New research tool makes it easier to identify pregnant patients with eating disorders

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Although rapid screening tools exist to help doctors identify patients with eating disorders, none have been developed and verified for use with pregnant patients specifically. That's a problem because when pregnancy and disordered eating intersect, unique experiences can arise. A team of WVU researchers—led by Elizabeth Claydon, an assistant professor in the School of Public Health—is pursuing a solution. Credit: WVU / Aira Burkhart

At least 5% of pregnant women will experience an eating disorder during their pregnancies, yet no rapid screening tool exists to identify who they are.

Researchers with the West Virginia University School of Public Health and School of Medicine teamed up to make one. Their Prenatal Eating Behaviors Screening tool is poised to give clinicians a fast, accurate way to determine which of their pregnant patients may need follow-up care from an eating-disorder specialist.

The Archives of Women's Mental Health has published an article on their project.

"With eating disorders, there's just not that much time for individuals to wait to get help," said Elizabeth Claydon, the project leader and an assistant professor in the Department of Social and Behavioral Sciences. "If we prevent or treat eating disorders during pregnancy, not only can it help the mom, but it can also help the child resulting from that pregnancy if it's carried to term."

A pregnancy craving, or something else?

In general, rapid screening tools are useful for quickly identifying patients whose health or safety are at risk. For example, if you've checked into an emergency department, the triage nurse might have asked if you feel safe in your home. Questions like that are part of a domestic violence screener. But until now, no one had developed and verified a similar rapid screener for eating disorders among pregnant women.

So Claydon and her research partners developed a tool to fill that void. They started with a 25-question screener that prompted women to say how frequently they took certain actions—or felt certain

emotions—associated with eating disorders.

Claydon's earlier research into eating disorders during pregnancy helped to inform what the screener asked.

For instance, instead of asking women about their desire for a flat stomach—which is how conventional eating-disorder questionnaires phrase the question for non-pregnant populations—the team's new PEBS tool asked how much they wanted their stomach to feel hungry.

"Then there are some questions, that in the original questionnaire, ask about loss of control during eating," Claydon said. "We wanted to make sure we framed that as, 'So, did you experience a loss of control in overeating unrelated to pregnancy cravings?' We wanted to distinguish a loss of control due to an eating disorder from a loss of control due to a normal pregnancy craving."

In an additional innovation, the team didn't limit the screener's scope to anorexia and bulimia. They also included binge-eating disorder and "other specified feeding and eating disorders"—the two most common eating disorders.

'A fantastic tool'

To test how accurately the PEBS tool flagged patients for follow-up care, the team enlisted 190 pregnant women to answer the 25 questions and share information about their experience with eating disorders. They called this group of participants the "development sample."

Then the team looked for associations between how the participants answered the questions and whether they had ever been diagnosed with an eating disorder. Using that data as a guide, the team narrowed the PEBS tool down to just 12 questions.

"Recently, we've had to apply multiple screening questionnaires to our patients—depression, substance abuse, intimate partner violence, social issues—and we have limited time in the visits," said Omar Duenas Garcia, an associate professor in the Department of Obstetrics, Gynecology and Reproductive Sciences and member of the research team.

The team also included Christa Lilly, an associate professor in the Department of Epidemiology and Biostatistics, and Jordan Ceglar, an undergraduate student focusing on public health.

"Visits are getting shorter and shorter as we have to examine the patients, come up with a plan and then add the screening tools," said Duenas Garcia, who's also an OB-GYN with WVU Medicine. "Creating short instruments that are not causing a burden on either the patients or the providers is imperative."

The researchers found that women who scored at least 39 points on the shortened screener were about 16 times more likely to have an eating-disorder diagnosis than women who scored lower.

To confirm these results, the team ran another round of testing with 167 other participants who made up their "validation sample." The validation testing bore out the initial findings

"Statistically, it looks like a fantastic tool, and it's nice to see those numbers play out for the validation dataset," said Lilly, a biostatistician. "For both the development and validation datasets, over 70% of women who reported having an eating disorder met that cutoff of 39. That's a measure of the screener's sensitivity. And over 80% of women who did not report having an eating disorder were correctly excluded when using that cutoff score. That's a measure of the screener's specificity."

How patients score on the PEBS tool can show healthcare providers which ones they should refer to specialists for assessment and intervention.

In the future, the research team wants to make it easier for providers to follow through on those referrals.

They're launching a feasibility study that takes into account the real-world experiences of clinicians and pregnant patients as they use the screener.

They also want to know how frequently follow-up testing confirms that pregnant women do, in fact, have eating disorders if the screener flags them.

And they plan to track how often women identified as having an eating disorder—or being at risk of one—are actually referred for more in-depth evaluation.

"I have a clinician information packet that I'll send out with the measure, too," Claydon said. "It provides all of those referrals specific to West Virginia, which is where we'll roll it out first. I don't want to provide a screening tool without letting the professionals know what to do next."

A precarious state

Rolling out the PEBS tool in West Virginia first may be particularly beneficial.

The National Eating Disorders Association states that if a woman has an eating disorder during pregnancy, her baby has an increased risk of preterm birth and low birthweight, among other complications. Yet West Virginia already has one of the highest preterm-birth rates in the nation

and a low-birthweight rate that exceeds the national average.

"In West Virginia, we also have a high prevalence of substance abuse disorders," Duenas Garcia said. "Some studies show a correlation between those conditions. In our practice, we see different spectrums of eating disorders. We have a high prevalence of elevated-BMI patients but certainly tons of poverty and poor access to healthy options. Screening these patients may help us to provide them with the appropriate tools to mitigate any potential poor outcomes."

Even pregnant women themselves are more likely to face health problems—like dehydration, poor nutrition, gestational diabetes and cardiac irregularities—if they engage in disordered eating.

Given all this, why don't pregnant women with eating disorders simply set their feelings aside and eat better—for the sake of their baby's health, and their own?

"For pregnant women who are unable to recover or who relapse, it's not that they didn't try or didn't love their children enough," Claydon said. "It's that they are battling constantly against diseases that contradict the current state they find themselves in. Their bodies are changing shape and size, they need to eat more than they feel comfortable with, and they feel a greater loss of control when eating."

During Claydon's previous research, some women in her study talked about their inability to stop their disordered eating behaviors despite wanting and loving their babies very much.

"This cognitive dissonance creates a sense of shame around the subject," Claydon said, "which makes seeking and receiving help even more difficult."

More information: Elizabeth A. Claydon et al, Development and validation across trimester of the Prenatal Eating Behaviors Screening tool, *Archives of Women's Mental Health* (2022). DOI: 10.1007/s00737-022-01230-y

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