

The Intuitive Eating Scale-3 (IES-3)

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Keywords: body-related behaviors, positive body image, adults, adolescents

Introduction

The 12-item Intuitive Eating Scale-3 (IES-3; Tylka et al., 2024) assesses *intuitive eating*, or being connected to internal hunger, satiety, and appetitive cues and flexibly using these cues to determine when, what, and how much to eat (Tribole & Resch, 2020). The IES-3 assesses four domains of intuitive eating: *Unconditional Permission to Eat* (UPE; eating pleasurable foods without shame, judgment, or guilt), *Reliance on Hunger and Satiety Cues* (RHSC; using internal hunger and satiety cues to guide eating behavior), *Eating for Physical Rather than Emotional Reasons* (EPR; eating to satisfy physical hunger rather than cope with emotional fluctuations or distress), and *Body-Food Choice Congruence* (B-FCC; selecting foods that help the body feel well). The IES (Tylka, 2006) and the revised IES-2 (Tylka & Kroon Van Diest, 2013) are its predecessors; the IES-3 represents the third iteration in this line of measures. While the three IES versions are not direct measures of body image per se, they are strongly related to body image, as caring for the body is consistent with trusting and following its hunger and satiety cues.

Development

In 1995, Tribole and Resch, two registered dietitians, identified intuitive eating as an adaptive eating approach that could help individuals “break free” from chronic dieting and disordered eating, and thereby reduce distress prompted by maladaptive eating. They developed 10 intuitive eating principles. Two principles represent cognitive restructuring to reject “diet culture” (i.e., Reject the Diet Mentality, Challenge the Food Police), six represent intuitive eating-related behaviors (i.e., Make Peace with Food, Discover the Satisfaction Factor, Honor Your Hunger, Feel Your Fullness, Cope with Emotions Without Using Food, Honor Your Health—Gentle Nutrition), one represents body acceptance (i.e., Respect Your Body), and one represents mindful movement (i.e., Exercise—Feel the Difference).

In 2006, Tylka aimed to empirically examine intuitive eating-related behaviors and developed the IES to facilitate this research. Three subscales were constructed based on five of the six principles representing intuitive eating-related behaviors. UPE combined the Make Peace with Food and Discover the Satisfaction Factor principles, RHSC combined the Honor Your Hunger and Feel Your Fullness principles, and EPR assessed the Cope with Emotions Without Using Food. In 2013, when revising the IES to the IES-2, Tylka and Kroon Van Diest added a B-FCC subscale to assess the Honor Your Health—Gentle Nutrition principle. They also introduced new items that more concisely reflected the intuitive eating construct. For over 10 years, the IES-2 was widely used and translated into various languages. Although its psychometric properties and ecological validity were largely upheld, there were lingering concerns. First, the IES-2 contained a mixture of positively and negatively worded items. This design choice creates psychometric problems (e.g., positively and negatively worded items would load on different factors), and negatively worded items deviate more from the theoretical construct being measured. Second, the IES-2's 4-factor structure failed to replicate in multiple clinical and nonclinical samples. Third, the IES-2 did not instruct participants how they should respond to its items when they restricted foods based on allergies, intolerances, other medical issues, being vegetarian or vegan, religious observances, or food insecurity, which may impact participant scores. Fourth, at 23 items, it was rather lengthy.

These concerns noted, Tylka et al. (2024) constructed the IES-3, including new instructions and a new, condensed set of positively worded items that more clearly aligned with the four principles of intuitive eating that accounted for all intuitive eating-related behaviors described by Tribole and Resch (1995, 2020). Within three samples, Tylka et al. explored the IES-3's factor structure, obtained reliability and validity estimates, and concluded that the IES-3 contained 12 items (three items per factor), had a bifactor structure, and accrued considerable reliability and validity evidence.

Administration and Timing

The IES-3 can be administered online or in-person; it can be completed within 2-3 minutes.

While it has been examined in adults, it has yet to be examined in adolescents or children; modifications likely are needed for children given their developmental level.

Factor Structure and Invariance

In accordance with intuitive eating theory, Tylka et al. (2024) hypothesized a bifactor model containing a latent global construct (G-factor, underlying responses to all IES-3 items) and four latent specific factors (S-factors, underlying responses to the specific intuitive eating domains [UPE, EPR, RHSC, B-FCC] not explained by the G-factor). Among samples of U.S. community adults, they found that a bifactor model using exploratory structural equation modeling (bifactor-ESEM) provided the best fit to the data. The G-factor was best represented by RHSC items, followed by EPR items, and then UPE and B-FCC items. UPE, EPR, and B-FCC accrued support as distinct S-factors in the presence or absence of a G-factor. While RHSC accrued psychometric support when examined independently of a G-factor, its variance was mostly absorbed when a G-factor was estimated.

Additionally, Tylka et al. (2024) assessed the invariance and measurement bias (differential item functioning) of the IES-3 across gender (women, men), age, and body mass index (BMI). The IES-3 was invariant across gender and showed lack of measurement bias across gender, age, and BMI. Therefore, the IES-3 functions in the same way across these demographic characteristics.

When comparing latent means, women had significantly lower IES-3 scores than men on the G-factor and UPE, EPR, and B-FCC S-factors. Older participants had higher latent scores on the EPR, RHSC, and B-FCC S-factors. The G- and all S-factors were associated with lower BMI. This preliminary evidence suggested that intuitive eating as measured by the IES-3 can be meaningfully compared between women and men, adult age groups, and BMI levels.

Evidence of Reliability

The internal consistency reliability and 3-week test-retest reliability of the IES-3's latent G-factor and latent UPE, EPR, and B-FCC S-factors were supported in the validation study (Tylka et al., 2024).

McDonald's omega estimates were around .95 for the latent G-factor and the mid .90s for the latent UPE S-factor, mid-to-high .70s for the latent EPR S-factor, and low-to-mid .80s for the latent B-FCC S-factor; estimates were lower (mid .50s to mid .60s) for the latent RHSC S-factor. Of note, when the latent G-factor was not estimated in an ESEM, omega for the latent RHSC S-factor was acceptable (.830), as was all other S-factors. For observed scores, McDonald's estimates were around .87 for the total IES-3, low .90s for UPE, mid-to-high .80s for EPR, mid 80s for RHSC, and low .80s for B-FCC.

Test-retest reliability was upheld via measurement invariance analyses for the latent IES-3 G-factor (.776) and the latent UPE (.762), EPR (.704), and B-FCC (.833) S-factors, but not the latent RHSC S-factor (.173). Intra-class correlation estimates supported the stability of the observed total IES-3 score (.841), as well as the observed subscales: UPE (.723), EPR (.784), RHSC (.741), and B-FCC (.723).

Evidence of Validity

Much validity support (convergent, discriminant, and incremental) has been accrued for the IES and IES-2 (for a meta-analysis, see Linardon et al., 2021). Similarly, Tylka et al. (2024) found strong evidence for the IES-3's validity. The IES-3 (latent and observed scores) is positively associated with other positive body image indices (body appreciation, functionality appreciation, body image flexibility, body acceptance by others) and general well-being (e.g., self-compassion, self-esteem). Further, the IES-3 is inversely associated with body dissatisfaction, eating disorder symptomatology, and psychological distress. Importantly, the IES-3 is associated with positive embodiment, self-compassion, self-esteem, and life satisfaction even after adjusting for eating disorder symptomatology and dietary restraint. It is only negligibly related to impression management.

Scale Instructions and Items

Instructions: "The following items ask about your eating habits. Specifically, we are interested in your **approach to eating foods** that are **available to you**: meaning, foods that you have access to, can afford, and don't have a medical or value-based reason for avoiding (such as insulin resistance, food sensitivities, food intolerance, food allergies, religious observances, being vegetarian or vegan). Please read each item carefully and indicate the response that best matches your eating habits in general."

1. I give myself the freedom to eat foods that I enjoy the taste of, without judgment.
2. I allow myself to eat foods that taste good, without guilt.
3. I eat foods that give me pleasure, without feeling ashamed about it.
4. I eat when I am physically hungry more so than when I am feeling distressed.
5. I generally eat to provide nourishment and fuel for my body more than to relieve emotional distress.
6. My main ways of coping with distressing thoughts and feelings don't involve food.
7. I generally rely on my body's hunger signals to tell me when to eat.
8. I generally rely on signals that my body is comfortably full to tell me when to stop eating.
9. I pay attention to my body to tell me when, what, and how much to eat.
10. I prefer foods that give me lasting energy.
11. I choose foods that help my body perform the best it can, both physically and mentally.
12. I eat foods that feel good in my body.

Response Scale

Strongly Disagree = 1, Disagree = 2, Neutral = 3, Agree = 4, Strongly Agree = 5.

Scoring

While the calculation of latent scores is preferred (via bifactor-ESEM), observed/manifest scores can also be calculated. The total score is calculated by averaging responses to all 12 items. The specific factors are calculated by averaging responses to Items 1, 2, 3 to calculate UPE; Items 4, 5, 6 to calculate EPR; Items 7, 8, 9 to calculate RHSC; and Items 10, 11, 12 to calculate B-FCC.

For those who wish to use latent scores in a bifactor-ESEM, the G-factor is recommended for interpretation rather than the individual S-factors, as a portion of the item variance that loaded onto the G-factor would be missing if only S-factors were considered (Tylka et al., 2024). Another option is considering both the latent G-factor and individual UPE, EPR, and B-FCC S-factors, although limited support was found for the usefulness of the S-factors in addition to the G-factor. It is also acceptable to calculate only latent S-factors and no G-factor (ESEM); in this case, the RHSC S-factor can be interpreted.

There are no clinical cut-offs to determine high and low intuitive eating. Categorizing participant responses into groups (e.g., high intuitive eating, low intuitive eating) unnecessarily restricts variance. For descriptive purposes only, users may classify those with IES-3 scores between 4-5 with high, 3-3.99 with moderate, and below 3 with low intuitive eating.

Abbreviations

There are no abbreviations for the IES-3. The IES-3 represents an abbreviated version (12 items) compared to its predecessors (21 and 23 items for the IES and IES-2, respectively).

Cost

There is no cost associated with the use of the IES-3; the measure is free to use in any setting.

Permissions

Scholars (e.g., researchers, faculty, students, clinicians) have permission to use the IES-3 if they do not modify any item or change the nature of the scale (e.g., shorten it). For scholars who wish to modify the individual scale items or the items composing the scale, they should seek permission from Tracy Tylka (tylka.2@osu.edu) and provide a rationale. Scholars who wish to translate the IES-3 into another language have permission to do so and are encouraged to follow best practices for scale translation and validation (see Swami & Barron, 2019; Swami, Todd, & Barron, 2021).

Copyright

Authors wishing to display the items of the IES-3 in the format originally published in the article should seek permission via

<https://www.elsevier.com/authors/permissions-request/journal-permissions-form>.

Additional Information for Users

If you have questions about the IES-3, contact Tracy L. Tylka at tylka.2@osu.edu.

When reporting on the IES-3, please use the Tylka et al. (2024) reference. When reporting on a future translation, please use both the Tylka et al. (2024) reference and the reference associated with the specific translation.

I recommend using the IES-3 rather than the original IES or IES-2, as the IES-3 is a better representation of the intuitive eating construct (see Tylka et al., 2024).

Translations Available

Due to the IES-3 being recently developed, no published translations of the IES-3 exist to date,

although translation and validation studies of the IES-3 are underway with multiple research groups. The IES-2 has been translated into multiple languages, but researchers are encouraged to translate, use, and validate the IES-3 as it represents an improvement over its predecessors.

References

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