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Dieting for weight-control among older adults: The role of perceived health and perceived overweight status

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ABSTRACT

Background: Despite the ever-growing literature on weight-control diets, data about dieting among older adults are scarce.

Purpose: To describe the prevalence of weight-control dieting across age groups and weight statuses (from healthy-weight to overweight and obese). To identify cross-sectional associations of perceived health and perceived overweight status with dieting among older adults.

Methods: Secondary analyses of the second and third waves of the Midlife in the US study (MIDUS). Sample included 2588 participants (40–93 years old, 54.5% females, age = 64.4 ± 11.1 years, BMI = 28.3 ± 5.9 kg/m^2). Logistic regressions were used to predict dieting across age groups (independent variables: BMI, perceived health, perceived overweight status; covariates: BMI change, education, age, race).

Results: As many as 15% of participants had reported dieting during the previous year. Older age was associated with less dieting among healthy weight (p = .02) and overweight (p < .001) participants, but not among participants with obesity (p = .36). Among participants younger than 75, overweight perception (vs. healthy-weight perception) was linked with higher likelihood for dieting (40–55 years: OR = 3.94[1.70–9.1]; 55–65 years: OR = 4.11[1.91–8.82]; 65–75 years: OR = 4.50[1.90–10.65]). Nevertheless, among participants older than 75, excellent (vs. good/fair/poor) perceived health was linked with higher likelihood of dieting (good vs. excellent: OR = 0.29[0.09–0.87]; fair/poor vs. excellent: OR = 0.12[0.03–0.54]).

Conclusions: Older age is associated with less weight-control dieting among people without obesity. Although overweight perception may have a stronger impact on dieting during younger age, health perception may have a stronger impact on dieting during older age, suggesting that the motivation behind weight-control diets may potentially change throughout the adult lifespan.

1. Introduction

The desire to lose weight is pervasive in Western countries (Organization, W. H, 2000; Yaemsiri, Slining, & Agarwal, 2011). In the USA, the majority of adults wish to weigh less, and almost half of the adult population pursue weight-control behaviors (Yaemsiri et al., 2011), including dieting and exercising. Studies suggest that dieting (i.e., trying to ingest fewer calories or less fat) is more common among females relative to males, as well as among people with a higher BMI (body mass index, kg/m^2) relative to people with a lower BMI (Forrester-Knauss & Stutz, 2012; Liechty & Lee, 2013), but data about dieting across the lifespan is scarce (Haynos et al., 2018). A study conducted in the USA (Mangweth-Matzek et al., 2006) among about 500 older females (aged 60–70 years) suggested that as many as half of these females restricted their eating to prevent weight gain, and a study conducted in the Netherlands (Slof-Op't Landt et al., 2017) indicated that rates of weight-control diets increased from early adolescence (13–16 years) to midlife (45–55 years) and decreased thereafter. However, the link between weight status (underweight, healthy weight, overweight, obese) and prevalence of weight-control dieting among older adults is still understudied. Hence, in the current study we sought to describe rates of weight-control diets across weight statuses and age groups.

A better understanding of weight-control dieting across the lifespan is important for several reasons. First, midlife and older adults (40 years and older) comprise almost one-third of the total population of the world, and due to longevity, the older adult population is rapidly increasing (Howden & Meyer, 2010). Second, despite the growing

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number of individuals who report dieting in order to lose/control weight, several longitudinal studies suggest that the consequences of dieting are likely to be just the opposite (Field et al., 2007; Stice, Cameron, Killen, Hayward, & Taylor, 1999; Tanofsky-Kraff, 2006), and in the long run, dieters are more likely to gain weight relative to non-dieters. Third, some research suggests that the prevalence of eating disorders and pathological eating in midlife and beyond has increased in recent years (Ackard, Richter, Frisch, Mangham, & Cronemeyer, 2013), and concerns about body weight and shape are highly prevalent not only among adolescents and young people, but also among older adults. Last, and perhaps most interestingly, it is important to pay attention to intentional vs. unintentional weight loss in older adults (Gaddey & Holder, 2014). While unintentional weight loss is associated with higher mortality rates (Gaddey & Holder, 2014), there is evidence (e.g., based on representative data from The National Health Interview Survey (Gregg, Gerzoff, Thompson, & Williamson, 2003) that the intention to lose weight is associated with lower mortality rates among people with overweight/obesity, independent of actual weight-loss (Fontaine & Allison, 2001; Kritchevsky et al., 2015). Therefore, it is plausible that although weight-loss diets are often unrelated to actual weight loss, trying to lose weight may have some benefits in midlife and beyond (e.g., reduced mortality rate), even if people do not actually lose weight.

The literature suggests that people with obesity tend to have worse perceived health relative to people with healthy weight (Farhat, Iannotti, & Summersett-Ringgold, 2015; Imai et al., 2008; Okosun, Choi, Matamoros, & Dever, 2001), both when adjusting for actual health status (e.g., chronic disease (Prosper, Moczulski, & Qureshi, 2009)), and when not. Perceived health (also known as self-rated health or subjective health) is a single-item construct that encompasses many aspects of physical and emotional health (Assari & Moghani Lankarani, 2017; Goldberg, Gueguen, Schmaus, Nakache, & Goldberg, 2001; Mansyur, Amick, Harrist, & Franzini, 2008; Pinquart, 2001; Wu et al., 2013), and has a strong predictive capacity of various health-related outcomes, including medical diagnoses (e.g., heart disease (van der Linde et al., 2013), cancer(Shadbolt, Barresi, & Craft, 2002)) and mortality (DeSalvo, Bloser, Reynolds, He, & Muntner, 2006; Idler & Benyamini, 1997). Studies report that there is a potential bi-directional link between perceived health and various health behaviors, including exercising (Gallant & Dorn, 2001) and utilization of preventive health-care services (e.g., flu vaccination, dental checkups (Bennett, Chen, Soroui, & White, 2009; Fillenbaum, Burchett, Kuchibhatla, Cohen, & Blazer, 2007)), such that people with better perceived health may be more likely to engage in health behaviors, and these health behaviors can potentially improve their health. Yet, it is still unknown whether perceived health impacts weight-control dieting across the lifespan, and it is also still unknown whether the decision to go on a diet is linked with better or worse perceived health among older people with different weight statuses.

Overweight perception (or perceived overweight status), defined as one's estimate of his/her actual weight status as overweight or obese, is highly correlated with weight-control behaviors (Atlantis & Ball, 2008; Tanenbaum et al., 2016; Yaemsiri et al., 2011). For example, Yaemsiri et al. (2011), report that overweight self-perception, rather than weight status per se, is the most important predictor of the desire to weigh less and the pursuit of weight-control behaviors. Furthermore, a Chinese study suggests that overweight perception is associated with higher likelihood of dieting, physical activity, and extreme weight-control behaviors (Tanenbaum et al., 2016). Nevertheless, despite the agreement that overweight perception is an important construct in the study of weight-control behaviors, and despite some preliminary findings suggesting that age plays a role in one's overweight perception (Burke et al., 1990), the link between overweight perception and weight-control dieting across the lifespan has still been understudied.

Hence, in the current study we used the Midlife in the US study (MIDUS) to examine prevalence and correlates of dieting for weight control among females and males of different age groups, while trying to understand the role of perceived health and perceived overweight status in weight-control dieting across age groups. Weight-control diets were defined according to the MIDUS (Brim, Ryff, & Kessler, 2004) as any weight-control diets that were used during the last year in order to treat a physical health problem, to treat an emotional or personal problem, to maintain or enhance wellness, or to prevent the onset of illness. We examined the following two research questions among four age groups (midlife: 40–55 years, old-midlife: 55–65 years, old: 65–75 years, old-old: 75+ years):

1. What is the prevalence of weight-control dieting across age groups and weight statuses?
2. What are the cross-sectional associations of perceived health and perceived overweight status with weight-control dieting across age groups?

Findings from the current study will contribute to the understanding of the characteristics of dieters across the lifespan, while potentially shedding light on the motivation behind dieting. In addition, the results can be used to structure age-appropriate dieting interventions that tap into the specific motivations of older and midlife adults to control their weight.

2. Method

2.1. Sample

Data were derived from MIDUS, a longitudinal nationally representative study of community-dwelling midlife adults. Data were first collected in 1994 using random digit dialing (N = 7108). Two additional waves were conducted by telephone interviews: MIDUS 2 (2004–2006, N = 4963) and MIDUS 3 (2013–2015, N = 3294), with response rates of 70% and 74%, respectively. We included only non-underweight participants (BMI > 18.5 at Wave 3) who provided information about dieting during the previous 12 months. Hence, our final sample included 2588 participants.

2.2. Measures

2.2.1. Weight-control diets

Participants were asked to rate the frequency of dieting for weight control on a 5-point Likert scale, [1 (*a lot)* to 5 (*never)*]: "*In the past 12 months, either to treat a physical health problem, to treat an emotional or personal problem, to maintain or enhance your wellness, or to prevent the onset of illness, how often did you use a weight-control diet?*" Dieting was dichotomized to indicate the difference between participants who did not use weight-control diets (*never*) and participants who used weight-control diets during the previous 12 months (*a lot/often/sometimes/rarely*). This dichotomization, which distinguishes between any or no dieting during the previous year, has been performed in previous research studies (Carr & Friedman, 2006; Raffoul, Leatherdale, & Kirkpatrick, 2018; Yaemsiri et al., 2011). Fig. 1 shows that the vast majority (85.3%, n = 2178) of participants reported that they *never* used weight-control diets during the last year. The remaining few reported that they dieted *a lot* (2.7%, n = 68), *often* (2.3%, n = 59), *sometimes* (6.3%, n = 161), or *rarely* (3.3%, n = 87) during the last year. The literature about reliability and validity of single items (Wanous, Reichers, & Hudy, 1997) suggests that measuring self-reported facts with a single item is a commonly accepted practice. To test construct stability, we examined the frequency of weight-control dieting in both waves of data. Out of those who dieted at Wave 3, as many as 65% reported being on a weight-control diet at Wave 2. This suggests high stability (Watson, 2004) over the course of 10 years. To test item validity, we tested the relationships between weight-control dieting and: (1) Perceptions of overweight: Dieters had significantly

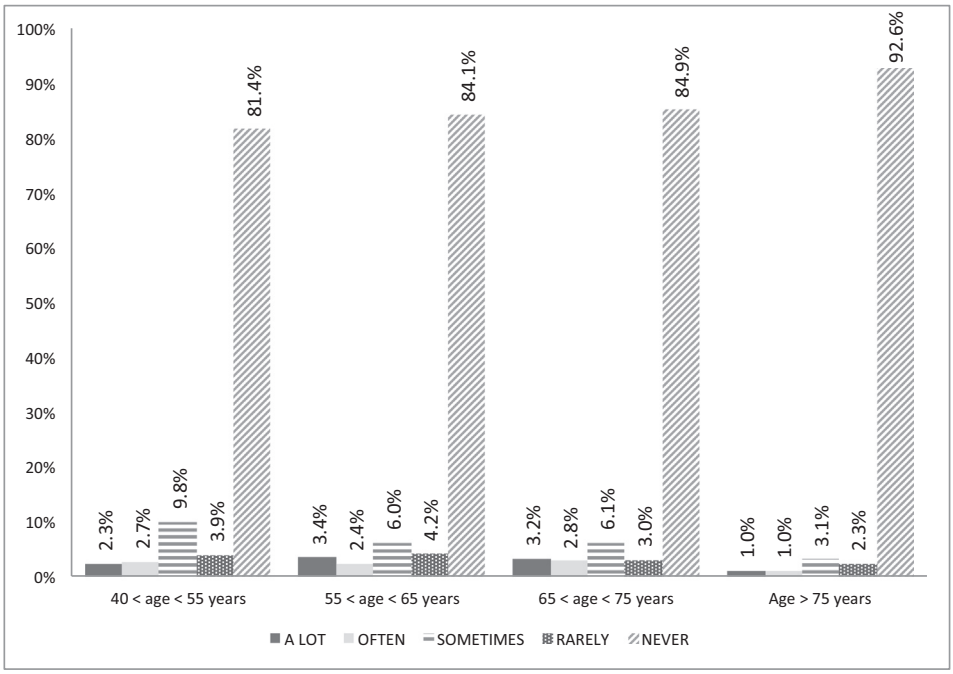

Fig. 1. Percent of participants who report weight control dieting during the last year: Stratified by age group.

higher overweight perception than non-dieters. (M = 4.17 vs. M = 3.71 t(537) = 12.42, $p < .001$) (2) Self-report weight loss: Out of those who reported dieting at Wave 3, 54% ($n = 202$) reported to had lost 10 pounds or more during the last year. (3) Physician's prescribed diet: Out of those who reported dieting at Wave 3, 37.6% ($n = 138$) reported using a physician prescribed diet (low salt, diabetes, etc.). These suggest that weight-control dieting is strongly related to other reported items, including body weight and eating behaviors, and implies convergent validity.

2.2.2. Perceived health

Perceived health was reported on a 5-point Likert scale: "*In general, would you say your physical health is…[excellent/very good/good/fair/poor]*"? Participants who reported fair and poor perceived health were combined into one group (Coverdill, López, & Petrie, 2011; Landrine, Corral, Hall, Bess, & Efird, 2016). *Excellent* perceived health was reported by $n = 381$ (14.7%), *very good* by $n = 962$ (37.0%), *good* by $n = 824$ (31.7%), *fair* by $n = 322$ (12.4%), and *poor* by $n = 109$ (4.2%) participants.

2.2.3. Overweight perception

Participants were asked whether they considered themselves to be: *very overweight* (14.4%, $n = 371$), *somewhat overweight* (52.2%, $n = 1346$), *about the right weight* (30.4%, $n = 783$), *somewhat underweight* (2.8%, $n = 72$), *very underweight* (0.3%, n = 7). Participants who perceived themselves to be very/somewhat overweight were combined into one group (Atlantis, Barnes, & Ball, 2008; Striegel-Moore et al., 2009).

2.2.4. Covariates

Six covariates were used: gender, age at Wave 3; self-reported BMI at Wave 3; race (white vs. non-white), years of education at Wave 3, and "past BMI change," representing changes in BMI during the last 10 years, calculated as BMI(Wave 3) – BMI(Wave 2).

2.3. Statistical analyses

Analyses were carried out with SPSS 25. Univariate relations were examined using Chi-square tests, Pearson correlations, and *t*-tests. Multivariate relations were examined using logistic regression models with one step. Among participants who reported rates of dieting in Wave 3, only 852 participants participated in the biomarkers project and were measured for BMI. The correlation between the self-reported and measured BMI was $r = 0.92$, $p < .001$. As such, we decided to use the self-reported BMI, in order to preserve a sufficient number of participants in all age groups. Four age groups were created: midlife (40–55 years; $n = 565$), old-midlife (55–65; $n = 766$), old (65–75; $n = 748$), and old-old (75+; $n = 509$). Similar age groups have been used in previous studies (Bach et al., 2004; Newman, Ayoub, Starkey, Diehl, & Wood, 2003; Ochner, Teixeira, Geary, & Asarian, 2013). Underweight participants (BMI < 18.5; $n = 43$) were excluded from the analysis, due to low rates of weight-control dieting, and the rest of the participants were grouped according to weight statuses (healthy weight: 18.5 ≤ BMI < 25; overweight: 25 ≤ BMI < 30; obese: 30 ≤ BMI).

2.4. Missing data handling

Multiple imputations were carried out using SPSS version 25. Five datasets were created, each containing different imputed values for the following variables: age, sex, education, race, weight control diets, BMI (Wave 2, 3), health perception, overweight perception. We predicted weight-control diets with each of the five imputed datasets and with the pooled imputed dataset using the same logistic regression models that were used with the original unimputed data. Analyses of the pooled imputed data (available upon request) were found to be consistent when compared to complete case analyses, except for one difference (described below in the results section) which did not change the direction of the relations between the variables.

3. Results

Participants included 1413 females and 1175 males with a mean age of 64.4(11.1) years and a mean BMI of 28.3(5.9) kg/m^2. Across the entire sample (Table 1), weight-control dieting was positively linked with female gender, younger age, higher BMI, perceived overweight status, and slightly more weight gain during the last 10 years. Among participants with a healthy-weight status (Table 2), rates of dieting

Table 1
Participants' characteristics at Wave 3 ($N = 2588$) and associations between the study's variables[a, b].

	Total sample	1 Female gender	2 Age	3 Race	4 Education	5 BMI	6 Overweight perception	7 BMI change	8 Perceived health
1. Female gender[c] (n, % females)	1413(54.4%)								
2. Age (average, std., range)	64.35(11.09) Range [40–93]	$r = -0.02$ $p = .30$							
3. Race[d] (n, % white)	2366(91.1%)	$\chi^2 = 5.17$ $p = .02$	$r = 0.02$ $p = .36$						
4. Education (average, std., range [years])	14.6(2.6) Range [6–20]	$r = -0.13$ $p < .001$	$r = -0.13$ $p < .001$	$r = -0.01$ $p = .69$					
5. BMI (average, std., range[kg/m^2])	28.3(5.9) Range [18.5–59.5]	$r = 0.001$ $p = .95$	$r = -0.10$ $p \leq .001$	$r = -0.04$ $p = .03$	$r = -0.13$ $p < .001$				
6. Overweight perception[e] (n, %)	1717(66.1)	$\chi^2 = 22.98$ $p < .001$	$r = -0.14$ $p \leq .001$	$\chi^2 = 1.77$ $p = .19$	$r = -0.05$ $p = .01$	$r = 0.56$ $p < .001$			
7. Past BMI change[f] (average, std)	0.37(2.7)	$r = 0.06$ $p = .01$	$r = -0.22$ $p < .001$	$r = 0.02$ $p = .49$	$r = 0.03$ $p = .17$	$r = 0.35$ $p < .001$	$r = 0.30$ $p < .001$		
8. Perceived health[g] (average, std., range)	2.5(1.0) Range: [1–5]	$r = 0.03$ $p = .09$	$r = 0.09$ $p < .001$	$r = -0.08$ $p < .001$	$r = -0.23$ $p < .001$	$r = 0.29$ $p < .001$	$r = 0.15$ $p < .001$	$r = 0.01$ $p = .71$	
9. Dieting[h] (n, %)	375(14.4%)	$\chi^2 = 68.46$ $p < .001$	$r = -0.09$ $p < .001$	$\chi^2 = 0.13$ $p = .72$	$r = 0.03$ $p = .09$	$r = 0.16$ $p < .001$	$\chi^2 = 99.05$ $p < .001$	$r = 0.05$ $p = .03$	$r = 0.02$ $p = .26$

[a] Pearson correlations were computed to examine associations between continuous/categorical variables (age, years of education, BMI) and Chi(World Health Organization, 2000) were computed to examine associations between dichotomous variables (gender, race, overweight perception, perceived health, dieting).
[b] All variables were retrieved from MIDUS Wave 3, except for past BMI change.
[c] Female gender is coded as "1", male gender is coded as "0."
[d] Race is coded as following: "1" (white), "0" (non-white).
[e] Overweight perception is coded as "1", normal weight/underweight perception is coded as "0."
[f] Past BMI change = BMI(Wave 3) – BMI(Wave 2), higher values indicated more weight gain.
[g] Better perceived health is indicated by lower values.
[h] Any dieting ("a lot", "often", "sometimes", "rarely") during the last year is coded as "1", no dieting (i.e., "never") during the last year is coded as "0."

decreased after the age of 55, while among participants with an overweight status (as well as among the entire sample), rates of dieting decreased after the age of 75. Nevertheless, among participants with obesity, rates of dieting were not related to age.

Univariate analyses (Table 3) suggest that Female gender and perceived overweight status were linked with more dieting across all age groups. Higher BMI was linked with more dieting after the age of 55. Perceived health was not linked with dieting in any age group. Multivariate analyses (Table 4) suggest that female gender was linked with higher likelihood of dieting among all age groups. In addition, among people who were 40 to 75 years old, overweight perception was linked with higher likelihood of dieting while health perception was not linked with dieting. In contrast, among old-old people (75+ years old) overweight perception was not linked with dieting while better perceived health was linked with higher likelihood of dieting, such that relative to old-old people with excellent perceived health, those with good perceived health and fair/poor perceived health were less likely to go on a diet. We also tested the same logistic regression models using the pooled imputed data. These regression analyses (available upon request) yield similar significant results as shown in Table 4, except for one difference: among old-old people, better perceived health was linked with higher likelihood of dieting only when comparing those with excellent perceived health to those with fair/poor perceived health (OR = 0.24[0.07–0.83], $p = .02$), but not when comparing those with excellent perceived health to those with good perceived health (OR = 0.43[0.15–1.21], $p = .10$).

4. Discussion

The current study focused on the association of perceived health and perceived overweight status with dieting for weight control in midlife and beyond. Analyses demonstrated two main interesting findings. First, older age was associated with less dieting among participants with healthy weight and overweight (but not among participants with obesity). Second, the impact of perceived health and perceived overweight status on dieting for weight-control varied across age groups. It could be that old-old people with excellent perceived health have more energy and vitality, and hence they are more capable of taking measures (e.g., dieting) to preserve their health.

We found that weight-control diets are prevalent among people in

Table 2
Rates of dieting by age and weight status.

	Healthy weight $n = 806$	Overweight $n = 973$	Obese $n = 786$	Total sample $n = 2565$
40 < age < 55 years, n (%)	24 (13%)[b]	32 (17%)[b]	49 (25%)[a]	105 (19%)[b]
55 < age < 65 years, n (%)	13 (6%)[a]	48 (17%)[b]	61 (25%)[a]	122 (16%)[b]
65 < age < 75 years, n (%)	12 (6%)[a]	41 (14%)[b]	59 (24%)[a]	112 (15%)[b]
Age ≥ 75 years, n (%)	12 (6%)[a]	9 (4%)[a]	15 (16%)[a]	36 (7%)[a]
All participants, n (%)	61 (8%)	130 (13%)	184 (23%)	375 (15%)
Test statistics, *p*-value	$\chi^2 = 10.3$, $p = .016$	$\chi^2 = 19.7$, $p < .001$	$\chi^2 = 3.2$, $p = .36$	$\chi^2 = 28.8$, $p < .001$

Note: Differing superscripts indicate that the absolute values differ significantly among each weight status.

Table 3
Participants' characteristics by dieting for weight-control, stratified by age groups.

	40 < age < 55		55 < age < 65		65 < age < 75		75 < age	
	Dieting	Not	Dieting	Not	Dieting	Not	Dieting	Not
Gender								
% Females	76.0	53.8	73.8	49.4	74.1	49.4	69.4	52.7
Test statistics, *p*-value	$\chi^2 = 17.06, p < .001$		$\chi^2 = 24.49, p < .001$		$\chi^2 = 23.36, p < .001$		$\chi^2 = 3.76, p = .04$	
BMI	29.6	28.4	31.3	28.1	31.3	28.3	29.3	26.6
(Average, std)	(5.1)	(6.4)	(6.6)	(6.1)	(5.8)	(5.8)	(6.9)	(4.5)
Test statistics, *p*-value	$t = 1.95, p = .05$		$t = 5.19, p < .001$		$t = 5.01, p < .001$		$t = 2.29, p = .03$	
Weight status								
% Normal weight	22.1	34.0	10.7	33.7	10.7	30.4	33.3	38.3
% Overweight	30.8	33.6	39.3	37.5	36.6	39.5	25.0	44.2
% Obese	47.1	32.5	50.0	28.8	52.7	30.2	41.7	17.5
Test statistics, *p*-value	$\chi^2 = 9.13, p = .01$		$\chi^2 = 32.44, p < .001$		$\chi^2 = 27.88, p < .001$		$\chi^2 = 13.18, p = .001$	
Overweight perception								
% Overweight	89.2	67.2	91.0	65.5	91.0	66.6	77.8	49.3
Test statistics, *p*-value	$\chi^2 = 19.75, p < .001$		$\chi^2 = 31.39, p < .001$		$\chi^2 = 26.90, p < .001$		$\chi^2 = 10.79, p = .001$	
Health perception (categorical)								
% Excellent	9.6	15.9	9.0	17.9	12.5	15.8	19.4	9.6
% Very good	44.2	41.2	38.5	38.1	31.3	37.9	30.6	31.4
% Good	36.5	28.8	31.1	27.6	38.4	31.9	36.1	37.7
% Fair/Poor	9.6	14.2	21.3	16.5	17.9	14.4	13.9	21.3
Test statistics, *p*-value	$\chi^2 = 5.47, p = .14$		$\chi^2 = 6.75, p = .08$		$\chi^2 = 3.78, p = .28$		$\chi^2 = 3.99, p = .26$	

Note: All variables were retrieved from MIDUS Wave 3.

midlife and beyond. About 15% of our entire sample of females and males reported dieting for weight control. Although it is difficult to compare rates of dieting across samples due to different definitions of weight-control diets and different prevalence of overweight/obesity, our rates appear to be lower than the rates reported in previous studies. For example, Slof-Op't Landt et al. (2017) suggested that as many as about 60% of midlife females and 30% of midlife males reported weight-control dieting. However, these researchers (Slof-Op't Landt et al., 2017) asked participants about lifetime dieting (*"Have you ever gone on a diet to lose weight or to stop gaining weight?"*) while the in MIDUS (Brim et al., 2004) participants were asked about dieting during the previous year. In addition, Mangweth-Matzek et al., (2006) reported that more than half (56%) of their Australian sample of midlife females stated that they restricted their eating to prevent weight gain, and the majority of their sample (86%) reported weight control by various means. Likewise, Yaemsiri et al. (2011) reported that 50% of females and 40% of males (≥55 years) in the USA pursued weight control. One explanation for these different findings may be that the two aforementioned surveys (Mangweth-Matzek et al., 2006; Yaemsiri et al., 2011) addressed a variety of weight-control methods, including exercising and unhealthful behaviors (Elran-Barak, 2019), while our study concentrated on weight-control diets. Additionally, it could be that the specific wording used in MIDUS to assess weight-control diets influenced the reported prevalence.

Our study is one of the first studies to report differences in rates of weight-control diets from midlife and beyond. Slof-Op't Landt et al. (2017), who studied dieting across the lifespan among a large community sample from the Netherlands, suggested that among females, rates of weight-control diets increased from early adolescence (13–16 years) to midlife (45–55 years) and decreased thereafter (> 55 years). Nevertheless, this aforementioned study (Slof-Op't Landt et al., 2017) did not distinguish between different age groups of people in the older-than-55 age range. We demonstrated that indeed, rates of weight-control diets tended to decrease during the transition from midlife to older adulthood, but this decrease in dieting rates was significant only among people with healthy weight and overweight status, not among people with obesity. People with obesity demonstrated a high rate of weight-control diets throughout their adult life. One potential explanation for this finding could be that the motivation behind dieting shifts during adult life, for example - from motivations that are appearance-related to motivations that are health-related. Relatedly, while there appears to be some protective health effect associated with

Table 4
Logistic regression to predict weight-control dieting, stratified by age groups.

	40 < age < 55 OR [95% CI]	55 < age < 65 OR [95% CI]	65 < age < 75 OR [95% CI]	75 < age OR [95% CI]
Gender				
Males	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)
Females	2.58 [1.47–4.54]**	2.86 [1.79–4.60]***	2.54 [1.54–4.21]***	2.93 [1.24–6.91]*
Overweight perception				
Under/healthy weight	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)
Overweight/obese	3.94 [1.70–9.1]**	4.11 [1.91–8.82]***	4.50 [1.90–10.65]**	2.19 [0.79–6.05]
Health perception				
Excellent	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)
Very good	1.36 [0.60–3.10]	1.54 [0.74–3.22]	0.93 [0.44–1.96]	0.35 [0.11–1.04]
Good	1.16 [0.48–2.82]	1.14 [0.52–2.48]	1.29 [0.61–2.71]	0.29 [0.09–0.87]*
Fair/poor	0.49 [0.15–1.65]	1.46 [0.62–3.48]	0.62 [0.23–1.61]	0.12 [0.03–0.54]**

Adjusted for BMI (Wave 3), Past BMI change (during the last 10 years), education, age, and race.
All variables were retrieved from MIDUS Wave 3, expect from Past BMI change = BMI(Wave 3)-BMI (wave 2).
* $p < .05$.
** $p < .01$.
*** $p < .001$.

older adults being overweight, it seems clear that obesity exacerbates the age-related decline in physical health in older adults (Rejeski, Marsh, Chmelo, & Rejeski, 2010; Villareal et al., 2011; Villareal, Apovian, Kushner, & Klein, 2005). Therefore, it is not surprising that people with obesity demonstrated high rates of self-reported dieting across the adult lifespan.

As expected, younger participants (40–75 years) who perceived themselves as overweight were about four times more likely to go on weight-control diets in comparison to their counterparts who did not perceive themselves as overweight. Previous studies have already demonstrated similar associations (Atlantis et al., 2008; Kim, 2007). For example, Yaemsiri et al. (2011) report that overweight self-perception is the most important predictor of the desire to lose weight, and of the pursuit of weight-control behaviors. However, we also found that among participants who were 75 and older, overweight perception did not make a significant contribution to dieting. This finding emphasizes that the motivation behind dieting may change across the lifespan. While among midlife adults, overweight perception plays a dominant role in the decision to go on diets, the data show that completely different factors (e.g., physical health) may impact the decision to go on diets among older adults (75+ years old).

Analyses indicated that perceived health was significantly related to weight-control dieting only among old-old people, such that among this age group, those with better perceived health were *more* likely to go on diets relative to those with worse perceived health. Studies about the role of perceived health in health behaviors (Bennett et al., 2009; Fillenbaum et al., 2007; Gallant & Dorn, 2001) have suggested a bi-directional link, such that people with improved perceived health may be more likely to engage in health behaviors, and these health behaviors can potentially improve their health. It could be that old-old people (75+ years of age) who perceive their health as fair/poor do not have the energy required to go on weight-control diets due to their medical and/or physical conditions. Additionally, it could also be that among old-old participants, being on weight-control diets improves one's perceived health (for example, due to healthier eating habits). Future studies may use prospective designs with shorter follow-up periods in order to determine direction of causation between perceived health and dieting.

People may be motivated to go on weight-control diets for various reasons (Putterman & Linden, 2004), including dieting out of concern for one's health (e.g., concerns about chronic illnesses such as diabetes or heart disease) as opposed to appearance reasons (e.g., body dissatisfaction, weight/shape concerns). The literature suggests that as people age, they tend to put less emphasis on appearance and body image as other domains, such as health, become more dominant (Lewis & Cachelin, 2001). At the same time, health-related concerns tend to *escalate* with increasing age, and specifically among the old-old (French, Sargent-Cox, & Luszcz, 2012), explaining why health perception may be linked with dieting only among older adults. Indeed, Putterman & Linden (2004), who looked at reasons for dieting, have already indicated that individuals who were motivated to change their appearance through dieting were younger than those dieting to improve their health. Although our study did not ask participants why they went on weight-control diets, and although we did not have any direct information about appearance-related motivations for dieting, our findings may still support the understanding that the motivations behind weight-control diets change over the course of the adult lifespan. While perceived overweight status (which may be linked with appearance-related motivations) tends to have a stronger impact on dieting during younger age, perceived health tends to have a stronger impact on dieting during older age.

While this study has multiple strengths (e.g., the use of a nationally representative study) it also has several limitations. First, as mentioned, one limitation is its cross-sectional design and its use of self-reported BMI rather than height and weight obtained from medical records. Nevertheless, the correlation between self-reported and measured BMI was high ($r = 0.92, p < .001$), indicating reliable self-reports. Second, the vast majority of participants were white (91%) and other ethnic/racial groups (e.g., African Americans, Hispanics) were under-represented. Third, participants were asked to report whether they went on weight-control diets, but information regarding their actual caloric intake and the specific dieting behavior they engaged in were unavailable. Relatedly, there could be social desirability bias or recall bias in terms of who reported weight-control diets. Finally, we recognize the large number of analyses conducted, a factor which increases the likelihood of a Type I error.

In summary, this study confirmed that rates of weight-control dieting tend to decrease with age, but not among people with obesity. Furthermore, it extended previous studies by suggesting that correlates of weight-control diets may change over the course of the adult lifespan. Findings from the current study, in addition to contributing to the understanding of the characteristics of older people who try to lose weight, may also help identify populations at risk for over or under engagement in weight-loss attempts. For example, data suggest that up to 22% of people in midlife (40–55 years) who go on weight-control diets have healthy weight, suggesting that their weight-control diets may be unnecessary and potentially even be unhealthful (Elran-Barak, 2019). Findings may also inform healthcare providers, by stressing that it is important to gain knowledge about weight-control diets among older adults (e.g., specific risks associated with dieting in older age) as people continue to go on weight-control diets across the entire adult lifespan. Additional studies using prospective designs with short follow-up periods and samples that include various ethnic/racial groups are needed to capture the precise reasons for dieting, and the impact of these reasons on dieting outcomes across the lifespan.

CRediT authorship contribution statement

Roni Elran-Barak:Conceptualization, Methodology, Software, Validation, Formal analysis, Investigation, Writing - original draft, Writing - review & editing.**Dikla Segel-Karpas**:Conceptualization, Methodology, Validation, Writing - review & editing.

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