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Adapting the Eating Disorder Examination for Use during Pregnancy: Preliminary Results from a Community Sample of Women with Overweight and Obesity

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Abstract

Objective—The Eating Disorder Examination (EDE) is a structured clinical interview that is widely used for assessing disordered eating. Although the EDE has been used in pregnant women, no standard pregnancy version has been developed. Accordingly, the present study aimed to document adaptations made to a pregnancy version of the EDE (EDE-PV) and to describe the internal reliability of this adapted version.

Method—Three major modifications were made in the development of the EDE-PV. First, disordered eating was assessed during and prior to pregnancy to account for changes across the perinatal period. Second, items were adapted and rules governing ratings were altered to distinguish eating attitudes and behaviors that are considered normative during pregnancy from disordered eating. Third, several items were omitted.

Results—The EDE-PV was administered to 129 women with overweight and obesity who were between 12 and 20 weeks gestation. Women were 27.25 ($SD = 5.48$) years of age and 56% were African American. Women endorsed low levels of disordered eating on the EDE-PV, and the internal reliability was similar to previous reports.

Conclusion—These findings provide support for use of the EDE-PV to assess disordered eating among pregnant women with overweight and obesity.

Keywords

eating disorder examination; pregnancy; overweight; obesity

Introduction

The Eating Disorder Examination (EDE)¹ is a structured clinical interview used for assessing disordered eating. The EDE includes questions comprising four subscales of

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disordered eating attitudes and behaviors and documents frequencies of binge eating and compensatory episodes.² The EDE was developed for use with adults and validated in community² and disordered eating samples.³ The EDE since has been adapted for use among additional specialized populations.^{4,5} Because pregnancy represents a unique period in which eating attitudes and behaviors change,^{6–12} assessments of disordered eating among pregnant women need to be adapted to appropriately assess eating attitudes and behaviors associated with the prenatal period.

Previous efforts to use the EDE in pregnancy^{6,13,14} have altered the time frame of assessment to include the periods prior to and during pregnancy⁶ and incorporated questions to assess nausea, dietary aversions and cravings, and pica.⁶ However, previous studies have failed to include sufficient detail to allow for replication and to ensure that the adapted instruments are sound. Accordingly, the aim of this work is to describe specific adaptations made to a pregnancy version of the EDE (EDE-PV) and considerations for its use among a community sample of pregnant women with overweight and obesity as well as to explore the internal reliability of this adapted version.

Methods

Participants

Women ($N=129$) were included if they were aged ≥ 14 years, had a body mass index ≥ 25 kg/m², 12–20 weeks gestation, and carrying a singleton. Women diagnosed with type 1 diabetes or taking weight-affecting medications were excluded. Women reporting acute suicidal ideation or psychotic symptoms also were excluded and referred to appropriate care. Demographic information is presented in Table 1.

Procedures

Study procedures were approved by the study site's Institutional Review Board. Participants aged ≥ 18 years provided written informed consent prior to participation. Participants aged 14–17 years provided verbal assent and written informed consent was obtained from their parent or legal guardian. Women reported demographic information, height and weight were measured, and the four subscales of the EDE-PV were administered by trained clinicians. Adaptations made to the interview and considerations for interpreting responses are described below.

Adaptations to the EDE—Prior to the study, a team of clinicians with previous experience administering the EDE reviewed the interview for areas that may be interpreted differently during pregnancy. Three major modifications were made to create the EDE-PV. First, to assess disordered eating during and prior to pregnancy, three time periods were included: the standard period assessing the previous 28-days in addition to the 2-month period immediately preceding the past 28-days and the 3-month period prior to conception. Second, to distinguish eating attitudes and behaviors that are considered normative during pregnancy from those attributable to disordered eating, certain items, and the guidelines for rating them, were adapted. For example, when inquiring about the desire to have an empty stomach, the main probe was changed to convey that an empty stomach refers to lack of

food and not the baby in their “stomach.” Additionally, when assessing patterns of eating, the option to include additional snacking intended to reduce nausea associated with pregnancy was added. Third, two items were omitted due to lack of relevance in the context of pregnancy, including the previous diagnostic item assessing menstruation and the item from the shape concern subscale assessing the desire to have a flat stomach.

Considerations for Subscale Administration—Questions that may arise during the administration of the interview are highlighted below with potential solutions.

Dietary Restraint—Dietary restraint may change during pregnancy due to dietary restrictions associated with healthy fetal development and physician recommendations. Pregnant women may report actively avoiding specific foods or following definite rules about eating, such as refraining from consuming deli meats, soft cheeses, or caffeine. Additionally, women may avoid eating either for long periods of time or foods that trigger nausea. Thus, it is critical to differentiate the motivation for food avoidance or dietary rules as a desire to promote a healthy pregnancy (not representing dietary restraint) from the desire to exert control over calorie intake in an effort to lose or maintain weight (representing dietary restraint).

Eating Concern—Concerns about eating may occur during pregnancy as a result of appetite changes, the presence of physical conditions, or when following physician guidelines. For instance, women may follow eating guidelines recommended by their physicians and develop concerns or guilt about eating if they stray from these guidelines. In this case, the interviewer should determine if guilt is severe and indicative of having done something wrong (representing eating concern) or is simply the lesser feeling of regret (not representing eating concern).

Shape Concern—When assessing shape concerns, a thorough discussion is important to understand any potential concerns related to pregnancy. Women may report shape concerns due to their changing size throughout pregnancy, such as experiencing feelings of discomfort when seeing their own bodies or exposing parts of their bodies to others. Discomfort may stem from feeling that they do not yet appear to be pregnant but instead look to have gained weight, particularly during the early months of pregnancy. Feelings of fatness or regional fatness related to their changing shape and growing midsection may also develop, and it is important to assess the level of distress or discomfort associated with these feelings.

Vigilance about shape is another question with the potential for further discussion and clarification during pregnancy. Active monitoring of shape should not be confused with tracking body changes that occur throughout pregnancy, such as measuring one’s stomach or trying on maternity clothing. If endorsed, it is necessary to determine whether the monitoring is intrusive (representing shape concern) or if it is simply to document shape changes during pregnancy (not representing shape concern).

Weight Concern—Women may report being dissatisfied with their weight because of excessive or insufficient gestational weight gain and may be concerned about the subsequent implications on fetal development. Although women may be hesitant to suggest that they

want to weigh less or have a desire to lose weight during pregnancy, it is important to capture any weight concerns and distress about weight gain. Desired weight or interest in weight loss among pregnant women can be influenced by their current and increasing size rather than their views about their weight when not pregnant. If women are struggling to select a desired weight or indicate their feelings and attitudes about their weight, interviewers may find it useful to encourage them to focus on how they are thinking and feeling in the present moment and to document whether this is a result of pregnancy. Notably, when assessing how often respondents weigh themselves, the interviewer should clarify the purpose of weighing and exclude weights measured at physician visits.

Results

Interviewers using the EDE-PV were able to distinguish disordered eating attitudes and behaviors from those that were normative of pregnancy. Table 1 includes average scores for each EDE-PV subscale and internal reliabilities. Although a Cronbach's alpha could not be computed for the eating concern subscale due to excessive skewness,^{15,16} the remaining subscales had Cronbach's alphas ranging from 0.59 to 0.67.

Table 2 illustrates the adaptations summarized above with case examples. As shown, discussion was needed to ensure that women understood the scope of the questions being asked and to determine whether pregnancy affected their answers. Further probing typically was required by interviewers to determine if endorsed issues were due to pregnancy or disordered eating.

Discussion

This report is the first to discuss a modified version of the EDE for use with pregnant women. Our use of the EDE-PV among a community sample of pregnant women with overweight and obesity demonstrates the utility of distinguishing normative eating attitudes and behaviors related to pregnancy from disordered eating. Similar to other community samples of women with overweight and obesity,² women in our sample tended to report low levels of disordered eating attitudes and behaviors. The internal reliabilities for each subscale of the EDE-PV were comparable to previous psychometric reports of the EDE in community samples of non-pregnant women^{17,18}. However, it should be noted that the internal reliability of the shape concern subscale found on the EDE-PV may not be directly comparable to those reported by others due to the removal of one item. Although extensive psychometric assessment of the EDE-PV is necessary to determine the validity and reliability of the instrument and to confirm its factor structure, these preliminary findings suggest that the EDE-PV may be a reasonable instrument to assess disordered eating attitudes and behaviors among pregnant women.

Although our results support the internal reliability of this adapted interview among a community sample of pregnant women with overweight and obesity, future research is needed to determine the soundness of this instrument among more varied populations of pregnant women. In addition, given that disordered eating attitudes and behaviors may vary during the perinatal period, research to establish the test-retest reliability of the EDE-PV and

the appropriateness of its use in longitudinal studies assessing the course of disordered eating across pregnancy is needed.

The adaptations to the EDE described herein have been made as part of an ongoing program of research designed to assess eating behaviors and psychosocial factors in pregnant women with overweight and obesity. Given that this is the first presentation of data from this adapted version of the EDE, these results should be considered preliminary. Additional details beyond those provided in the manuscript on the wording of adapted questions and considerations for administering or scoring the EDE-PV are available from the corresponding author upon request.

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TABLE 1

Participant characteristics ($N=129$) and sub-scale scores for a pregnancy version of the Eating Disorder Examination (EDE-PV).

Characteristic	
Age in years, Mean $\pm$ SD	27.25 $\pm$ 5.48
Prepregnancy body mass index in kg/m ² , Mean $\pm$ SD	33.28 $\pm$ 6.64
Body mass index in kg/m ² , Mean $\pm$ SD	34.38 $\pm$ 6.98
Gestational weight gain in kg, Mean $\pm$ SD	6.76 $\pm$ 14.08
Weeks gestation, Mean $\pm$ SD	14.8 $\pm$ 2.15
% African American (n)	56 (72)
% Education < college degree (n)	79 (102)
% Income \$30,000 (n)	72 (93)
Subscale	
Dietary Restraint, Mean $\pm$ SD	0.27 $\pm$ 0.58
Eating Concern, Mean $\pm$ SD	0.08 $\pm$ 0.24
Shape Concern, Mean $\pm$ SD	1.02 $\pm$ 1.05
Weight Concern, Mean $\pm$ SD	0.87 $\pm$ 0.95
Global Score, Mean $\pm$ SD	0.56 $\pm$ 0.54

Notes. A Cronbach's alpha could not be computed for the eating concern subscale due to excessive skewness. Cronbach's alpha for the other subscales were: Dietary Restraint = 0.67; Shape Concern = 0.65; Weight Concern = 0.59; and Global Score = 0.65.

Illustration of specific adaptations made to and the administration of a pregnancy version of the Eating Disorder Examination (EDE-PV).

TABLE 2

Subscale	Original Question	Rating Considerations for EDE-PV	Participant Demographics	Quote	Decision/Rating
Dietary Restraint	“Over the past four weeks have you <i>tried</i> to avoid eating any foods which you like, whether or not you have succeeded?”	Determine if food avoidance or the formation of dietary rules are being practiced to promote a healthy pregnancy and/or reduce nausea verses to alter shape and/or weight.	17-year-old African American woman	Regarding food avoidance: “Salty stuff, like those chips. I should never have eaten them. They have too much salt. [The doctor] said I can have high blood pressure and stuff. And I’m trying to stop eating sweets, too, because of [gestational diabetes].”	Was not rated positively because food avoidance was due to issues related to health during pregnancy rather than for issues related to shape and/or weight.
Eating Concern	“Outside of the times when (refer to any objective and subjective bulimic episodes), over the past four weeks have you felt guilty after eating?”	Determine if concerns or guilt about eating are the result of changes in appetite, physical ailments, or physician recommendations for pregnancy and whether the participant is experiencing guilt or regret.	39-year-old Caucasian woman	Regarding feelings of guilt after eating: “There was a day that I remember I had a big lunch and I didn’t eat dinner that night, and I remember thinking, like, “Oh my gosh, the kid is not getting nutrients.”	Was not rated positively because the participant had retrospective feelings of regret and not guilt felt immediately after eating.
Shape Concern	“Over the past four weeks have you been dissatisfied with your overall shape (your figure)?”	Determine if concerns about shape are related to one’s changing size during pregnancy: either being too large or too small.	39-year-old Caucasian woman	Regarding dissatisfaction with shape (too large): “I feel very flabby now. I think that when people say, “I can’t tell you’re pregnant,” I think I automatically say, “That’s because I already <i>have</i> a belly.” But if I were thin, you’d be able to see that I have a little belly.”	Rated positively because the participant viewed her overall shape as too large, even while pregnant.
Weight Concern	“Over the past four weeks have you been dissatisfied with your weight (...the number on the scale)?” “Over the past four weeks, have you wanted to weigh less (again I am referring to the number on the scale)?”	Determine if concerns about weight are related to pregnancy changes: either gaining too much or too little. Probe for hesitation about wanting to lose weight or weigh less during pregnancy.	28-year-old bi-racial woman 31-year-old Hispanic woman	Regarding dissatisfaction with weight being too low: “When I first went to the doctor and they weighed me. I thought I weighed a lot more than that. [It was too low] on the scale. I just kept thinking, “Well geez, if I’m this big, how come I only weigh 160 pounds?” ...I feel like I should have weighed more.” Regarding fear of weight gain: “With how big I am now and then finding out that I was pregnant, I knew that I would gain more weight and I’m disgusted with my weight as is, so to have to gain more weight to [give nutrition] to the baby is [a fear].”	Rated for dissatisfaction with weight being too low because the participant endorsed overall dissatisfaction for her weight being too low at that point during pregnancy. Because the participant endorsed a fear of weight gain, even while pregnant, this was rated positively.