



Published in final edited form as:

J Am Psychiatr Nurses Assoc. 2018 ; 24(3): 241–246. doi:10.1177/1078390317717790.

Procedures and Protocols for Weight Assessment During Acute Illness in Individuals With Anorexia Nervosa: A National Survey

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Abstract

BACKGROUND—Weight assessment is a key component of nursing care for individuals with the acute illness of anorexia nervosa (AN). However, there is little data to guide protocols and procedures regarding weight assessment.

OBJECTIVE—To describe institutional practices regarding weight assessment of individuals during acute illness of AN.

DESIGN—Treatment facilities ($N = 24$) completed a survey about written protocols and procedures regarding weight assessment and disclosure of weight to patients.

RESULTS—The majority of facilities ($n = 22$; 92%) have written protocols for weight assessment. Weight assessments occurred mostly in the morning ($n = 23$; 95.8%), in hospital gowns ($n = 21$; 87.5%), and after voiding ($n = 14$; 58.3%). Respondents described mixed practices for disclosing weight to patients.

CONCLUSION—Results indicate widespread variability in weight assessment and disclosure of weight. Further research is necessary to help develop evidence-based guidelines about weighing practices during acute illness for individuals with AN.

Keywords

anorexia nervosa; weight; treatment assessment and planning; psychiatric nursing practice

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Author Roles

All authors contributed to proposal development, study procedures, writing and editing the article, and approving the final version to be published.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Anorexia nervosa (AN) is a serious psychiatric disorder associated with significant morbidity and mortality (Arcelus, Mitchell, Wales, & Nielsen, 2011; Brand-Gothelf, Leor, Apter, & Fennig, 2014). Individuals with AN struggle with distorted body image and an intense fear of gaining weight despite the risk of dangerous consequences, including malnourishment and extreme weight loss (American Psychiatric Association [APA], 2013). Specialized eating disorder inpatient units and residential programs (i.e., acute treatment) provide intensive treatment, often for persons with AN having the greatest severity of the disorder (APA, 2006).

Body weight assessment is an established integral component of care for persons with AN (APA, 2006) during acute treatment, and nurses are primarily responsible for obtaining this assessment or the oversight of clinical staff such as nursing assistants or paraprofessionals who obtain weight. Body weight is an anthropometric measurement often used as one proxy for determining medical stability and efficacy of treatment response (APA, 2006), in addition to other measures such as serum electrolytes and vital signs. Accurate determination of body weight is required for the treatment team to make informed decisions regarding plan of care. Recommendations suggest that the weekly trend of weight changes over time be used to determine progress because daily weight fluctuates due to fluid shifts and bowel movements (Marzola, Nasser, Hashim, Shih, & Kaye, 2013). However, obtaining an accurate body weight poses numerous challenges including consistency of measurement, procedures (e.g., time of day, clothing worn), and patient's use of spurious methods to conceal actual body weight. Furthermore, differing theories about the best approach to this seemingly benign assessment of body weight pose controversy in the field (e.g., Academy for Eating Disorders Members Listserv, October 2013-present, discussion; Waller & Mountford, 2015).

Currently, there is little known about practices used to assess body weight in individuals with acute AN. Practice guidelines do not fully address best practices for body weight assessment in this population. While there may not be a "one size fits all" approach, there is a paucity of research related to evidence-based practice for body weight assessments during acute illness in individuals with AN. Across inpatient and residential treatment settings, body weight assessment procedures vary in terms of time of day, frequency, and context (e.g., after voiding, in a hospital gown; Jaffa, Davies, & Sardesai, 2011; Schwartz, Mansbach, Marion, Katzman, & Forman, 2008). In the outpatient setting, both to inform and not inform individuals with AN of their body weight are accepted practices (Forbush, Richardson, & Bohrer, 2014). Currently, both practices (to inform/not inform) are considered "standard of care" and are widely used throughout the U.S. acute treatment centers, with most facilities subscribing to one of the two practices (Schwartz et al., 2008). Still, to inform or not inform individuals with AN of their body weight is often a question patients and providers struggle with on a daily basis (Waller & Mountford, 2015). Competing hypotheses argue that being informed (or not informed) of body weight may either increase or decrease mood states (e.g., depression, anxiety) and associated eating disorder psychopathology (e.g., weight preoccupation, body dissatisfaction), and inhibit or facilitate treatment responsiveness.

With regard to frequency of body weight assessment, several different viewpoints are represented in the literature. One initial study in healthy women suggests a negative influence of repeated weighing on mood and self-esteem (Ogden & Whyman, 1997), although persons with AN may be much more accustomed to frequent weighing than their control counterparts. Several authors state that daily weights are preferable during inpatient hospitalization (Abraham & Illewell, 1992; Herpertz et al., 2011; Wolfe, Dunne, & Kells, 2016). However, others suggest the potential utility of less frequent weight assessments. For example, the report by Touyz et al. (1990) describes no difference in the rate of weight gain for individuals with AN during inpatient treatment who were weighed daily versus three times a week. In another study, Vandereycken and Meerman (1984) describe their program, which starts with daily weights, decreasing to thrice weekly weights, and then biweekly weights as the patients met their weight goals. These patients return to daily weights if they fail to meet weight gain requirements.

For body weight assessment procedures, inpatient practices include obtaining weights on the same scale at the same time each day wearing only a hospital gown and voiding prior to measurement (APA, 2006; Herpertz et al., 2011; Wolfe et al., 2016), particularly if the patient is suspected of altering their weight (e.g., water loading or putting weighted objects in pockets before weighing). One study reports that former patients preferred to be weighed in their underwear to reduce temptation of falsifying weight (Jaffa et al., 2011).

The concept of revealing weights to patients with AN is still under debate by researchers and clinicians and there exists little published literature on the topic. Adoption of the approach to inform patients of their body weight is grounded in the belief that individuals control their thoughts and actions and having knowledge will decrease anxiety, low self-esteem, and preoccupation with weight (Garfinkel & Garner, 1982). This is thought to occur through exposure plus cognitive restructuring, central to cognitive behavioral therapy (Dobson, 2010; Fairburn, 2008; Waller & Mountford, 2015). Conversely, the “do not tell” approach is rooted in the belief that knowing one’s weight will increase levels of negative affect, low self-esteem, and preoccupation with weight (Anderson, 1985). Both approaches recognize that negative mood, low self-esteem, and associated eating disorder psychopathology may influence treatment responsivity (i.e., body weight gain).

There is a dearth of empirical data to guide clinical weight assessment procedures with individuals suffering from acute AN. Given this knowledge gap, the aim of this study is to describe current weighing practices for individuals with AN across inpatient and residential eating disorder programs in the United States. Specifically, acute care and residential treatment facilities were queried regarding (a) the extent to which written guidelines/protocols were used for weight assessment and disclosure of weight, and (b) what specific practices were employed regarding weight assessment and disclosure for individuals with AN.

Materials and Method

Sampling Frame

A list of potential institutions was compiled using the treatment finder function of three online informational resources for AN including Edreferral.com, Multiservice Eating Disorder Association, and Something-Fishy.org. After cross-referencing to remove duplicates and solely outpatient institutions, 146 facilities treating individuals with AN in either an inpatient or residential hospitalization setting were identified. All 146 institutions were then contacted via telephone to obtain the mailing address and name of the nurse manager or nursing director. After removing institutions that had since closed, were unable to disclose the name of the nurse manager or director, did not have a nurse manager or director, or did not answer after at least three phone call attempts, a total of 131 eligible institutions were contacted to participate in a brief survey. Of these, 34 participants agreed to participate and were enrolled in the study.

Sample

Eligible participants were (a) 18 years of age and older; (b) male or female; and (c) the director, manager, or nurse manager of an inpatient unit or residential institution that reported treating individuals diagnosed with AN (APA, 2013). Exclusion criteria included individuals who self-report that the institution in which they are employed does not treat individuals with AN in an inpatient or residential setting.

Procedures

Participants were recruited via mailed invitation. According to methods described by Dillman, Smyth, and Christian (2009), three mailed reminder invitations with online completion instructions were sent to those who did not complete the survey previously. Informed consent was completed either via signing and returning consent form with completed hard copy survey or by typing name and date prior to entry of the online survey to indicate consent. At the start of the survey, participants were asked to confirm that the institution in which they worked provided services to individuals diagnosed with AN in an inpatient or residential setting. Those who responded affirmatively proceeded to the remainder of the survey. The survey included a section of demographic and institutional descriptive information, followed by questions regarding specific written guidelines/protocols, frequency, timing, clothing worn, and voiding procedures at weight assessment, and disclosure of weight to the individual with AN. Data were collected between October 2015 and January 2016. The institutional review board at Boston College approved this study.

Data Analysis

The data were analyzed using both parametric and non-parametric, descriptive statistics. Categorical data were analyzed using percentages and measures of central tendency as well as chi-square analysis. Incomplete surveys were not included in the data analysis. All data analyses were conducted using the Statistical Package for Social Sciences (SPSS, Chicago, IL).

Results

Of the 34 participants who agreed to participate via phone and completed the survey, 70.6% of individuals ($n = 24$) confirmed that the institution in which they worked provided services to individuals diagnosed with AN. Thus, 24 individuals with completed surveys were included in all analyses. The responses were from 18 U.S. states, representing largely suburban ($n = 11$; 45.8%) and urban ($n = 10$; 41.7%) settings, and were private, for-profit facilities ($n = 19$; 79.1%). See Table 1 for institutional demographics.

Nearly all participants ($n = 22$; 92%) reported that their institution had written guidelines for body weight measurement and 88% ($n = 21$) of respondents reported having written guidelines for body height measurement. The majority of institutions ($n = 19$; 80%) reportedly had written guidelines about informing individuals with AN of their body weight and 88% ($n = 21$) of sites had written guidelines about informing individuals with AN of their weight range. Regarding frequency of being weighed, 56% ($n = 14$) institutional policies reportedly state that individuals with AN were weighed daily, 29% ($n = 7$) of institutions weigh patients two to three times per week, and 12.5% ($n = 3$) of the sample weigh patients once per week. A small percentage of institutions ($n = 1$; 4%) reported weighing patients four to six times per week. Twenty sites (83.3%) reported using established weight ranges for individuals with AN, but only three sites (12%) described an increase in frequency of body weight measurement for individuals who are not within their established weight range. Respondents also described that changes in patient situation, such as sudden changes in weight, suspected surreptitious weights, inability to void, changes in vital signs, acute food refusal, and/or a physician order, will change the frequency of body weight measurements.

Weight procedures were conducted almost exclusively in the morning ($n = 23$; 95.8%) and in hospital gowns ($n = 21$; 87.5%). Although more than half ($n = 14$; 58.3%) of the institutions reported requiring patients to void prior to weight, 29.1% ($n = 7$) collected urine-specific gravity to evaluate hydration status and potential water loading.

Respondents reported mixed practices regarding informing individuals of their weight or weight range. Institutional policies regarding informing the patient of their weight varied, ranging from never (54%; $n = 13$), once per week (4%; $n = 1$), once per day (4%; $n = 1$); to tailored approach based on clinical status, provider preference, and/or treatment plan (38%; $n = 9$; see Table 2). There was variability among responses for informing patients of their weight range or for informing patients of their status of “in” or “out” of their weight range (see Table 2). Institutions reported being more likely to tell patients their weight range ($n = 18$; 75%) or status of “in/out” of weight range ($n = 21$; 87.5%) compared with exact weight ($n = 11$; 45.8%), with varying frequency. Although less than half of the institutions reported informing patients of their exact weight, most respondents (92%; $n = 22$) indicated that patients “sometimes, frequently, or always” inquire about their *exact weight*. Similarly, 80% ($n = 19$) of respondents reported that patients “sometimes, frequently, or always” inquire about their weight *range*.

Discussion

The purpose of this study was to characterize weighing practices among institutions across the United States that provide acute and residential treatment for individuals with AN. While the vast majority of institutions ($n = 22$; 92%) had specific guidelines for body weight measurement, only about 80% ($n = 19$) of sites had specific protocols related to weight disclosure. Overall, findings indicated widespread variability in weight procedures including frequency of weighing, clothing worn during weight assessment, voiding requirements, and use of urine-specific gravity to assess hydration status and potential water loading. Furthermore, institutional policy varied regarding informing individuals of their weight, with less than half of respondents indicating context-specific tailored disclosure. These findings are consistent with other reports of weighing practices for individuals with AN (Forbush et al., 2014; Jaffa et al., 2011; Schwartz et al., 2008).

This study highlights that patients inquired about their weight or weight range frequently; however, institutional policies were varied and less likely to disclose this information. Decisions to inform individuals of their weight may be influenced by the fact that clinicians are less likely to inform individuals diagnosed with AN as compared with other eating disorders and the type of treatment modality used (Forbush et al., 2014). Additionally, clinician judgment on who would benefit most from weight disclosure has been suggested as a factor on patient-to-patient variations in informing of weight (Forbush et al., 2014). It is unclear what role the discrepancy between individuals' desire for knowledge of weight and practice of weight disclosure has on therapeutic alliance. Therapeutic alliance has been suggested to be a key factor in treatment of individuals with AN (Zaitsoff, Pullmer, Cyr, & Aime, 2015). Further investigation into comparative outcomes between informing individuals with AN of their weight and among varied treatment modalities may inform practice for weight disclosure. Additionally, it is important to note that the complex nature of the illness may make it challenging to impose rigid policies whether to disclose or not disclose weight without individual patient consideration.

Study results should be interpreted with caution due to several limitations. First, institutions were identified via three online informational resources for AN and mailed invitations to participate in this study. Although institutions were recruited from a variety of sources, such methods may have led to selection bias regarding survey completion. Second, the 26% response rate is low. Low response rate could be due to a number of factors including blind mailing of survey and invitation to participants, that sampling method of using online databases may not have yielded sites that treat AN or participants who felt comfortable answering survey, and need for participants to enter survey URL into Web browser from mailed invitation may have been a limiting step for some participants. Third, the survey had specific response options to questions, which may have been challenging if institutions have more nuanced policies. Fourth, the data were self-reported, and hence there may be discrepancies between actual practice and institutional procedures and policies. Finally, the findings of this study do not provide information about the clinical implications for specific weighing practices among institutions, whether informing or not informing patients with AN of their weight is preferable for treatment outcomes, or for which patients different practices may have the most optimal effects. Despite these limitations, this study is the first to report

on weight assessment procedures in individuals with AN used by acute and residential settings in the United States.

Conclusion

This study highlighted the need for evidenced-based guidelines regarding weighing practices for individuals with AN; specifically, it identified the range of current practices, highlighting the need to further understand whether there are differential responses to such approaches that might influence clinical outcomes. To develop evidence-based guidelines, additional studies are needed to examine the clinical impact of actual weighing practices and disclosure of weight or weight range to individuals with AN. For example, further study into the effect of weight frequency, procedures, or disclosure of weight should be considered with regard to patient outcomes such as weight trajectory, as well as other indicators of medical stability such as vital signs and psychological status. Improved understanding of these links may inform the development of guidelines to aid clinicians in decision making with regard to best practice for weighing procedure. Due to the complex nature of AN, better informed guidelines may provide clinicians with the necessary tools to effectively individualize care according to patient need.

Acknowledgments

We would like to acknowledge Tina Bui and Emily Clark, undergraduate research fellows, for their work on the initial survey.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

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Table 1Institution Demographics as Reported by Respondents ($N = 24$).

	<i>n</i>	%
Population density		
Urban	10	41.7
Suburban	11	45.8
Rural	3	12.5
Facility type		
Private for-profit	19	79.1
Private not-for-profit	3	12.5
Government	1	4.2
Public	1	4.2
Classification		
Psychiatric specialty	6	25
General hospital	3	12.5
Eating disorder only	9	37.5
Other (addiction treatment, dual diagnosis)	6	25
Age of patients		
Children and adolescents	2	8.3
Children, adolescents, and adults	2	8.3
Adolescent only	1	4.2
Adolescents and adults	12	50
Adults only	7	29.1

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Table 2

Informing Patients of Weight Status (*N* = 24).

	n
Informing patients of exact weight	
Never	13
Once per week	1
Daily	1
Varies	9
At time of admission only	0
At time of discharge only	2
At both times of admission and discharge	3
Informing patients of weight range	
Never	6
Once per week	1
Varies	17
At time of admission only	2
At time of discharge only	1
At both times of admission and discharge	5
Informing patients of status of “in” or “out” of weight range	
Never	3
Once per week	8
Once per month	1
2–3 Times per week	1
Varies	11
At time of admission only	1
At time of discharge only	3
At both times of admission and discharge	6

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