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Body image concerns and intuitive eating in older women

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ABSTRACT

Intuitive eating has been described as representing a positive relationship with food that can support health. However, to date, most of the extant research on intuitive eating has been conducted among young women, limiting our understanding of how intuitive eating can contribute to supporting health in aging women. This study aimed to bridge this gap by exploring body image and eating correlates of intuitive eating in older women. The hypotheses were that among older women, intuitive eating would be significantly associated with lower disordered eating, weight and shape concerns, and fewer depressive symptoms, and that an indirect relationship between BMI and intuitive eating via weight and shape concerns would exist. Community women aged 60–75 (N = 200) completed questionnaires assessing intuitive eating, disordered eating, body concern, depressive symptoms and body mass index (BMI). Higher intuitive eating global scores were associated with lower restraint, lower eating concern, lower body concern, fewer depressive symptoms, and lower BMI. An indirect relationship between BMI and intuitive eating via weight and shape concern emerged, suggesting that being preoccupied by one's appearance hinder the ability to practice intuitive eating. These results suggest that intuitive eating is associated with positive outcomes among older women and might be a useful target for interventions designed to increase healthy aging.

1. Introduction

Intuitive eating (Tribole & Resch, 2012; Tylka, 2006) designates an eating pattern based on internal cues rather than external rules, and has been described as related to positive mental and psychological health outcomes (Hazzard et al., 2020; Tribole & Resch, 2012). Specifically, it has been described as associated with lower levels of dieting and disordered eating patterns, as well as more positive body image and well-being (Bruce & Ricciardelli, 2016). To date, however, the majority of the work conducted focused on intuitive eating has included young or midlife women (Bruce & Ricciardelli, 2016). Given the growing recognition of body image and eating concerns among older women (Kilpela et al., 2019), as well as the importance of eating patterns to support healthy aging (Peel et al., 2005), the present study aimed to explore the relationships among intuitive eating and body image, depressive symptoms, and indices of disordered eating among older women.

Intuitive eating is positioned as a sustainable pattern of eating that is grounded in awareness of and responsiveness to inner cues, with the capacity to support long-term health outcomes (Tribole & Resch, 2012). Intuitive eating is based on a positive relationship with food and hunger and satiety cues. Specifically, it has been proposed that intuitive eating includes four separate dimensions (Tylka, 2006; Tylka & Van Diest, 2013). The first is Unconditional Permission to Eat, that is allowing oneself to eat the foods one wants, without feelings of guilt or judgments, and in the absence of external food rules. The second dimension is Reliance on Hunger and Satiety Cues, that is a sense of confidence in being guided by feelings of hunger and fullness to guide when to eat, which foods, and how much. The third dimension includes Eating for Physical Rather than Emotional Reasons, that is eating in response to hunger as opposed to negative emotions. Finally, the fourth dimension is Body-Food Choice Congruence, which refers to making food choices that are satisfying and nutritious, as well as supporting health and body functioning. This dimension is also sometimes referred to as "gentle nutrition" (Tribole & Resch, 2012).

Given the focus of intuitive eating on internal regulation, and distance from food rules or eating patterns that aim to modify the appearance of the body, as well as an overall positive relationship with the body and eating, it has been proposed that higher levels of intuitive

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eating would be associated with more positive physical and mental health indices (Tribole & Resch, 2012). Consistent with this, a previous systematic review of the literature identified intuitive eating as being associated with a number of positive outcomes in terms of eating attitudes and behaviors, body image, and emotional functioning (Bruce & Ricciardelli, 2016). Specifically, the findings showed that higher levels of intuitive eating were associated with lower indices of disordered eating, such as eating concerns or dietary restraint. Moreover, higher intuitive eating was associated with lower body dissatisfaction, body monitoring, or body objectification. In addition, higher intuitive eating was found to be associated with improved emotional functioning including lower depressive symptoms, and improved emotional regulation capacities. Finally, higher levels of intuitive eating have been associated overall with lower body mass index (BMI) (Camilleri et al., 2016), although the mechanism underlying this association and its directionality require further clarification. However, it is possible that higher weight might directly or indirectly mitigate the experience of internal food cues and therefore render intuitive eating less achievable. In contrast, higher BMI may also be associated with deliberate overriding of one's internal sensations in the context of weight loss efforts. Thus, the findings overall have supported a positive relationship between intuitive eating and more positive patterns of eating behaviors, and improved body image and mood. However, findings have also revealed that the majority of the existing work included young women, often students (Bruce & Ricciardelli, 2016), and more rarely middle-aged women, highlighting a gap as related to other groups.

While young women have often been a group of particular interest in research focused on body image and eating behaviors due to their disproportionate risk for engaging in disordered eating and experiencing body image concerns (Smink et al., 2012), older women have been increasingly recognized as also experiencing these concerns (Gagne et al., 2012; Rodgers et al., 2016; Tiggemann, 2004). Indeed, although previously proposed that body dissatisfaction and body image concerns would decrease with age, mounting evidence suggests this is not the case (Roy & Payette, 2012). The beauty ideals promoted by Western society place strong emphasis not only thinness but also on youthfulness (Cameron et al., 2019). Older women, who may be prone to weight gain and changes in weight distribution, and witness the signs of aging of their bodies, may experience themselves as moving further from these ideals (Tiggemann, 2004). Findings from a study among 1,849 women aged 50 and over showed that even at an older age, a high percentage (71.2%) of the participants were trying to lose weight and reported unhealthy eating behaviors (Gagne et al., 2012). Furthermore, in women aged 50–86 years, negative body image was shown to mediate the relationship between higher BMI and lower engagement in health behaviors and indicators, including less consumption of nutritious foods, but also lower quality of life, and higher psychosocial impairment (Kilpela et al., 2019). Body dissatisfaction is thus still present in older women and associated with negative health outcomes similar to those documented in young women. Given these findings, exploring intuitive eating among older women is an important direction, and may constitute a useful addition to intervention efforts in this age group when nutritional deficiencies increase the risk of frailty (Lorenzo-López et al., 2017).

The goals of the present study were therefore twofold. A first hypothesis was that intuitive eating would be associated with lower disordered eating behaviors, weight and shape concerns, and fewer depressive symptoms in community women aged 60–75 years. Second, this study sought to extend the findings of Kilpela et al. (2019), with the hypothesis that an indirect relationship between BMI and intuitive eating via weight and shape concerns would exist in this same population.

2. Methods

2.1. Participants

Women aged between 60 and 75 years old were recruited in the French-speaking part of Switzerland and the surrounding region of France between August 2017 and March 2018 with advertisements distributed in newspapers and associations for seniors. Inclusion criteria were age and having lived in a Western country for most of their lives. The use of medication that interfered with appetite was an exclusion criterion. A total of 222 participants completed the questionnaires. After removal of incomplete questionnaires, the analyses were conducted on $N = 200$ participants with complete data. Mean age (standard deviation) of the participants was 67.49 (4.17), and mean BMI was 23.69 (4.21). Around half (56%, $n = 112$) of the participants lived with a partner, 48% ($n = 96$) had completed higher education (college or equivalent), 16.5% ($n = 33$) were currently employed, and 95% ($n = 190$) were of European origin.

2.2. Procedure

After phone-screening participants to determine eligibility, a research assistant offered to send them either a paper version of the questionnaires via mail or a code that enabled them to complete the questionnaires online via LimeSurvey®. All participants provided written informed consent by mail. In compensation, participants received a 20 CHF (20 USD) voucher for a department store after completing the questionnaires. Data were anonymized. The research protocol was approved by the Geneva Research Ethical Committee (protocol 2017-00529).

2.3. Measures

2.3.1. Intuitive eating

The *Intuitive Eating Scale-2* (IES2; Camilleri et al., 2015; Tylka & Van Diest, 2013) is a 23-item questionnaire assessing four dimensions of intuitive eating as well as providing a global score. The four subscales include: 1) *Unconditional Permission to Eat* (6 items), e.g. "I try to avoid certain foods high in fat, carbohydrates, or calories"; 2) *Eating for Physical Rather than Emotional Reasons* (8 items), e.g. "I find myself eating when I am lonely, even when I'm not physically hungry "; 3) *Reliance on Hunger and Satiety Cues* (6 items), e.g. "I rely on my hunger signals to tell me when to eat"; and 4) *Body-Food Choice Congruence* (3 items), e.g. "I mostly eat foods that give my body energy and stamina." Items are rated on a 5-point Likert scale ranging from 1 *(strongly disagree)* to 5 *(strongly agree)*. Mean scores are calculated for the subscales and the global score, with higher scores indicating greater intuitive eating. Cronbach's alphas for the present sample were $\alpha = .88$ for the global score, $\alpha = .65$ for Unconditional Permission to Eat, $\alpha = .92$ for Eating for Physical Rather than Emotional Reasons, $\alpha = .91$ for Reliance on Hunger and Satiety Cues, and $\alpha = .78$ for Body-Food Choice Congruence.

2.3.2. Disordered eating, negative body image, and BMI

The *Eating Disorder Examination Questionnaire* v6.0 (EDEQ; Carrard et al., 2015; Fairburn & Beglin, 2008) is a 28-item questionnaire assessing a total score and four subscales: 1) *Restraint* (5 items), e.g. "have you been deliberately trying to limit the amount of food you eat to influence your shape or weight (whether or not you have succeeded)?"; 2) *Eating Concern* (5 items), e.g. "have you had a definite fear of losing control over eating?"; 3) *Shape Concern* (8 items), e.g. "how dissatisfied have you been with your shape ?"; and 4) *Weight Concern* (5 items), e.g. "how dissatisfied have you been with your weight ?". The questions relate to the past 28 days. Items are rated on a 7-point Likert scale (0–6) with higher scores indicating greater frequency or severity. In the present study, we used the Restraint subscale ($\alpha = .81$) and the Eating

Concern subscale (α = .75) to evaluate disordered eating. In order to reduce multiple testing, we followed the approach used by Keirns and Hawkins (2019) to assess negative body image by combining the Weight Concern and Shape Concern subscales, which were highly correlated (r = .89), into a single Weight and Shape Concerns scale (α = .92). Body Mass Index (BMI) was calculated by dividing the weight in kilograms by the height in meter squared, both self-reported by the participants in the EDEQ.

2.3.3. Depressive symptoms

The *Beck Depression Inventory-II* (BDI-II; Beck et al., 1996, 1998) is a 21-item questionnaire that was used to assess depressive symptoms. Items are rated on a 4-point Likert scale (0–3). Items are summed into a total score, with higher scores revealing the presence of a greater number of depressive symptoms, of higher severity. Cronbach's alpha was α = .85 for the present sample.

2.3.4. Demographics

Demographic information regarding age, education level, living and professional situations, was also collected via questionnaire.

2.4. Statistical analyses

Normality was assessed for continuous variables and revealed that the EDEQ Restraint and EDEQ Eating Concern distributions were skewed. Spearman's rank-order correlations were therefore computed to assess the relationships among the Intuitive Eating global score and subscales and eating disorder symptoms (Eating Concern, Restraint, Weight and Shape Concerns), and Depressive Symptoms (hypothesis 1). Five mediation models were tested using the version 3.5 of PROCESS (model number 4) for SPSS® (IBM® version 25) written by Hayes (www.processmacro.org; Darlington & Hayes, 2017), with BMI as the independent variable and Weight and Shape Concerns as the mediator in each model, and successively the Intuitive Eating global score, and the four subscales as the dependent variables (hypothesis 2). Standard error were computed using a bootstrap procedure.

3. Results

Descriptive statistics for the study variables are presented in Table 1. Spearman's correlation analyses (Table 1) showed that higher scores of intuitive eating, as measured by the global score, were significantly associated with lower levels of Restraint, lower levels of Eating Concern, lower levels of Weight and Shape Concerns, and lower levels of depressive symptoms, as well as lower BMI. While Eating for Physical Rather than Emotional Reasons and Reliance on Hunger and Satiety Cues showed significant associations with most of the eating and body image variables, Unconditional Permission to Eat and Body-Food Choice Congruence subscales did not reveal the same patterns. Higher levels of Unconditional Permission to Eat were significantly associated with lower levels of Restraint and Eating Concern, as well as with lower Weight and Shape Concerns. Rather, higher levels of Body-Food Choice Congruence were associated with lower levels of Weight and Shape Concerns, fewer depressive symptoms, and lower BMI. However, no other significant association emerged.

Four of the five mediations models (Fig. 1) revealed significant indirect relationships between BMI and intuitive eating via Weight and Shape Concerns. This was true for the intuitive eating global score (standardized indirect effect a*b: $b = -0.24$, Boot SE = 0.06; 95% CI = [−0.35; −0.13], standardized direct effect c': $b = -0.10$, $p = 0.186$), Unconditional Permission to Eat (standardized indirect effect a*b: $b = -0.12$, Boot SE = 0.04; 95% CI = [-0.21; −0.04], standardized direct effect c': $b = 0.10$, p = 0.240), Eating for Physical Rather than Emotional Reasons (standardized indirect effect: $b = -0.22$, Boot SE = 0.06; 95% CI = [−0.34; −0.11], standardized direct effect c': $b = -0.07$, $p = 0.327$), and Reliance on Hunger and Satiety Cues (standardized indirect effect: $b = -0.17$, Boot SE = 0.05; 95% CI = [−0.28; −0.06], standardized direct effect c': $b = -0.16$, $p = 0.042$). The relationships were negative, meaning that higher BMI was associated with higher Weight and Shape Concern, which was in turn associated with lower intuitive eating. However, no significant indirect relationship emerged in the model examining Body-Food Choice Congruence as an outcome (standardized indirect effect: $b = -0.03$, Boot SE = 0.04; 95% CI = [−0.12; 0.04], standardized direct effect c': $b = -0.14$, $p = 0.096$). Thus, hypothesis 2 was overall supported.

4. Discussion

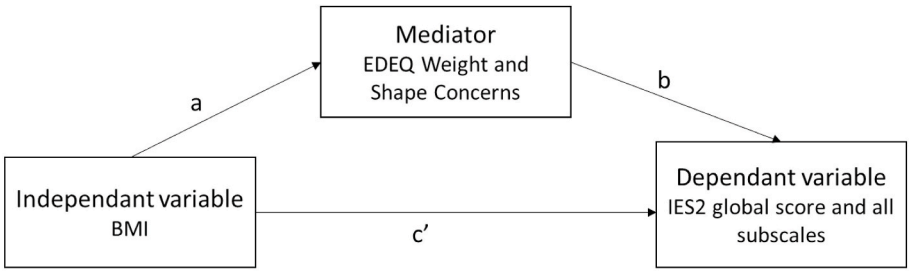
This study aimed to bridge the gap in the research examining the relationships between intuitive eating and other indicators of body image and eating behaviors and depressive symptoms, as well as exploring indirect relationships with BMI. Taken together, findings confirm the cross-sectional relationships described among younger women (Bruce & Ricciardelli, 2016) and suggest that among older women also intuitive eating may be related to lower levels of psychological and mental concerns. Furthermore, the presence of significant indirect relationships between BMI and intuitive eating via weight and shape concerns suggests that poor body image plays an important role in the relationship between higher weight and intuitive eating. These findings are both novel and important as they extend previous understandings of intuitive eating among younger women, and constitute preliminary support for the usefulness of intuitive eating approaches among women over 60 years.

Confirming the first hypothesis, findings revealed that in older women, intuitive eating, and more particularly unconditional permission to eat, that is an absence of "forbidden" foods, eating patterns

Table 1
Means (M), standard deviations (SD), median (Med), quartiles 1 and 3 (25–75), and Spearman's correlations.

Variables	*M*	*SD*	*Med*	*25–75*	1	2	3	4	5	6	7	8	9	10
1. IES2G	3.66	0.59	3.65	3.26–4.16	–									
2. UPE	3.60	0.70	3.67	3.17–4.17	.48**	–								
3. EPR	3.60	1.02	3.50	2.88–4.50	.87**	.26**	–							
4. RHSC	3.78	0.84	4.00	3.20–4.33	.75**	.21**	.50**	–						
5. B-FCC	3.74	0.82	3.67	3.33–4.33	.31**	-.15*	.12	.32**	–					
6. RESTR	0.97	1.31	0.40	0.00–1.60	-.27**	-.30**	-.19**	-.22**	.02	–				
7. EATC	0.28	0.70	0.00	0.00–0.20	-.55**	-.27**	-.49**	-.42**	-.13	.33**	–	.		
8. WSHC	1.27	1.30	0.78	0.31–2.01	-.46**	-.19**	-.40**	-.40**	-.18*	.59**	54**	–		
9. DP	7.88	6.26	6.00	3.00–11.00	-.38**	-.10	-.32**	-.36**	-.21**	.12	.32**	.40**	–	
10. BMI	23.69	22.59	4.21	20.76–25.99	-.31**	-.05	-.27**	-.29**	-.16*	.36**	.34**	.52**	.12	–

Note. B-FCC: Intuitive Eating Scale-2 Body-Food Choice Congruence; BMI: Body Mass Index; DP: Beck Depression Inventory II; EATC: Eating Disorder Examination Questionnaire Eating Concern subscale; EPR: Intuitive Eating Scale-2 Eating for Physical Rather than Emotional Reasons subscale; IES2G: Intuitive Eating Scale-2 global score; RESTR: Eating Disorder Examination Questionnaire Restraint subscale; RHSC: Intuitive Eating Scale-2 Reliance on Hunger and Satiety Cues; UPE: Intuitive Eating Scale-2 Unconditional Permission to Eat subscale; WSHC: Eating Disorder Examination Questionnaire Weight and Shape Concerns subscale.
** p < 0.01 * p < 0.05.



Note. BMI: Body Mass Index, EDEQ: Eating Disorder Examination Questionnaire; IES2: Intuitive Eating Scale 2

Indirect effect = a * b

Fig. 1. Theoretical Conception of the Mediation Models
Note. BMI: Body Mass Index, EDEQ: Eating Disorder Examination Questionnaire; IES2: Intuitive Eating Scale 2 Indirect effect = a * b.

relying on internal cues of hunger and satiety, and using such cues for guidance rather than eating to cope with difficult emotions, was associated with less dietary restraint and eating concerns. These results, together with the lack of association between the dimension of body-food choice congruence and disordered eating symptomatology, were similar to those documented in samples of younger women (Bruce & Ricciardelli, 2016). Few studies have examined dieting in older women, however, perceptions of being overweight has previously been associated with a higher likelihood of dieting up to the age of 75 (Elran-Barak & Segel-Karpas, 2020). Weight management efforts are critical concern among individuals who are advancing in age, in particular due to increased dangers of sarcopenia, accentuated by the loss of lean mass through dieting, leading to increased frailty (Gill et al., 2015). These risks that are specific to older individuals, and might be most relevant to women who may present higher concerns related to maintaining their figure while aging (Tiggemann, 2004), highlight the importance of placing the emphasis on well-being in this population rather than weight loss at all costs (Gill et al., 2015). As a non-dieting approach to nutrition, and given the associations documented here with lower levels of disordered eating, interventions aiming to increase intuitive eating may therefore be useful among older women.

Intuitive eating, and particularly aspects including the reliance on internal cues of hunger and satiety, eating for physical rather than emotional reasons, as well as choosing foods for their taste and their capacity to provide energy (gentle nutrition), were associated with lower levels of depressive symptoms in our sample. While the relationships between eating concerns and depressive mood have been explored in adolescents and young women (Goldschmidt et al., 2016; Lewis-Smith et al., 2020), few studies have looked at these relationships in older women (Kilpela et al., 2015). The desire to lose weight has been associated with poorer psychological health in middle-aged and older women (Carrard et al., 2018), and indeed at the population level, mid-range BMIs or those in the slightly higher range have been found to be most strongly associated with healthy aging (van Uffelen & Brown, 2010). While these findings are cross-sectional, it may be that depressive symptoms are related to decreased capacity to tune into internal hunger cues, leading to lower levels of intuitive eating. It may also be that depression is associated with poorer appetite in older women, which may explain the lack of relationship with unconditional permission to eat.

Higher levels of intuitive eating, including the global score and the subscales, were significantly associated with lower levels of shape and weight concerns in our sample of older women. Furthermore, in support of hypothesis 2, a significant indirect relationship via weight and shape concerns emerged between BMI and intuitive eating, meaning that the relationship between high BMI and low intuitive eating scores was in part explained by elevated shape and weight concerns. This indirect effect underscores the importance of putting aside any desire for weight loss in order to practice the principles of intuitive eating, as articulated by Tribole & Resch (2012). Weight and shape concerns tend to constitute a barrier to following internal cues of hunger and satiety, honoring hunger and eating for physical rather than emotional reasons. One of the 10 principles of Tribole and Resch's intuitive eating is "respect your body", which, interestingly is not fully assessed by the four dimensions of the Intuitive Eating Scale-2 questionnaire, although somewhat present in the concept of body-food choice congruence (Tylka & Van Diest, 2013). The present findings highlight how body image acceptance may also be associated with health-related behaviors in older women, as it is in younger ones (Wood-Barcalow et al., 2010). Clarifying these relationships and developmental trajectories is an important focus for future research. Nevertheless, the existing evidence strongly supports that intervention efforts among older women should focus on decreasing body image concerns as a prerequisite for developing intuitive eating patterns.

Despite the evidence in support for the majority of the indirect relationships hypothesized, no evidence was found for an indirect relationship between BMI and body-food choice congruence via weight and shape concerns, despite the presence of bivariate relationships between the different variables. As the effect sizes of these correlations were small, this may be due to the size of the sample and a lack of statistical power to detect the indirect relationship. However, other factors may also come into play in the relationship between BMI and gentle nutrition, such as having had access to nutrition education, as well as continuing to have access to healthy foods. Other work has noted how restricted access to certain foods, and lower resources, is associated with eating behaviors and weight (Lake et al., 2009; White, 2007). Further work exploring the factors that may modulate the relationships between weight, body image, and food choices among older women is warranted.

One of the important strengths of this study was its focus on an understudied population of older women. However, a significant number of limitations should be noted. First, the data were cross-sectional, which precludes inference regarding causality. The sample in this study was overall healthy and highly educated such that the results may not be generalizable to the broader population and individuals with lower socio-economical levels. Finally, regarding the Intuitive Eating Scale-2, the global score and the subscales consistency indicators were acceptable except for the Unconditional Permission to Eat subscale, which was somewhat below the generally considered as acceptable value of 0.70 (Nunnally, 1978). In the present study, we used the original factor structure of the Intuitive Eating Scale-2 (Tylka & Van Diest, 2013). We chose to retain to the original version to facilitate comparisons with the literature. Few measures have been specifically validated

among older populations, and those used in the present study are no exception.

In conclusion, this study revealed that higher intuitive eating was associated with lower disordered eating, lower negative body image and less depressive symptoms, suggesting that it may be a protective dimension in older women, as it is in younger ones. Should these findings be replicated and supported in longitudinal work, they would support the development of interventions specifically targeting intuitive eating in older women to support healthy aging. In addition, the results highlighted how weight and shape concerns may constitute a barrier to intuitive eating, even among older women, and that targeting these concerns first may be an essential component of efforts to increase intuitive eating. More broadly, the present findings highlight that developing a positive relationship with one's body is a critical component of interventions that aim to promote flexible eating habits, including intuitive eating, mindful-eating, or other approaches to eating focusing on internal cues. Further work clarifying the relationships among intuitive eating and psychological and physical health during aging is warranted to inform intervention efforts among older women.

Author contributions

IC, SR and RR designed the study. IC and SR analyzed the data. All authors contributed to writing the manuscript. All authors have reviewed and approved the final article.

Data statement

Data are available on request.

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Ethical statement

The study protocol was reviewed and approved by the Research Ethical Committee of Geneva (protocol 2017-00529).

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