typing the responses. The interviews

were then coded and analyzed for common themes with the use of this software. Themes and concepts were applied to the social learning theory and other concepts.

**Findings**

**Diet and Menu**

The menu planning at this facility is similar to the diabetic exchange system where each patient is given a certain amount of exchanges at each meal. The exchange system is a list of foods and portions that are interchangeable with any item on the same list. All patients receive the same food at each meal but with differing portion sizes depending on their needs. Patients have an initial meeting with the dietitian (RD) when they are admitted and they continue to meet weekly for individual sessions. The RD determines each individual’s energy and protein requirements. The menus are determined by the RD and the chef preparing the meals. The chef is given a list of each resident’s exchange requirements and plates the food accordingly. Patient care technicians (PCT) serve the food to the patients and monitor the patients as they eat. The residents are given instructions on how to use the exchange system and are allowed to select their own breakfast and snacks. A sample menu can be seen in Table 3: Sample Menu. An example of how exchanges are used at meals can be seen in

**Table 3: Sample Menu**

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Lunch	Grilled cheese, vegetable minestrone, and fruit cup	Greek wrap (hummus, chicken and veg.) fresh fruit	Turkey, broccoli and cheese bakers and fruit cup	Vegetable noodle bowl with chicken, spring roll, and red grapes	Flatbread pizza, green bean salad, and chopped melon	Spiced pork tenderloin, smashed potatoes, green beans, arugula salad w/ dressing, and banana bread	Quiche, salad with dressing and fruit cup

Dinner	Sesame chicken, rice, green beans, fresh fruit, chocolate orange cookies	Lasagna, herb salad, and fresh fruit	Turkey Caesar salad w/ dressing, baguette, chopped melon	Winter soup, magnolia roll and butter	Chicken fingers, mashed potatoes, squash casserole, and fruit cup	Chicken penne pasta, mixed green salad w/ dressing, mixed fruit	*restaurant outing with RD*
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Table 4: Example of Exchanges

Sesame Chicken, Rice, Green Beans, Chocolate Orange Cookies	
½ cup Sesame Chicken	2 proteins + 1 fat
¾ cup Sesame Chicken	3 proteins + 1 fat
1 cup Sesame Chicken	4 proteins + 2 fat
1 cup Rice	2 grains
½ cup Green Beans	1 vegetable
1 piece of fresh fruit	1 fruit
2 small or 1 large cookie	Dessert/extra

### Typical Day in Residential Treatment

The facility in which the researcher obtained the data offered two types of treatment programs, standard residential and partial hospitalization program (PHP). Both of the groups eat meals and attend group therapy together during the day. The PHP individuals live in an apartment on the sites campus where they are able to live more independently. A shuttle picks them up in the morning at 7:30am and drops them off at 9:00pm.

Each morning at 6:00am blind weights are taken. In order to obtain the most accurate weight, patients are weighed in a thin hospital gown. Other vital signs are also taken at this time. At 8:00am, breakfast is served. Some residents are given portioning privileges which means they are given the opportunity to portion their food out for themselves rather than having the staff portion their food. Portioning privileges are given to residents that have shown they are ready to take on that next level of independence and responsibility. This is determined by dietitian and the

patient's therapist. The PCT is required to verify that their portions are acceptable for each individual's meal plan. All other patients not given portioning privileges are served by the PCT. All of the residents are then required to eat their meal while the PCT monitors eating disorder behaviors.

After breakfast, residents who have been cleared for physical activity may do so. Exercise consists of low level yoga for 45 minutes two days a week and/or 30 minute walks 3 days a week. Exercise time is closely monitored by PCT to ensure that residents are not taking advantage of the exercise privilege by excessively exercising.

At 9:30am, the residents attend one of many therapeutic groups. The groups include but are not limited to process group, nutrition group, mindfulness, family group, trauma group, art therapy, and women's issues. When asked which group they found most beneficial to improving their relationship with food and motivating them for recovery, five out of the eight stated that process group was the most beneficial. After the first group of the day, the women eat their first snack. When snack has been completed the residents go to process group. In the Process group the residents talk about the meal or snack, what they found difficult, what they accomplished, and what urges they experienced. This gives the residents an opportunity to express what they need the rest of the group to know so that they can work together and hold each other accountable.

Afternoon meds are given at 12:15pm and then the group sits down for lunch at 12:45pm. Lunch, unlike breakfast and snacks, is prepared and served by the chef. Like breakfast, some residents are given the opportunity to portion their meals. When lunch is completed, the residents may have another process group lead by the PCT depending on the meal or the dynamic of the group. At 1:45, the women go to another therapeutic group until about 3:00pm. At 3:00pm the

residents choose another snack to eat based on their meal plan and pre-determined exchanges. The resident will then have an individual therapy session with their therapist, dietitian or physician. From 4:30pm-5:30pm, residents are given free time to work on therapy assignments. At 5:30pm, meds are given out and dinner is served by the chef at 6:00pm. Those with portioning privileges are able to portion their meals during the time leading up to the meal. All other residents are served by the PCT.

After dinner comes a group called affirmation and appreciation. This group gives the women the opportunity to share what it is they accomplished that day and celebrate the progress they are making. It gives residents an opportunity to acknowledge peers and any major strides they have taken. At 7:00pm they go to their final group of the day, followed by snack at 8:30pm. Like the other snacks, residents are able to select their snacks. The rest of the evening is available for the residents to use however they please. This time is normally used on phone calls to family and friends or for working on therapy assignments.

At 9:30pm, those in PHP are shuttled back to their apartment. All other residents are able to go to sleep for the night or continue using their free time. At 10:30pm all the lights are off and residents go to sleep for the night.

#### Social History Leading Up to Stay

The residents' path to this treatment center varied considerably but in the end it was the residents' decision to be admitted. A few of the patients had received treatment for other addictions (i.e. alcohol and drug) and then were recommended to this facility in order to concentrate on their eating disorder. One patient claimed that, "Once I got the chemical dependency under control, my eating disorder started to get worse." Others had received treatment for their eating disorder in recent history. Some of the time it was their choice to go

into treatment, either a partial hospitalization program (PHP) or Intensive Outpatient (IOP). These treatment programs were helpful but not the type of treatment they were in need of at the time. In other cases, patients were admitted into treatment, either residential, PHP, or IOP as the result of an ultimatum. One resident stated, “It was either come here or see tons of doctors, so I gave this a shot.” Finally, some of the residents interviewed came to the realization that they needed help on their own. Often times they had had a history of disordered eating and therefore recognized when they had lost control or could no longer “handle it themselves.” One patient described how she came to this realization:

*“I was driving one day completely hypnotized by a binge. I was so consumed that I completely wrecked my car. That’s when I knew that I needed to start looking at going inpatient.”*

Another resident said, “I thought I had everything under control but then I slipped and had two major binges and that just led me back into a downward spiral.”

Residents were questioned where they were on a scale of 1-10, 1 being completely uninterested in recovery and 10 being actively seeking recovery. When they were first admitted the average response was 5.5 (range from 1-10) [n=8; SD=3.0]. Most of the residents were at the facility by choice. Many patients at the facility were referred by their physician or other member of their treatment team.

#### Relationship with Food

Food played many different roles in the lives of the women interviewed. Those that struggled with bulimia nervosa generally viewed food as an escape from what was going on in life. Some described food as their “best friend” when they were in the midst of a binge. Eventually though, their best friend became their worst enemy when the purging began. One resident stated that food was a comfort to fill a void, “I have a love hate relationship with food; I



love food but I'm embarrassed to admit that because I want to hate food." A resident diagnosed with EDNOS said she struggled with balancing food,

*"It was either eat anything and everything or it's not allowed if it's not on my 'diet.' "*

She went on to describe it as *"A means to an end. I wanted the perfect body and this was the way to do it."*

Residents reported that restricting food seemed to give them a feeling of control. Those that had a history of restricting described their relationship as very rule based and typically only allowed "safe" foods like raw fruits and vegetables and whole grains. One resident claimed that restricting was easier than facing the anxiety of eating a meal. All in all, those interviewed indicated that restricting foods tended to be very habitual and routine thus giving them a sense of control.

Being at the facility has helped some of the residents separate their feelings from food. One resident described food in this way: "food is medicine; food is what I need right now to get me healthy again." By participating in the facility's program residents have apparently learned to be more mindful of the food they eat, paying close attention to the taste, texture and types of foods they are eating. One resident said, "I used to have a ton of fear foods. Now, I've learned that all foods fit in a healthy diet and that is such a relief!"

### Meals and Snacks

Meals and snacks are critical in an eating disorder treatment center. That being said, it is important that this aspect of treatment is highly regulated. To help with this regulation, all meals and snacks are served at the same time every day. Each resident is required to finish everything on her plate; if she is unable to do this the meal will be substituted with Ensure. If the patient refuses both the substitute and the meal, she will receive a non-compliant. Each resident is allowed three non-complaints' a week. If a resident does receive three or more, it is up to the

resident and her therapist to determine what the consequences are. According to the RD, the facility does not put a huge emphasis on punishment and it is rare for resident's to receive non-compliance. All meals and snacks use a modified exchange system. The RD determines how many exchanges each resident is expected to eat at each meal and snack and conveys this to the resident. Rather than having to remember meal exchanges, residents have an individualized meal card for each meal and snack with their meal exchanges listed on it.

Breakfast and snacks are chosen by the residents. As their time at the treatment center goes on, they are encouraged to challenge themselves when they are given options like this but are by no means required to eat specific foods. The food is portioned by the residents, and then the PCT confirms they have portioned the correct amount. Lunch and dinner are prepared by a professional chef and, according to the residents, tend to be more challenging. The chef has the residents' meal cards and plates the food accordingly. Those with portioning privileges are allowed to plate their own food. Residents are given thirty minutes for breakfast, lunch, and dinner and given 15 minutes for morning, afternoon, and evening snack. All meals and snacks are eaten at the dinner table and monitored by a PCT. It is the PCT's responsibility to make sure no one is engaging in eating disorder behaviors or food rituals (e.g. cutting food into tiny pieces, eating abnormally fast or slow, or holding food in ones cheeks) and ensuring each resident eats 100% of her meal. The PCT may choose whether or not to eat meals and snacks with the residents. In order to diminish the stress and anxiety of the situation at hand, games are played to help distract the women.

Snacks are generally more enjoyable for residents. According to the residents snacks are more relaxed and less stressful since it isn't a whole meal. When asked about the snacks here, one resident responded:

*“I like snacks! I get to kind of experiment with how am I going to put some things together, what am I going to want that day so it’s fun to see different combinations people come up with and then putting it all together like sometimes its yogurt and granola and some berry mix and there is so many different combinations so that’s what I really like is figuring out what do I really like rather than just looking at it as something I just have to have.”*

However, for some residents on a weight restoration plan, this is where the additional calories needed for weight gain are added. In addition to larger snacks, these individuals are sometimes given supplements to further increase their calorie consumption. As expected this can be challenging for many. One resident responded with: “I do not need the snacks, I do not want the snacks”. She continued to state that they are “constantly eating” and she would “never eat this much or these kinds of foods if she were at home.” The residents agreed that being able to choose the snacks was a huge stress reliever and gave them a sense of control.

Meals on the other hand elicited a different reaction. The meals are described by residents as fresh, restaurant-like, large portions, and very diverse. One resident claimed that the foods served at lunch and dinner were always very calorie dense and included a lot of fat. This resident went on to say “It’s not that I won’t eat, I just want to be able to choose what I eat.” Other residents commented that the meals were prepared very healthfully, and offered a great deal of variety. When asked if they would be willing to try these new foods out on their own, one resident responded: “I’m willing to do the challenge. This is something I will want outside of here so I might as well try it while I am here in a safe environment”. While they are allowed to pick breakfast and snacks, not being able to choose lunch and dinner ensure that some challenging fear foods will be encountered. Each resident is allowed to have three foods they automatically substitute for something else. In the same way, they are able to replace one entree

a week with peanut butter and jelly. Some residents said that some meals seem more unbalanced than others and are more challenging but in the end everything evens out and “I don’t spontaneously combust.”

After the meals, residents are required to participate in process group. This gives the women the opportunity to talk about their hunger cues, thoughts, behaviors, and urges before and after the meal. They end process group with “Affirmation and Appreciation” which gives all the residents the chance to celebrate and acknowledge their accomplishments from the day or meal. According to the dietitian, residents are taught to find the connection between their emotions and hunger cues. Residents are also taught that no matter what they are feeling or what is going on in their life, they still need to take care of themselves.

#### What is recovery?

Recovery is difficult concept for anyone struggling with an addiction. One resident summarized what recovery was for her by saying:

*“Recovery is finding a balance with food. Drugs and alcohol are different; you put them down and ideally never pick it up again. With an eating disorder you are essentially sitting down to your drug of choice 3-6 times a day”.*

According to the women that were interviewed, recovery can be summed up in a few brief words: normal, balance, hope, and freedom. One resident stated that recovery meant being a member of society,

*“I feel like I can’t be in society because I make people uncomfortable because of my eating disorder or my family and friends will recommend I not go out with them because it might be too challenging. They treat me like I’m this fragile doll and it gets annoying! I’m a grown woman and I can do this!”*

Other residents said they want to be able to sit down at a meal and not have a panic attack or feel the need to cover it with condiments to make it unappetizing or have the urge to run off to the bathroom after the meal is done. One resident described her eating disorder as “being buried underneath tons of rocks.” Recovery is breaking through those rocks, experiencing life, having a future worth living, and being a role model.

At the end of the interview, the scale of 1-10 was brought back and the residents were asked to state where they would put themselves on the scale at that moment in time. The average response was 8.9 and responses ranged from 7-10 [n=8; SD=1.0]. When asked why they responded this way, one resident said “I have too much to lose if I continue on. This can’t be my life story; this can’t be how it ends.” Another resident responded by saying “some days the rules are really apparent and I feel like I have no freedom. On those days the number is a lot lower.”

#### How are residents prepared for life after treatment?

The goal of just about any treatment center for eating disorders is to help the clients become more comfortable around food. This facility used exposure therapy the most to help achieve this goal. The residents are exposed to food six times a day (three meals and three snacks) and required to choose four out of the six times. This autonomy helps give the residents some sense of control while also challenging them to pick foods they normally would not eat. More challenging foods are typically served at lunch and dinner as well as during meal and snack outings. This exposure to certain fear foods will help them pick these foods on their own. A cooking class is also taught once a week which is lead by the RD and the chef. The cooking class gives the clients the chance to not only cook and work with food but also eat the food they prepare. “Many of the residents are excellent cooks, they just don’t eat the foods they cook,” states the registered dietitian. Another philosophy the treatment team tries to convey to their

client's is that all foods are ok and that they have permission to eat any and all foods. The dietitian went on to say, "It's amazing to see that light go off in some clients head when they finally realize and believe this to be true"

Before residents are discharged from the facility it is advised that they meet certain expectations. First, the client must be able to separate food from their feelings and understand that one does not dictate the other. The registered dietitian added, "Clients are educated that no matter what issues or feelings come up, they have to take care of themselves." Furthermore, each patient is required to go to PHP,

*"This is residential, they won't be ready for the real world, which is why we require everyone go to PHP before they are discharged. Once a client shows they can follow the meal plan independently in PHP, grocery shop, cook and prepare their own meals, and are not engaging in any eating disorder behaviors, then they have shown they are ready for the real world."*

## **Discussion**

Having a structured setting is helpful in this kind of environment. When an individuals are taken to a residential eating disorder center and told they can no longer live their life the way they were, they are more than likely to feel as though they have lost all sense of control. Adjusting to this drastic change can be difficult so having a predictable schedule can help with the adjustment. In the same way, giving the residents the freedom to chose their own breakfasts and snacks gives them a sense of autonomy while still challenging them with lunches and dinners. A controlled environment appeared beneficial for residents to learn the necessary skills and gain the self-confidence needed for recovery.

Social learning theory is composed of several concepts, many of which were observed at the treatment center. “The person’s ability to change a behavior is influenced by characteristics within the person, the environment, and the behavior itself is known as reciprocal determinism” (10). This was seen in the way that the women depend on each other and encourage each other to take steps toward recovery. Behavioral capability is the “knowledge and skills that are needed for a person to change a behavior” (10). This is possibly the most relevant to the registered dietitian’s role. The patients at this facility looked to the RD for nutritional information, and counseling on how to normalize their eating behaviors. This is done through individual counseling, nutrition groups, cooking lessons, and meal outings. Self-Efficacy, another concept within the social learning theory, is defined as the “confidence in the ability to take action and persist in the action.” This can be seen in many activities at the treatment center (10). For example, all residents are given the freedom to choose their own breakfast and snacks. This opportunity allows them to actively experience normal eating patterns. This is also seen when residents are given portioning privileges for meals. They must trust that what they have learned will lead them to choosing appropriate portion sizes. “Learning how to do a behavior by watching credible others do the same” is known as observational learning (10). A good example of this is how the older residents act as role models to the newly admitted residents. One resident noted that “the success of the other girls motivates me to get better.” Reinforcement is the last concept within the social learning theory that was observed. Reinforcement is the “response to a behavior that will either increase or decrease the likelihood that the behavior will be repeated” (10). Participating in process group, after a meal gives the residents a chance to share with the others what they have accomplished or are struggling with. This gives the other residents the opportunity to affirm their accomplishments or offer support when they are struggling.

## **Conclusion**

When patients suffering from eating disorders willingly enter a residential treatment center such as the one described above, they will likely learn and adopt healthy eating habits and coping mechanisms. To elaborate, all of the patient's interviewed were at the facility by choice, and all had embraced the lessons and were applying what they had learned to their own recovery. The long term outcome of residential treatment is unknown. Although there is more to eating disorders than dietary intake, a registered dietitian was key in teaching these clients how to normalize their eating behaviors and develop a healthy relationship with food. It is likely this is the case in similar residential treatment centers.

There were various strengths and limitations to this study. The major strengths of this study included obtaining information first hand from the residents. Interviewing the dietitian at this facility was also a strength because it triangulated the data and reinforced the validity of what the resident's reported. Another advantage of this study was that it took a qualitative approach to collecting the data. Since the research question and topic were very broad this was helpful in collecting the most information in a variety of topics.

This study also lays groundwork for additional specific research. Further research can be done to compare residential treatment with intensive outpatient treatment. Another area of research would be the long term outcome of various types of treatment methods and levels of intensity. Comparing adult females with eating disorders to adolescents, children and males with eating disorders is another area for future research.

There were several limitations of the study. First, the time, money, experience and support the researcher had for this project was rather limited. More time and experience would result in a more in depth literature review and more precise data analysis. More experience may



have allowed the researcher to sit in on meals and groups for further observation. As mentioned, the topic was very broad meaning that further, more specific questions and related research are needed in order to obtain information relevant to the treatment of eating disorders. Another limitation of the study was the small sample size. While it is normal for qualitative studies to have small sample sizes, the results are difficult to apply to whole populations. Moreover, obtaining subjects from multiple treatment centers with different treatment approaches may help to strengthen the study's findings.

### **Acknowledgements**

I would like to thank Dr. Elaine Phillips, Dr. Ghada Soliman, and Dr. Caroline Webber for acting as mentors to me throughout this process. I would also like to thank the Lee Honors College for supporting my research, travel and expense with the Lee Honors College grant. Finally, I would like to thank the facility in which I collected the data and my dear friend Allison Rademacher for inspiring me to work with eating disorders.

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## **Appendix I: Letter to Residents**

Dear Magnolia Creek Resident,

Hello! My name is Chelsea Cook. I am a senior at Western Michigan University majoring in Dietetics and with a minor in Psychology. I am a member of the Lee Honors College here where we are required to complete an honors thesis by the time we graduate. The title of my honors thesis is “Residential Treatment of Adult Women with Eating Disorders.”

The purpose of this study is to see how being at a residential eating disorder facility has affected ones willingness to change and one’s attitude toward food. Participants will be asked to take part in an interview lasting approximately 45-60 minutes. There is a possibility that a follow up interview will be necessary but should take no longer than 10-20 minutes. In this case, the follow up interview will be conducted after all primary interviews have been carried out. I will be at Magnolia Creek for approximately one week to collect all the data. All interviews will be audio recorded. All data collected by the interviewer, including but not limited to audio recordings will be kept completely confidential.

There will be two types of interviews, one for the residents at Magnolia Creek Treatment Center for Eating Disorders and one for the registered dietitians at Magnolia Creek. Interview questions for the residents will discuss the history of one’s eating disorder, ones daily routine, and ones relationship with food. The registered dietitians will be asked to answer questions about the facility as a whole, not specific patients. The questions will be related to the daily routine for residents, how meals are regulated and what is done to prepare the resident for a healthy relationship with food.

If you are a resident and interested in this study, please inform you primary therapist. Further information and instruction will be given when I arrive at the facility.

Thank you very much in advance! I look forward to meeting you!

Sincerely,

Chelsea Cook  
Western Michigan University  
Lee Honors College  
Family Consumer Science - Dietetics

## **Appendix II: Letter to Registered Dietitian**

Dear Dietitians at Magnolia Creek,

Hello! My name is Chelsea Cook. I am a senior at Western Michigan University majoring in Dietetics with a minor in Psychology. I am a member of the Lee Honors College here where we are required to complete an honors thesis by the time we graduate. The title of my honors thesis is “Residential Treatment of Adult Women with Eating Disorders.”

The purpose of this study is to see how being at a residential eating disorder facility has affected one’s willingness to change and one’s attitude toward food. To collect this data, I will be interviewing approximately 5 patients at Magnolia Creek Treatment Center for Eating Disorders as well as any registered dietitians working with the patients at Magnolia Creek. Interviews for all participants will last approximately 45-60 minutes. There is a possibility that a follow up interview will be necessary but should take no longer than 10-20 minutes. In this case, the follow up interview will be conducted after all primary interviews have been carried out. I will be at Magnolia Creek for approximately one week to collect all the data. All interviews will be audio recorded. All data collected by the interviewer, including but not limited to audio recordings will be kept completely confidential.

As mentioned, there will be two types of interviews, one for the residents and one for the registered dietitians. The registered dietitians will be asked to answer questions about the facility as a whole, not specific patients. The questions will be related to the daily routine for residents, how meals are regulated and what is done to prepare the resident for a healthy relationship with food. Interview questions for the residents will discuss the history of one’s eating disorder, one’s daily routine, and one’s relationship with food.

If you are interested in taking part in this study, please contact Ronda Cannon, Director of Operations at Magnolia Creek Treatment Center for Eating Disorders. Further information and instructions will be given when I arrive in Chelsea, AL.

Thank you very much in advance! I look forward to meeting you!

Sincerely,

Chelsea Cook  
Western Michigan University  
Lee Honors College  
Family Consumer Sciences – Dietetics

## **Appendix III: Resident Informed Consent**

### **Resident Informed Consent Western Michigan University Didactic Program in Dietetics**

**Principal Investigator:** Dr. Ghada A. Soliman  
**Student Investigator:** Chelsea Cook  
**Title of Study:** Residential Treatment of Women with Eating Disorders

You have been invited to participate in a research project titled "Residential Treatment of Women with Eating Disorders." This project will serve as Chelsea Cook's Honor's thesis research project for the requirements of the Bachelors in Science. This consent document will explain the purpose of this research project and will go over all of the time commitments, the procedures used in the study, and the risks and benefits of participating in this research project. Please read this consent form carefully and completely and please ask any questions if you need more clarification.

#### **What are we trying to find out in this study?**

The purpose of the study is to see how being at a residential eating disorder facility has affected your relationship with food. To help obtain the most relevant answers, there will be a brief paragraph read before the preliminary data is obtained. This section will remind you that answers should focus primarily on food and nutrition.

#### **Who can participate in this study?**

Those participating in this study are adult women who are current residents of Magnolia Creek Treatment Center for Eating Disorders during the week the researcher will be in Chelsea Alabama. Subjects will have the diagnosis of Anorexia nervosa, Bulimia nervosa, and/or eating disorder not otherwise specified. Only females ages 18-99 will be included in this study. Those excluded from the study are females under age 18, men of all ages and those admitted during the week of the researchers visit. Participation in this study is completely voluntary, and you may withdraw at any time if you wish to do so.

#### **Where will this study take place?**

Data collection will take place in a private location at Magnolia Creek Treatment Center for Eating Disorders. Data analysis will take place at Western Michigan University in Kalamazoo Mi.

#### **What is the time commitment for participating in this study?**

We ask that you commit approximately 1-2 hours. The student investigator will make multiple visits to the facility during her stay in Chelsea, Al until all data has been collected. You will be asked to complete an initial interview lasting approximately 60 minutes. If a follow up interview is needed, it will last about 10-20 minutes depending on the amount of information needed.

#### **What will you be asked to do if you choose to participate in this study?**

You will be asked to take part in a one-on-one interview with the student investigator. If for any reason the principal investigator or student investigator needs to get in contact with you, they will contact Magnolia Creek treatment center as to ensure confidentiality. If a follow up interview is needed, it will take place in the same private location as before. It will last approximately 10-20 minutes and be done while the researcher is still there.

**What information is being measured during the study?**

The data being collected will be the responses you give to the questions being asked. Questions will be related to your daily routine, the relationship between you and food and your goals and attitudes towards recovery.

**How will information be obtained and recorded?**

All interviews will be audio recorded. This includes the initial interview and any follow-up interviews that may take place. The researcher may also take brief notes while conducting the interview. All audio tapes will be kept completely confidential and destroyed once the study has concluded. If you agree to partake in this study you will be audio taped. The audio tapes will be for the researcher team only. The research team consists of Chelsea Cook, Dr. Ghada Soliman MD, Ph.D., RD, Dr. Caroline Webber Ph.D., RD, and Dr. Elaine Phillips Ph.D. The audio tape will only include the interview conducted while at Magnolia Creek Treatment Center for Eating Disorders.

**What are the risks of participating in this study and how will these risks be minimized?**

Participants may experience unsettling feelings of disclosure. To prevent this potentially unsettling feeling, a calming comfortable environment will be created before the interview takes place. Another potential risk would be keeping you from attending regularly scheduled group or individual counseling sessions. To prevent this from happening, staff will schedule you for the interview during their free time. If you do not have any free time available, arrangements will be made with Magnolia Creek officials as to ensure that any scheduled activities are accounted for. You will be given code number as to conceal your identity. All information collected will be for the principal investigator, research board and the student investigator. You will be given an alphanumeric code as to conceal your identity. Information will not be shared until it is time to present the findings, and still no personal information will be shared.

**What are the benefits of participating in this study?**

The benefit you may receive from taking part in this study is contributing to the limited amount of research there is about eating disorder treatment and prevention.

**Are there any costs associated with participating in this study?**

The only cost associated with this study is that of time. The interview may conflict with scheduled therapy or group sessions. To avoid this problem, interviews will be scheduled during your free time.

**Is there any compensation for participating in this study?**

There will be no form of compensation to you or to Magnolia Creek treatment center affiliates.

**Who will have access to the information collected during this study?**

All information will be kept confidential. Dr. Ghada Soliman and Dr. Caroline Webber the principal investigators and Chelsea Cook the student investigator will have access to the information. Once the study is complete, Western Michigan University’s Lee Honors College will have access to the study indefinitely. There is a possibility that in the future, WMU’s Lee Honors College will publish the findings once they are complete. If this is the case, contact will be made with Magnolia Creek to inform them and the participants of the study. Once again, absolutely no identifying information will be shared with the thesis committee. Participants will be given an ID number to distinguish the participants.

**What if you want to stop participating in this study?**

You can choose to stop participating in the study at anytime for any reason. You will not suffer any prejudice or penalty by your decision to stop your participation. You will experience NO consequences related to your treatment here at Magnolia Creek or personally if you choose to withdraw from this study. You may also choose not to answer any of the questions asked during the interview if you feel it is necessary or you feel uncomfortable with the question.

The investigator can also decide to stop your participation in the study without your consent.

Should you have any questions prior to or during the study, you can contact the primary investigator, Dr. Ghada Soliman at (269) 387-3722 or ghada.soliman@wmich.edu. You may also contact the Chair, Human Subjects Institutional Review Board at 269-387-8293 or the Vice President for Research at 269-387-8298 if questions arise during the course of the study.

This consent document has been approved for use for one year by the Human Subjects Institutional Review Board (HSIRB) as indicated by the stamped date and signature of the board chair in the upper right corner. Do not participate in this study if the stamped date is older than one year.

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I have read this informed consent document. The risks and benefits have been explained to me. I agree to take part in this study.

\_\_\_\_\_  
Please Print Your Name

Date: \_\_\_\_\_



I have read this informed consent document. I understand that in agreeing to take part in this study I will be audio recorded. By signing this portion of the document, I give the researcher permission to audio tape my words.

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Please Print Your Name

Date: \_\_\_\_\_

## **Appendix IV: Registered Dietitian Informed Consent**

### **Registered Dietitian Informed Consent Western Michigan University Didactic Program in Dietetics**

**Principal Investigator:** Dr. Ghada A. Soliman  
**Student Investigator:** Chelsea Cook  
**Title of Study:** Residential Treatment of Women with Eating Disorders

You have been invited to participate in a research project titled "Residential Treatment of Women with Eating Disorders." This project will serve as Chelsea Cook's Honor's thesis research project for the requirements of the Bachelors in Science. This consent document will explain the purpose of this research project and will go over all of the time commitments, the procedures used in the study, and the risks and benefits of participating in this research project. Please read this consent form carefully and completely and please ask any questions if you need more clarification.

#### **What are we trying to find out in this study?**

The purpose of the study is to see how being at a residential eating disorder facility has affected women with eating disorders and their relationship to food. Since dietitians play a key role in normalizing eating patterns and helping the client develop a more positive attitude towards food, your insight is greatly needed. Furthermore, when being interviewed, it is important that responses pertain to the overall population at Magnolia Creek Treatment Center for Eating Disorders, not specific individuals.

#### **Who can participate in this study?**

Dietitians that are able to participate must be certified Registered Dietitians. No Registered Dietetic Technicians, Chef's or Nutritionist will be able to participate. In additions, Registered Dietitians must care for residents of Magnolia Creek Treatment Center for Eating Disorders.

#### **Where will this study take place?**

Data collection will take place in a private location at Magnolia Creek Treatment Center for Eating Disorders. Data analysis will take place at Western Michigan University in Kalamazoo Mi.

#### **What is the time commitment for participating in this study?**

We ask that you commit approximately 1-2 hours. The student investigator will make multiple visits to the facility during her stay in Chelsea, Al until all data has been collected. You will be asked to complete an initial interview lasting approximately 60 minutes. If a follow up interview is needed, it will last about 10-20 minutes depending on the amount of information needed.

#### **What will you be asked to do if you choose to participate in this study?**

You will be asked to take part in a one-on-one interview with the student investigator. If a follow up interview is needed, it will take place in the same private location as before. It will last approximately 10-20 minutes and be done while the researcher is still there. If for any reason the

principal investigator or student investigator needs to get in contact with you, they will contact Magnolia Creek Treatment Center for Eating Disorders first as to ensure confidentiality.

**What information is being measured during the study?**

The investigator will be collecting information having to do with how residents with eating disorders deal with food during their stay at a residential eating disorder facility. Questions to you will address how meals and snacks are regulated, and how the registered dietitian works with the residents to increase their comfort with food both before and after their stay.

**How will information be obtained and recorded?**

If you agree to take part in this study you will be audio taped. The researcher may also take brief notes while conducting the interview. All audio tapes will be kept completely confidential and destroyed once the study has concluded. The audio tapes will be for the researcher team only. The research team consists of Chelsea Cook, Dr. Ghada Soliman MD, Ph.D., RD, Dr. Caroline Webber Ph.D., RD, and Dr. Elaine Phillips Ph.D. The audio tape will only include the interview(s) conducted while at Magnolia Creek Treatment Center for Eating Disorders.

**What are the risks of participating in this study and how will these risks be minimized?**

Participants may experience unsettling feelings of disclosure. To prevent this potentially unsettling feeling, a calming comfortable environment will be created before the interview takes place. Additionally, the researcher will continually inquire about your comfort level and whether you wish to continue with the interview. That being said, participation in this study is completely voluntary. Another potential risk would be keeping you from attending regularly scheduled meetings, group, or individual counseling sessions. To prevent this from happening, the researcher will work around your schedule and find a time that works best for you. Another potential risk would be having your professional opinion exposed and possibly reflect badly. To minimize this risk, your identity will be kept completely confidential. Absolutely no personal information such as your name, place of work, school you attend/attended etc. You will be given an alphanumeric code as to conceal your identity.

**What are the benefits of participating in this study?**

The benefit you may receive from taking part in this study is contributing to the research being done regarding eating disorders and the role of RD in residential treatment centers.

**Are there any costs associated with participating in this study?**

The only cost associated with this study is that of time. The interview may conflict with meetings with colleagues, appointments with clients, or group sessions. To avoid this conflict, the interview will be scheduled at a time that is most convenient for you.

**Is there any compensation for participating in this study?**

There will be no form of compensation to you or to Magnolia Creek treatment center affiliates.

**Who will have access to the information collected during this study?**

All information will be kept confidential. Dr. Ghada Soliman and Dr. Caroline Webber the principal investigators and Chelsea Cook the student investigator will have access to the

information. Once the study is complete, Western Michigan University's Lee Honors College will have access to the study indefinitely. There is a possibility that in the future, WMU's Lee Honors College will publish the findings once they are complete. If this is the case, contact will be made with Magnolia Creek Treatment Center for Eating Disorders to inform them and the participants of the study. Once again, absolutely no identifying information will be shared with the thesis committee. Participants will be given an ID number to distinguish the participants.

**What if you want to stop participating in this study?**

You can choose to stop participating in the study at anytime for any reason. You will not suffer any prejudice or penalty by your decision to stop your participation. You will experience no consequences related to your employment here at Magnolia Creek Treatment Center for Eating Disorders or personally if you choose to withdraw from this study. You may also choose not to answer any of the questions asked during the interview if you feel it is necessary or you feel uncomfortable with the question.

The investigator can also decide to stop your participation in the study without your consent.

Should you have any questions prior to or during the study, you can contact the primary investigator, Dr. Ghada Soliman at (269) 387-3722 or ghada.soliman@wmich.edu. You may also contact the Chair, Human Subjects Institutional Review Board at 269-387-8293 or the Vice President for Research at 269-387-8298 if questions arise during the course of the study.

This consent document has been approved for use for one year by the Human Subjects Institutional Review Board (HSIRB) as indicated by the stamped date and signature of the board chair in the upper right corner. Do not participate in this study if the stamped date is older than one year.

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I have read this informed consent document. The risks and benefits have been explained to me. I agree to take part in this study.

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Please Print Your Name

Date: \_\_\_\_\_

I have read this informed consent document. I understand that in agreeing to take part in this study I will be audio recorded. By signing this portion of the document, I give the researcher permission to audio tape my words.

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Please Print Your Name

Date: \_\_\_\_\_