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# What is Intuitive Eating?: A Review

Didem Bostan Bendaş<sup>1,a,\*</sup>, Çiçek Hocaoğlu<sup>2,b</sup>

<sup>1</sup>Sivas Numune Hospital, Psychiatry Clinic, Sivas, Turkiye

<sup>2</sup>Rize Recep Tayyip Erdoğan University, Faculty of Medicine, Department of Psychiatry, Rize, Turkiye \*Corresponding Author

Founded: 2004

Review	ABSTRACT
History Received: 24/02/2024 Accepted: 27/03/2024	Eating-related behaviors are affected by many factors such as genetics, environment, emotional state, sociodemographic characteristics, religious and cultural beliefs, media, and body perception. As stated, eating behavior, which is affected by many factors, appears to be closely related to emotional factors such as excitement, boredom, happiness and stress. Nowadays, the importance of developing intuitive eating skills in ensuring the formation of healthy eating behaviors instead of unhealthy eating behaviors is emphasized and the use of intuitive eating as an intervention technique is considered important. It is thought that intuitive eating can be an alternative to calorie-restricted diets in the prevention, treatment and body weight management of eating disorders and can also be used together with traditional methods. In this review, literature information about the concept of intuitive eating and its effect on body weight and eating disorders will be presented.

Keywords: Eating behavior, Intuitive eating, Obesity, Eating disorders

# Sezgisel Yeme Nedir?: Bir Gözden Geçirme

ÖZET

sunulacaktır.

#### Derleme

Süreç

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Anahtar Kelimeler: Yeme davranışı, Sezgisel yeme, Obezite, Yeme bozuklukları

° 🔕 didem1566@hotmail.com

0009-0008-5651-6790

🛚 😒 cicekh@gmail.com

Yeme ile ilgili davranışlar genetik, çevre, duygusal durum, sosyodemografik özellikler, dini ve kültürel

inançlar, medya, beden algısı gibi pek çok faktörden etkilenmektedir. Belirtildiği gibi birçok faktörden etkilenen yeme davranışının heyecan, can sıkıntısı, mutluluk, stres gibi duygusal faktörlerle yakından ilişkili

olduğu görülmektedir. Günümüzde sağlıksız yeme davranışlarının yerine sağlıklı yeme davranışlarının

oluşmasını sağlamada sezgisel yeme becerisinin gelişmesinin önemi üzerinde durulmakta ve sezgisel yemenin müdahale tekniği olarak kullanılması önemsenmektedir. Sezgisel yemenin, yeme bozukluklarının önlenmesinde, tedavisinde ve vücut ağırlığı yönetiminde kalori kısıtlı diyetlerin alternatifi olabileceği, ayrıca geleneksel yöntemlerle birlikte kullanılabileceği düşünülmektedir. Bu derlemede, sezgisel yeme kavramı ve bu kavramın vücut ağırlığı ve yeme bozuklukları üzerindeki etkisi hakkında literatür bilgileri

0000-0001-6613-4317

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# Introduction

Eating behaviors and habits begin to develop at an early age. During this process, the relationship between eating behavior and emotions has become a subject of interest for those working in this field. Eating behavior, essential for life, can lead to problems such as eating less or more than necessary or eating disorders.<sup>1</sup> Inadequate coping mechanisms for daily stress can lead to unhealthy eating habits. It is understood from this that an individual's psychological traits can influence their eating behaviors. The influence of psychological traits on eating behavior is not only observed in obese or overweight individuals but also in those perceived to have an ideal body weight. Unhealthy eating habits can also emerge in those who follow prolonged and inappropriate diets.<sup>1-3</sup> In recent years, there has been discussion about certain eating behaviors to be aware of and manage changes in food consumption related to individuals' emotions.<sup>4</sup> It is emphasized that developing intuitive eating skills is important for changing eating attitudes and behaviors towards health, especially in weight control and the treatment of eating disorders.<sup>5</sup> This review will present literature information on the concept of intuitive eating and its impact on body weight and eating disorders.

## **Definition and History**

Intuitive eating is defined as a style of eating that is not driven by emotional desires but by listening to and adapting to the physical signals of hunger and satiety, which are natural responses of the body.<sup>6,7</sup> Intuitive eating emerges as an eating attitude where the individual can stop eating after consuming enough food to satisfy physiological hunger.8,9 The concept of intuitive eating was defined by Tribole and Resch in 1995.<sup>10</sup> Starting to eat intuitively is a challenging process that requires replacing old dietary habits with new ones.<sup>11</sup> Innate body awareness is hindered by diets, being forced to finish one's plate in childhood, eating because 'it is dinner time', restaurants serving overly large portions, and advertisements that prompt eating irrespective of hunger. The main principles of intuitive eating are to reacquire 'body wisdom'; when this occurs, a person typically eats when hungry and stops when full. Except for certain health conditions (e.g., diabetes, food allergies), there are no restrictions on the types of food you can eat.<sup>6,8,9,12,13</sup> The concept of intuitive eating is based on three fundamental approaches: 1. Unconditional permission to eat, 2. Eating based on physical rather than emotional reasons, 3. Eating in response to physical hunger and satiety signals.<sup>14,15</sup> According to Tribole and Resch, intuitive eating can be explained with 10 principles. These 10 principles include rejecting the diet mentality, challenging the food police, making peace with food, honoring one's hunger, feeling satiety, dealing with emotions without using food, discovering the satisfaction factor, respecting your body, feeling the difference with exercise, and honoring your health with gentle nutrition. These principles aim to

abandon old eating attitudes, dismantle dietary taboos, and rediscover the innate skills of intuitive eating.<sup>10,16</sup> Studies have shown that intuitive eating improves cholesterol levels, blood pressure, and insulin sensitivity.<sup>17-19</sup>

## **Diagnostic Evaluation**

The behavior of intuitive eating is identified using the Intuitive Eating Scale developed to assess adaptive eating attitudes as an alternative to maladaptive eating behaviors.<sup>6</sup> The first Intuitive Eating Scale was developed by Hawks et al. in 2004.<sup>16</sup> It was revisited by Tylka in 2006,<sup>6</sup> and in 2013, Tylka and Kroon Van Diest revised the scale to develop the Intuitive Eating Scale-2 (IES-2).<sup>10</sup> This scale comprises twenty-three items and four subscales: (i) eating in response to physical rather than emotional triggers, (ii) unconditional permission to eat, (iii) reliance on hunger and satiety cues, and (iv) body-food choice congruence. The scale is scored according to a 5-point Likert scale (1=strongly disagree, 5=strongly agree). Higher scores indicate a higher propensity for intuitive eating.<sup>15</sup> The Turkish adaptation of the scale, along with its validity and reliability, was conducted by Bas et al. in 2017.<sup>20</sup>

# The Relationship Between Intuitive Eating and Obesity

Obesity, whose prevalence is increasing worldwide, is associated with various factors such as age, gender, physical activity, food intake, and eating behavior.<sup>21</sup> Especially today, individuals' eating behaviors play a significant role in the development and prevention of obesity and related diseases.<sup>21,22</sup> The tendency to consume high-calorie and high-fat foods, significant in the development of obesity, increases among individuals with emotional problems.<sup>23</sup> Known treatments for obesity typically focus on interventions that restrict calories and increase physical activity.<sup>24</sup> Recently, certain eating behaviors have been emphasized to be aware of and manage changes in food consumption related to individuals' emotions. Intuitive eating is one of the eating behaviors highlighted in the prevention of obesity.<sup>4</sup> Due to its focus on physical hunger and providing cues on the quantity of food to be consumed, intuitive eating behavior is reported to be negatively associated with body weight and body mass index (BMI), suggesting it could contribute to obesity prevention and treatment.<sup>25,26</sup> In the 1990s, intuitive eating became a new treatment paradigm for obesity in the United States.<sup>8</sup> Evidence suggests that mindfulness-based eating intervention can lead to significant changes in weight, eating behavior, and psychological distress in obese individuals.<sup>12</sup> While traditional dieting may initially lead to weight loss followed by weight gain, evidence also suggests that intuitive eating interventions can support weight maintenance.<sup>27-32</sup> Moreover, completing an intuitive eating program can also result in weight loss.<sup>33</sup> When

exploring the effect of intuitive eating on environmental factors like portion size, it was found that individuals with higher levels of intuitive eating consumed less food, and portion sizes decreased.<sup>34</sup> In various studies investigating the relationship between intuitive eating and BMI, it was found that individuals with a normal BMI had higher intuitive eating scores compared to those who were overweight or obese.<sup>35-37</sup> Among young adults, an inverse relationship between BMI and intuitive eating has been demonstrated.<sup>38,39</sup> Another study found a strong association between eating in response to hunger and satiety cues and lower BMI in middle-aged women, partially influencing the frequency of binge eating.<sup>40</sup> Other studies also demonstrate the association between intuitive eating and a reduction in body weight.<sup>9,41-44</sup> In a study aimed at evaluating the relationship between intuitive eating behaviors among adults in relation to obesity-associated disease risk and gender through anthropometric measurements, a negative correlation was found between IES-2 scores and body weight, BMI, waist-to-height ratio, and waist-to-hip ratio.45 Intuitive eating is negatively correlated with BMI in cross-sectional studies.<sup>10,33,41-47</sup> Individuals with a high propensity for intuitive eating showed lower BMI, higher high-density lipoprotein (HDL) cholesterol, lower triglycerides, and lower cardiovascular risk compared to individuals with a low propensity for intuitive eating.<sup>46</sup> A study investigating how postmenopausal women classified as overweight or obese experienced the intuitive eating process and the barriers and facilitators they encountered in their daily lives showed that, despite being challenging to implement, the intuitive eating approach was generally well received by participants.53 In the NutriNet-Santé cohort, involving a total of 11,774 men and 40,389 women aged  $\geq$ 18, levels of intuitive eating were collected using the validated French version of IES-2. Higher intuitive eating scores were strongly associated with lower rates of overweight and obesity in both men and women.<sup>26</sup> In contrast, a 6-week study evaluating the anthropometric measurements of obese adults using calorie restriction and intuitive eating to achieve weight loss found that the calorie restriction approach was superior to intuitive eating for achieving weight loss, with the calorie restriction group losing significantly more weight. Additionally, some participants in the intuitive eating group began to regain weight during the study.<sup>54</sup>

# The Relationship Between Intuitive Eating and Eating Disorders

Using diets as a tool for weight loss is common among college students. It has been found that female undergraduate students engage in disordered eating behaviors such as unhealthy weight control methods throughout college. A study conducted on 638 college students found that 22% ate according to weight loss diets, 3% fasted or took diet pills, 2% chewed and spit out their food or took laxatives, and 1% used diuretics.<sup>55</sup> Another study found that a significant portion of the

college population engaged in excessive exercise and binge eating, with the desire to lose weight being the strongest predictor of disordered eating.<sup>56</sup> Cognitions related to restricting calorie intake with the intent to manipulate body weight can increase the risk of developing negative psychological effects such as eating disorders, obsessive concern about weight and body shape in high-risk individuals.<sup>57-61</sup> There is limited research on intuitive eating among individuals with eating disorders. Intuitive eating is negatively associated with disordered eating behaviors in healthy adolescents and adults.<sup>62</sup> Intuitive eating is associated with a more positive body image, more positive emotions, and consequently, a lower risk of eating disorders.<sup>63</sup> It also shows a negative correlation with the adoption of thinness ideals and body dissatisfaction.<sup>6</sup> Individuals with intuitive eating skills tend to exhibit behaviors leading to weight gain to a lesser extent compared to individuals with lower intuitive eating skills.8 Intuitive eating is considered a valuable intervention target for improving psychological health and reducing disordered eating behaviors, especially binge eating.64 It has been found that women with eating disorders such as anorexia nervosa, bulimia nervosa, and binge eating disorder have significantly lower scores on the full scale of intuitive eating compared to those without an eating disorder diagnosis.<sup>65</sup> A study exploring the role of intuitive eating in the treatment and recovery of eating disorders found that women who showed full recovery had significantly higher intuitive eating scores compared to those with partial recovery or ongoing eating disorders, and their scores were not different from healthy controls.<sup>66</sup> While intuitive eating is associated with greater weight stability, rigid and flexible control are linked to greater weight variability.<sup>67</sup> Body appreciation has been identified as a protective factor in the development of eating disorders.<sup>68</sup> and is a component of positive body image focusing on respecting, accepting, endorsing, and thinking positively about one's body.<sup>69</sup> Interventions based on physical acceptance and intuition have been shown to effectively reduce the risk of developing eating disorders, excessive weight loss, dietary restrictions, and the internalization of thoughts about psychological disorders.<sup>70</sup> Intuitive eating is a component of body acceptance interventions designed for women with high body weight and symptoms of eating disorders; these women stabilized their weight and reduced symptoms of eating disorders, and improved body image and metabolic condition after the intervention and at follow-up.<sup>27,71</sup> A study investigating the impact of a five-week intuitive eating intervention on dietary restraint, body appreciation, and intuitive eating among female undergraduate students provided preliminary data suggesting that intuitive eating intervention could help mitigate disordered eating risk factors by reducing dietary restraint and increasing intuitive eating.72 A survey revealed that most Chinese female university students perceived low weight as ideal and were inclined to adopt strict dieting rules, thereby increasing the risks of body dissatisfaction and eating disorders.<sup>73</sup> In a study where 66

women in China participated in an 8-week online and faceto-face intuitive eating intervention consisting of eight modules, evaluating their eating behaviors, symptoms of eating disorders, intuitive eating, and eating flexibility, significant effects of the intervention were found on both groups, promoting positive body image and intuitive eating, and reducing negative body image and disordered eating behaviors.<sup>74</sup> A 10-week intuitive eating and mindfulness training intervention conducted with 93 university students and staff in the United States increased participants' body appreciation and decreased the likelihood of problematic eating behaviors.<sup>75</sup> In a study conducted in a residential treatment center for women receiving treatment for eating disorders, the effects of an intuitive eating intervention were explored, and it was found that intuitive eating scores significantly increased for all diagnosed eating disorders studied. At discharge, higher intuitive eating scores were associated with better clinical outcomes, including fewer symptoms of eating disorders, less body image concerns, and psychological symptoms.<sup>76</sup> A 10-week intervention study following the 10 core principles of intuitive eating, involving 61 participants, observed that participants moved away from the concept of 'dieting' by the end of the program, indicating that intuitive eating interventions could be beneficial in treating individuals with binge eating disorder.<sup>31</sup> Programs supporting intuitive eating have been stated to reduce the frequency of overeating or binge eating and contribute to the development of healthy eating behaviors.<sup>14</sup> In a systematic review of 20 different studies on interventions promoting intuitive eating, it was found that intuitive eating interventions reduced binge eating and led to better responses to hunger and satiety cues.44 Another study observed a strong protective effect of intuitive eating against binge eating. An initial higher score in intuitive eating was associated with a 74% lower likelihood of binge eating at follow-up, and an increase of one point in intuitive eating scores during follow-ups was associated with a 71% lower likelihood of binge eating.<sup>64</sup> A study examining the extent to which obese individuals differ from those of normal weight and overweight in emotional and addiction-like eating behaviors reported that the two groups with higher BMI indicated higher levels of depressive mood, ate more in response to negative emotions but less intuitively, and exhibited more severe and/or frequent symptoms of addiction-like eating behaviors compared to normalweight individuals.<sup>77</sup> A study with 200 women aged 60-75 aiming to explore the relationships between body image, intuitive eating, and eating showed that higher scores of intuitive eating were associated with lower restriction, lower eating concern, lower body concern, fewer depressive symptoms, and lower BMI. An indirect relationship emerged between BMI and intuitive eating through concerns about weight and shape, suggesting that preoccupation with appearance might impede the practice of intuitive eating. These findings suggest that intuitive eating is associated with positive outcomes among older women and could be a valuable target for

interventions designed to promote healthy aging.<sup>78</sup> Overall, intuitive eating is inversely related to symptoms of eating disorders.<sup>79,80</sup>

# Conclusion

Intuitive eating appears to be significant both in the management of body weight and in the treatment and prevention of eating disorders. Interventions based on intuitive eating can be used alongside other methods for weight management and the prevention and treatment of eating disorders. Such emerging therapeutic approaches are thought to hold promise, especially for the positive change in eating behaviors, including weight management and the treatment of eating disorders. Further comprehensive studies in this field are needed.

## **Conflict of Interest**

The authors declare no conflict of interest.

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## References

- 1. Canetti L, Bachar E, Berry EM. Food and emotion. Behav Processes. 2002; 60(2):157-164.
- Chaput JP, Leblanc C, Perusse L, Despres JP, Bouchard C, Tremblay A. Risk factors for adult overweight and obesity in the Quebec Family Study: have we been barking up the wrong tree? Obesity (Silver Spring), 2009; 17(10):1964-70.
- Wardle J, Steptoe A, Oliver G, Lipsey Z. Stress, dietary restraint and food intake. J Psychosom Res. 2000; 48(2): 195-202.
- Smith JM, Serier KN, Belon KE, Sebastian RM, Smith JE. Evaluation of the relationships between dietary restraint, emotional eating, and intuitive eating moderated by sex. Appetite. 2020 Dec 1;155:104817.
- Köse G, Tayfur M, Birincioğlu İ, Dönmez A. Adaptation Study of the Mindful Eating Questiionnare (MEQ) into Turkish. Journal of Cognitive-Behavioral Psychotherapy and Research. 2016; 5(3):125-134.
- Tylka T. Development and psychometric evaluation of a measure of intuitive eating. Journal of Counseling Psychology. 2006; 53(2):226-40.
- 7. Tribole E, Resch E. Intuitive Eating: A Recovery Book for the Chronic Dieter: Rediscover the Pleasures of Eating and Rebuild Your Body Image. 1995.
- Gast J, Hawks SR. Weight Loss Education: The Challenge of a New Paradigm. Health Education & Behavior. 1998; 25(4): 464 -473.
- Van Dyke N, Drinkwater EJ. Relationships between intuitive eating and health indicators: literature review. Public Health Nutr. 2014; 17(8):1757-66.
- Tribole E, Resch E. Intuitive eating: A revoutionary program that works. 3rd edition, N.Y.: St. Martin's Press, New York 2012.
- Bacon L, Aphramor L. Weight science: evaluating the evidence for a paradigm shift. Nutr J. 2011 Jan 24;10:9. doi: 10.1186/1475-2891-10-9. Erratum in: Nutr J. 2011;10:69.

- Dalen J, Smith BW, Shelley BM, Sloan AL, Leahigh L, Begay D. Pilot study: Mindful Eating and Living (MEAL): weight, eating behavior, and psychological outcomes associated with a mindfulness-based intervention for people with obesity. Complement Ther Med. 2010 Dec;18(6):260-4.
- Kroon Van Diest AM, Tylka TL. The Caregiver Eating Messages Scale: Development and psychometric investigation. Body Image. 2010 Sep;7(4):317-26.
- Akay GG. Yeme Bozukluklarında Fiziksel Açlığı Duygusal Açlıktan Ayırt Edebilme. Turkiye Klinikleri J Psychol-Special Topics.2016;1(2):17-22.
- Tylka TL, Kroon Van Diest AM. The Intuitive Eating Scale-2: item refinement and psychometric evaluation with college women and men. J Couns Psychol. 2013; 60(1):137-53.
- Hawks S, Merrill RM, Madanat HN. The Intuitive Eating Scale: Development and Preliminary Validation. American Journal of Health Education. 2004; 35(2):90-99.
- Pereira RA, Alvarenga MDS, de Andrade LS, Teixeira RR, Teixeira PC, da Silva WR, Cuppari L. Effect of a Nutritional Behavioral Intervention on Intuitive Eating in Overweight Women With Chronic Kidney Disease. J Ren Nutr. 2023 Mar;33(2):289-297.
- Belon KE, Serier KN, VanderJagt H, Smith JE. What Is Healthy Eating? Exploring Profiles of Intuitive Eating and Nutritionally Healthy Eating in College Women. Am J Health Promot. 2022 Jun;36(5):823-833.
- Hayashi LC, Benasi G, St-Onge MP, Aggarwal B. Intuitive and mindful eating to improve physiological health parameters: a short narrative review of intervention studies. J Complement Integr Med. 2021 Dec 16;20(3):537-547.
- Bas M, Karaca KE, Saglam D, et al. Turkish version of the Intuitive Eating Scale-2: Validity and reliability among university students. Appetite. 2017; 114:391-397.
- Lazarevich I, Irigoyen Camacho ME, Velázquez-Alva MDC, Zepeda Zepeda M. Relationship among obesity, depression, and emotional eating in young adults. Appetite. 2016 Dec 1;107:639-644.
- 22. Joint WHO/FAO Expert Consultation on Diet, Nutrition and the Prevention of Chronic Diseases (2002) Diet, Nutrition and the Prevention of Chronic Diseases: Report of a Joint WHO/FAO Expert Consultation, Geneva. Geneva, Switzerland: World Health Organization.
- Özkan N, Bilici S. Are anthropometric measurements an indicator of intuitive and mindful eating? Eat Weight Disord. 2021 Mar;26(2):639-648.
- Jensen MD, Ryan DH, Apovian CM, et al. 2013 AHA/ACC/TOS guideline for the management of overweight and obesity in adults. Circulation 2014; 129: S102–S138.
- 25. Outland L.Intuitive eating: a holistic approach to weight control. Holist Nurs Pract. 2010; 24(1):35-43.
- Camilleri G, Mejean C, Bellisle F, et al. Intuitive eating is inversely associated with body weight status in the general population-based NutriNet-Sante study. Obesity. 2016 May;24(5):1154-61.
- Bacon L, Stern JS, Van Loan MD, Keim NL. Size acceptance and intuitive eating improve health for obese, female chronic dieters. J Am Diet Assoc. 2005 Jun;105(6):929-36.
- Provencher V, Begin C, Tremblay A et al. Health-At-Every-Size and eating behaviors: 1-year follow-up results of a size acceptance intervention. J Am Diet Assoc 2009 Nov;109(11):1854-61.
- 29. Gagnon-Girouard MP, Begin C, Provencher V et al. Psychological impact of a 'Health-at-Every-Size'

intervention on weight-preoccupied overweight/obese women. J Obes 2010;2010:928097.

- Hawley G, Horwath C, Gray A et al. Sustainability of health and lifestyle improvements following a non-dieting randomised trial in overweight women. Prev Med 2008 Dec;47(6):593-9.
- Cole RE, Horacek T. Effectiveness of the "My Body Knows When" intuitive-eating pilot program. Am J Health Behav. 2010 May-Jun;34(3):286-97.
- 32. Leblanc V, Provencher V, Begin C et al. Impact of a Health-At-Every-Size intervention on changes in dietary intakes and eating patterns in premenopausal overweight women: results of a randomized trial. Clin Nutr 2012 Aug;31(4):481–488
- Bradshaw AJ, Horwath CC, Katzer L, Gray A. Non-dieting group interventions for overweight and obese women: what predicts non-completion and does completion improve outcomes? Public Health Nutr. 2010 Oct;13(10):1622-8.
- Anderson DA, Schaumberg K, Anderson LM, Reilly EE. Is level of intuitive eating associated with plate size effects? Eat Behav. 2015;18: 125 30.
- Saunders JF, Nichols-Lopez KA, Frazier LD. Psychometric properties of the intuitive eating scale-2 (IES-2) in a culturally diverse Hispanic American sample. Eat Behav. 2018; 28:1-7.
- Ruzanska UA, Warschburger P. Psychometric evaluation of the German version of the Intuitive Eating Scale-2 in a community sample. Appetite. 2017; 117:126-134.
- Bourdier L, Orri M, Carre A, et al. Are emotionally driven and addictive-like eating behaviors the missing links between psychological distress and greater body weight? Appetite. 2017; 120:536-546.
- Denny KN, Loth K, Eisenberg ME, Neumark Sztainer D. Intuitive eating in young adults. Who is doing it, and how is it related to disordered eating behaviors? Appetite. 2013; 60(1):13-19.
- Cancian ACM, de Souza LAS, Liboni RP A, Machado WL, Oliveira MDS. Effects of a dialectical behavior therapybased skills group intervention for obese individuals: a Brazilian pilot study. Eat Weight Disord. 2017; 1-13.
- 40. Madden CE, Leong SL, Gray A, Horwath CC. Eating in response to hunger and satiety signals is related to BMI in a owide sample of 1601 mid-age New Zealand women. Public Health Nutr. 2012; 15(12):2272-9.
- Grider HS, Douglas SM, Raynor HA. The Influence of Mindful Eating and/or Intuitive Eating Approaches on Dietary Intake: A Systematic Review. J Acad Nutr Diet. 2021 Apr;121(4):709-727.
- Smith JM, Serier KN, Belon KE, Sebastian RM, Smith JE. Evaluation of the relationships between dietary restraint, emotional eating, and intuitive eating moderated by sex. Appetite. 2020 Dec 1;155:104817.
- 43. Snoek HM, Engels RC, van Strien T, Otten R. Emotional, external and restrained eating behaviour and BMI trajectories in adolescence. Appetite. 2013 Aug;67:81-7.
- 44. Schaefer JT, Magnuson AB. A review of interventions that promote eating by internal cues. J Acad Nutr Diet 2014; 114: 734–760.
- Ayyıldız F, Akbulut G, Karaçil Ermumcu MŞ, Acar Tek N. Emotional and intuitive eating: an emerging approach to eating behaviours related to obesity. J Nutr Sci. 2023 Feb 13;12:e19.
- Hawks S, Madanat H, Hawks J, Harris A. The relationship between intuitive eating and health indicators among college women. J Health Educ 2005; 36: 331–336.

- Schoenefeld SJ, Webb JB. Self-compassion and intuitive eating in college women: examining the contributions of distress tolerance and body image acceptance and action. Eat Behav 2013; 14: 493–496.
- Smith T, Hawks SR. Intuitive eating, diet composition, and the meaning of food in healthy weight promotion. Am J Health Educ 2006; 37: 130–136.
- Tanco S, Linden W, Earle T. Well-being and morbid obesity in women: a controlled therapy evaluation. Int J Eat Disord 1998; 23: 325–339.
- Tylka TL, Calogero RM, Daníelsdóttir S. Is intuitive eating the same as flexible dietary control? Their links to each other and well-being could provide an answer. Appetite 2015; 95: 166–175.
- Camilleri GM, Méjean C, Bellisle F, et al. Cross-cultural validity of the intuitive eating Scale-2: Psychometric evaluation in a sample of the general french population. Appetite 2015 Jan;84:34-42.
- 52. Horwath C, Hagmann D, Hartmann C. Intuitive eating and food intake in men and women: Results from the swiss food panel study. Appetite 2019 Apr 1;135:61–71.
- Vorlet J, Carrard I. Barriers and facilitators of intuitive eating in postmenopausal women: A qualitative study. Health Psychol Open. 2023 Feb 18;10(1):20551029231157515.
- Anglin JC. Assessing the effectiveness of intuitive eating for weight loss - pilot study. Nutr Health. 2012 Apr;21(2):107-15.
- White S., Reynolds-Malear J.B., Cordero E. Disordered Eating and the Use of Unhealthy Weight Control Methods in College Students: 1995, 2002, and 2008. Eat. Disord. 2011;19:323–334.
- Barrack M.T., West J., Christopher M., Pham-Vera A.-M. Disordered Eating Among a Diverse Sample of First-Year College Students. J. Am. Coll. Nutr. 2019;38:141–148.
- Schaumberg K., Anderson D.A., Anderson L.M., Reilly E.E., Gorrell S. Dietary restraint: What's the harm? A review of the relationship between dietary restraint, weight trajectory and the development of eating pathology. Clin. Obes. 2016;6:89–100.
- Stice E. Risk and maintenance factors for eating pathology: A meta-analytic review. Psychol. Bull. 2002;128:825–848.
- Stice E., Marti C.N., Durant S. Risk factors for onset of eating disorders: Evidence of multiple risk pathways from an 8-year prospective study. Behav. Res. Ther. 2011;49:622–627.
- Stice E., Presnell K., Spangler D. Risk factors for binge eating onset in adolescent girls: A 2-year prospective investigation. Health Psychol. 2002;21:131–138.
- Hawks S.R., Madanat H.N., Christley H.S. Psychosocial Associations of Dietary Restraint: Implications for Healthy Weight Promotion. Ecol. Food Nutr. 2008;47:450–483.
- Nelson JD, Trojanowski PJ, Aarnio-Peterson CM, et al. Caregiver and adolescent intuitive eating behavior: associations with weight change during family-based treatment for anorexia nervosa. Eat Weight Disord. 2023 Mar 25;28(1):32.
- 63. Bruce LJ, Ricciardelli LA. A systematic review of the psychosocial correlates of intuitive eating among adult women. Appetite. 2016; 96: 454- 472.
- Hazzard VM, Telke SE, Simone M, Anderson LM, Larson NI, Neumark-Sztainer D. Intuitive eating longitudinally predicts better psychological health and lower use of disordered eating behaviors: findings from EAT 2010-2018. Eat Weight Disord. 2021 Feb;26(1):287-294.

- 65. van Dyck Z, Herbert BM, Happ C, et al. German version of the intuitive eating scale: psychometric evaluation and application to an eating disordered population. Appetite. 2016;105:798–807.
- Koller K.A., Thompson K.A., Miller A.J., Walsh E.C., Bardone-Cone A.M. Body appreciation and intuitive eating in eating disorder recovery. Int. J. Eat. Disord. 2020;53:1261–1269.
- Tylka TL, Calogero RM, Daníelsdóttir S. Intuitive eating is connected to self-reported weight stability in community women and men. Eat Disord. 2020 May-Jun;28(3):256-264.
- Levine M.P., Smolak L. The role of protective factors in the prevention of negative body image and disordered eating. Eat. Disord. 2016;24:39–46.
- Avalos L., Tylka T.L., Wood-Barcalow N. The Body Appreciation Scale: Development and psychometric evaluation. Body Image. 2005;2:285–297.
- Atkinson M.J., Wade T.D. Does mindfulness have potential in eating disorders prevention? A preliminary controlled trial with young adult women. Early Interv. Psychiatry. 2016;10:234–245.
- Mensinger, J. L., Calogero, R. M., Stranges, S., Tylka, T. L. A weight-neutral versus weight-loss approach for health promotion in women with high BMI: A randomizedcontrolled trial. Appetite105, 2016;364–374.
- Katcher JA, Suminski RR, Pacanowski CR. Impact of an Intuitive Eating Intervention on Disordered Eating Risk Factors in Female-Identifying Undergraduates: A Randomized Waitlist-Controlled Trial. Int J Environ Res Public Health. 2022 Sep 23;19(19):12049.
- 73. Zhang H. Master's Thesis. Hebei Normal University; Hebei, China. Correlation between Socio-Cultural Influences and Body Image of Female College Students. Jun 5, 2008.
- Cheng Z, Gao X, Yang C, Brytek-Matera A, He J. Effects of Online and Face-to-Face Intuitive Eating Interventions on Body Image and Eating Behaviors among Women in China: A Feasibility Study. Nutrients. 2022 Apr 22;14(9):1761.
- Bush H.E., Rossy L., Mintz L.B., Schopp L. Eat for life: A worksite feasibility study of a novel mindfulness-based intuitive eating intervention. Am. J. Health Promot. 2014;28:380–388.
- 76. Richards PS, Crowton S, Berrett ME, et al. Can patients with eating disorders learn to eat intuitively? A 2-year pilot study. Eat Disord. 2017;25:99–113.
- Bourdier L, Fatseas M, Maria AS, Carre A, Berthoz S. The Psycho-Affective Roots of Obesity: Results from a French Study in the General Population. Nutrients. 2020 Sep 28;12(10):2962.
- Carrard I, Rothen S, Rodgers RF. Body image concerns and intuitive eating in older women. Appetite. 2021 Sep 1;164:105275.
- Babbott KM, Mitchison D, Basten C, et al. Intuitive Eating Scale-2: psychometric properties and clinical norms among individuals seeking treatment for an eating disorder in private practice. Eat Weight Disord. 2022 Jun;27(5):1821-1833.
- Linardon J, Mitchell S. Rigid dietary control, flexible dietary control, and intuitive eating: Evidence for their differential relationship to disordered eating and body image concerns. Eat Behav. 2017 Aug;26:16-22.