

Psychometric properties of the Checklist for Healthy Dieting in young women

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1. Introduction

Currently, the number of Japanese young adult women who are underweight has increased (Ministry of Health, Labour and Welfare, 2014). This trend is accounted for by unhealthy dieting behavior and overeating due to a drive for thinness; therefore, the promotion of healthy eating is necessary.

Dieting and dietary restraint are similar but not equivalent concepts, and not all dieters restrict their eating *per se*. Furthermore, researchers usually use two types of self-report measurements: a single question about dieting status: “Are you trying to lose weight at present?” (yes/no), and scales consisting of continuous items. Those who answer “yes” to the former question are known as “intentional dieters”; dieting is defined as intentionally and consciously reducing dietary intake to achieve or maintain a desired weight or figure. Rideout and Barr (2009) showed that the body mass index (BMI) of dieters, i.e., intentional dieters, was higher than that of non-dieters. On the other hand, the BMI of restrained eaters, with scores equal to or above the median on the Three-Factor Eating Restraint Questionnaire, was found to be lower than that of unrestrained eaters. Dieters scored higher on disinhibition, but disinhibition scores of restrained eaters did not differ from those of unrestrained eaters. It is thus necessary to discriminate between dieting,

regarded as intentional dieting, and actual dietary restraint, it is regarded as the practice of dieting by way of healthy eating. This may provide insight into healthy and successful weight management.

This study had two purposes. Firstly, we investigated healthy diet strategies, developed a checklist to assess healthy eating, and confirmed its factor structure, reliability, and content validity. Secondly, we examined the relationships between healthy eating strategies, drive for thinness, and overeating tendencies in terms of the differences between intentional dieting and the practice of healthy eating. Dieting in this study was defined as strategies to achieve or maintain a desired weight or figure.

2. Methods

We gathered items of healthy eating strategies from 164 women, aged 18–34 years, using an open-ended online survey and obtained 226 items as an initial item pool. Subsequently, two psychologists with Ph.D. ordered and selected 22 items in terms of their relevance and representativeness of healthy eating, composing the Checklist for Healthy Dieting (CHD). To establish the content validity of the CHD items, experts within the field of health behaviors (one psychiatrist, one nutritionist, one psychologist with Ph.D., and one clinical psychologist with Ph.D.) evaluated the instructions and contents of the CHD items.

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The 22-item CHD was administered to 318 women, aged 20–34 years, in an online survey including the following sections: 1) Dieting: a single question to assess current intentional dieting, “Are you dieting at present?” (yes/no); 2) The CHD with the instructions comprising two sentences, “How often do you do the following? Please choose the answer that best corresponds to your current situation”, and each item being scored on a 6-point Likert-type scale, ranging

from 1 (Never) to 6 (Always); 3) The overeating subscale of the Eating Disorder Inventory (Nagata et al., 1994); 4) The Drive for Thinness Scale (Baba & Sugawara, 2000); and 5) Demographic information: age, sex, height, weight.

3. Results

The results of a factor analysis confirmed that

Table1 Factor loadings for the Checklist for Healthy Dieting (CHD)

CHD Items	Factor loadings
15 I try to include low-calorie ingredients, such as mushrooms, seaweed, and konjak, in my diet.	.78
9 I eat in moderation.	.75
7 I mostly eat Japanese food.	.72
8 I control the amount of carbohydrates, such as rice, noodles, bread and “okonomiyaki,” that I consume.	.72
11 I eat plenty for breakfast and lunch, and then have small suppers.	.70
13 I eat slowly and chew thoroughly.	.69
17 I use a wide variety of ingredients in my dishes.	.68
5 I try not to drink too many sweetened beverages, such as juice, soft drinks and milk tea.	.66
4 I try not to eat too many fast and instant foods.	.65
3 I try not to eat too many fried foods, such a fried chicken and tempura.	.64
6 I eat more fish than meat.	.63
1 I keep track of calories when I eat.	.63
2 I try not to eat too many sweets, such as chocolates and cakes.	.59
14 I eat my food in a certain order, such as eating salad first.	.59
10 I eat supper relatively early, such as before 19:00.	.58
18 I consume plenty of water and green tea.	.56
16 I keep a record of what I eat.	.53
20 I always eat my meals at the same time.	.52
22 I avoid eating while doing something else, such as watching television or using my smartphone.	.51
19 I control my alcohol intake.	.46
21 I try to cook at home rather than eating out.	.44
12 I don't have midnight snacks.	.40

Table 2 Differences in drive for thinness and overeating between intentional dieters and non-dieters with high scores

CHD	Total sample	Intentional dieters		Non dieters	
		High	Low	High	Low
<i>N</i> (%)	318 (100%)	113 (35%)	77 (24%)	40 (13%)	88 (28%)
Drive for thinness	33.76 ± 11.56	39.42 ± 8.51*	34.36 ± 11.23	28.13 ± 11.31	28.51 ± 11.91
Overeating	16.70 ± 8.38	19.35 ± 9.33*	17.05 ± 7.09	13.05 ± 6.92	14.65 ± 7.66

Note. CHD: Checklist for Healthy Dieting.

Participants were classified as intentional dieters if they answered “yes” to the question, “Are you dieting at present?” and as having high CHD scores if they scored at or above the mean CHD score of 64.

* $p < .05$

the 22 CHD items loaded on a single factor (Table 1), which accounted for 40.85% of the variance. The checklist also showed high internal consistency ($\alpha = .92$).

The results of a correlation analysis showed a weak association between CHD scores and drive for thinness ($r = .32, p < .001$) and overeating ($r = .22, p < .001$).

Mean BMI for the total sample was 20.84 ($SD = 4.45$); 190 women reported dieting at the time of the survey, i.e., intentional dieters, and 128 were non-dieters (Table 2). The intentional dieters (70.88 ± 21.06) obtained significantly higher scores on the CHD than did the non-dieters (55.07 ± 18.93) ($t(316) = 6.83, p < .001$).

Furthermore, members of these two groups were assigned to either a high- or low-score group based on their CHD scores. A two-factor analysis of variance (dieter/non-dieter \times high/low CHD) revealed significant interactions between both factors for drive for thinness ($F(1, 314) = 4.57, p < .05$) and overeating ($F(1, 314) = 4.00, p < .05$), and a simple main effect indicated that the overeating scores of intentional dieters were higher than those of non-dieters for those with high CHD scores. In terms of drive for thinness, scores of intentional dieters were also higher than those of non-dieters for those with high CHD scores.

4. Discussion

Results demonstrated sufficient reliability and content validity of the CHD, and suggest that the CHD consisting of one factor is useful to assess healthy eating strategies and the practice of dieting behavior. Additionally, it is likely that the scores will differ between individuals with actual dietary restraint and intentional dieting. As the mean CHD score of non-dieters was 55.07, this indicates that some non-dieters practice healthy eating as useful approach to dieting naturally. Our results suggest that some non-dieters, 13% in this study, practice dieting behaviors by way of healthy eating without dieting intentionally.

Furthermore, our findings suggest that even if healthy eating that is useful to lose or maintain weight, intentional dieting is associated with a higher drive for thinness and overeating in women. In view of this, interventions on intentional dieting would be helpful to prevent overeating. Our results are useful for designing such interventions.

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