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SHORT COMMUNICATION

Characteristics of adults with overweight/obesity and high internal disinhibition: do they fit with targets for acceptance-based interventions?

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Summary

Objective

Adults with overweight/obesity reporting high levels of internal disinhibition (ID) tend to do poorly in standard behavioural weight loss programmes. The current study sought to compare a sample of individuals with overweight/obesity selected on the basis of high ID with an unselected treatment-seeking sample of adults with overweight/obesity on characteristics that might make acceptance-based treatments particularly appropriate for those with high ID.

Methods

Sample 1 included 162 treatment-seeking adults with overweight/obesity who were selected for high ID; sample 2 included 194 unselected treatment-seeking adults with overweight/obesity. First, the two samples were compared on levels of general and weight-related experiential avoidance, and values-consistent behaviour, both of which are targeted in acceptance-based treatments, and on other general psychological characteristics. Next, the unselected sample was split into two groups, those meeting criteria for high (N = 105; sample 2/high ID) vs. low (N = 89; sample 2/low ID) ID, and the three groups were compared on the same characteristics.

Results

Sample 1 reported higher levels of both general and weight-related experiential avoidance as well as less values-consistent behaviour than sample 2. They reported greater psychological impairment in quality of life, depression and anxiety. Within sample 2, 54% met the criteria for high ID. Both sample 1 and sample 2/high ID reported higher levels of experiential avoidance and less values-consistent behaviour than did the sample 2/low ID. The two high ID samples also reported greater psychological impairment in quality of life, depression and anxiety than sample 2/low ID.

Conclusions

Adults with overweight/obesity who report high levels of ID were characterized by higher levels of experiential avoidance, lower levels of values-consistent behaviour, and more psychosocial impairment as compared with other adults with overweight/obesity. As these are important targets of acceptance-based approaches, this subgroup may benefit from the integration of such approaches into behavioural weight loss programmes.

Keywords: Acceptance-based treatment, behavioural weight loss, internal disinhibition, obesity.

Introduction

Overweight and obesity continue to be significant public health concerns affecting two-thirds of the adult population and contributing to serious medical conditions that are estimated to take the lives of 365,000 Americans and cost the $US147bn per year (1,2).

Behavioural weight loss programmes typically produce average weight losses between 5% and 10% and remain the initial treatment of choice for individuals who are overweight or obese (3). However, there is considerable variability in weight loss outcomes, with standard deviations in weight losses as large as the mean (3). Innovations in assessment and treatment are needed to improve weight loss for individuals who have a poor response to treatment.

Individuals who report eating in response to emotional states (referred to as emotional eating, stress eating or disinhibited eating depending on the measure used) achieve poorer initial weight losses and have more difficulty with weight loss maintenance (4–6). Niemeier *et al*. (6) found that these individuals can be identified using a subscale of the commonly used Disinhibition Scale of the Eating Inventory, which focuses on internal disinhibition (ID) and includes just eight items. In several samples, ID, but not external disinhibition (ED; eating in response to social or food cues), has been shown to predict weight-related outcomes (6,7). Given that ID could be an important predictor of poor response to standard behavioural treatment, an alternative approach may be warranted for a high ID subgroup.

Newer generation cognitive–behavioural approaches such as Acceptance and Commitment Therapy offer alternative strategies for addressing cognitive and emotional barriers to healthy living experienced by individuals reporting high ID (8). These acceptance-based interventions shift the focus from changing problematic thoughts and feelings to being more mindfully aware and accepting of them in the service of engaging in behaviour that is consistent with personal values and life goals (9,10). For example, when dealing with stress-related eating, an acceptance-based approach might teach skills to better identify stress, openly embrace it and practice taking values-based action while stress was present (e.g. making a healthier food choice and engaging in non-sedentary behaviour). The overarching goal of acceptance-based interventions is to reduce experiential avoidance, or excessive attempts to control unwanted cognitive and emotional experiences, which has been shown to be a common core process in psychosocial dysfunction (9). Acceptance-based approaches stand in contrast to the cognitive 'control' strategies found in standard behavioural interventions, such as distraction or refocusing, which have been shown to be less helpful for dealing with food cravings and food consumption amongst individuals who report high levels of emotional eating (11).

Recent research suggests that acceptance-based interventions could be helpful for individuals who tend to eat in part to manipulate their emotional states. In a randomized controlled trial comparing standard behavioural weight loss (SBT) with an acceptance-based weight loss intervention (ABT), ABT achieved significantly better weight losses than SBT in those who reported high levels of disinhibition (not separated into internal vs. external) and emotional eating at baseline, but not in the overall sample (12). Furthermore, positive results of using an acceptance-based behavioural weight loss approach were reported in a pilot study with individuals who were overweight/obese and who scored high on the ID subscale, with weight losses averaging 12.0 kg after 6 months of treatment (13). This preliminary evidence suggests that acceptance-based strategies could be helpful for individuals who report high ID. However, there currently is no research examining characteristics of a high ID sample in relation to typical targets of acceptance-based interventions.

The goal of this study was to determine whether individuals with overweight/obesity and with high ID have characteristics that might make an acceptance-based approach particularly appropriate for them. To address this, two samples of treatment-seeking individuals with overweight/obesity were studied: one that was recruited based on their self-report of high levels of ID and a second general, unselected sample of treatment-seeking participants. First, these two groups were compared on measures relevant to acceptance-based treatments and on general psychological characteristics. It was hypothesized that individuals selected for high ID would report high levels of experiential avoidance and low levels of values-consistent behaviours relative to the unselected sample of individuals with overweight/obesity. In addition, it was hypothesized that individuals selected for high levels of ID would report higher levels of psychological symptoms and lower quality of life than the comparison individuals. Next, the percentage of the unselected sample that would meet criteria for high ID was determined, and those in the unselected sample with high vs. low ID scores were compared with each other and with the sample selected for high levels of ID. It was hypothesized that individuals high on ID from both samples would be similar to each other and both would differ from those with low ID on experiential avoidance, values-consistent behaviours, psychological symptoms and quality of life.

Methods

Participants

Sample 1 recruitment

Participants included 162 individuals who were of age 18–70 years with a body mass index (BMI) of 30–50 recruited to participate in a behavioural weight loss programme. Participants needed to meet criteria for high ID, as indicated by a score of 4 or greater for men and 5 or greater for women on the ID subscale of the Eating Inventory. Initially, a cut-off of 5 or greater was selected to define high internal distribution across gender based on a prior study showing that individuals scoring 5 or higher on the ID scale in a standard intervention trial had poorer weight loss at 18 months (4.8 vs. 7.6 kg) (13). However, initial screening demonstrated that men were being disproportionately excluded owing to the ID cut-off (33% of men excluded vs. 17% of women); thus, the cut-off for men was changed to 4. This is consistent with recent research that shows that the norms for men on all of the primary subscales of the Eating Inventory are lower than those for women (14).

Advertisements in local newspapers targeted those likely to endorse ID with such statements as 'Do you have trouble controlling your eating when stressed?' and 'Would you consider yourself an emotional eater?'

Sample 2 recruitment

Participants included 194 individuals who were of age 18–70 years with a BMI of 27.5–45 to participate in a behavioural weight loss programme. Participants were not selected for a specific characteristic. Advertisements in local newspapers targeted individuals who were interested in long-term weight loss with such statements as 'Do you want to lose weight and keep it off?' and 'Have you lost weight in the past but found that you have gained the weight back?' Initial analyses were conducted using the entire sample. Next, this sample was divided into sample 2/high ID and sample 2/low ID. Sample 2/high ID met the recruitment criteria for the aforementioned sample 1, a score of 4 or greater for men and 5 or greater for women on the ID subscale of the Eating Inventory. Sample 2/low ID had ID scores below 4 for men and 5 for women.

Samples 1 and 2 exclusion criteria

The assessments used in this study were taken from data collected at baseline from participants in two ongoing randomized controlled trials. For both samples, participants with medical conditions that precluded exercise, serious current psychological disorders (e.g. schizophrenia and bipolar), pregnancy or planned pregnancy, and logistical or behavioural issues that precluded participation in a face-to-face behavioural weight loss programme were excluded. Protocol approval was obtained from the Miriam Hospital Institutional Review Board, and all participants gave written informed consent.

Measures

The following assessment measures were obtained at baseline for both sample 1 and sample 2.

Demographic information

Participants were asked to self-report their age, gender, race/ethnicity, highest education level attained and family income.

Body mass index

Height was measured to the nearest 0.1 cm using a wall-mounted stadiometer. Body weight in light clothing and no shoes was measured to the nearest 0.1 kg on a digital scale. These were used to calculate BMI.

Internal and External Disinhibition Scales

The Disinhibition Scale of the Eating Inventory (15) has been shown to be composed of two separate subscales (6). The ID scale is an 8-item subscale that assesses tendency to eat in response to emotional or cognitive cues; the ED scale is a 6-item subscale that assesses the tendency to eat in response to social or food cues. Previous research has demonstrated good validity for the both the ID and ED scales (6). Higher scores indicate more ID and ED.

Acceptance and Action Questionnaire-II

The Acceptance and Action Questionnaire-II (AAQ-II) is a seven-item questionnaire that assesses general experiential avoidance (16). Higher scores indicate more experiential avoidance, which suggests a tendency to try to change, control or get rid of unwanted thoughts, feelings or bodily sensations when doing so causes harm. The AAQ-II has good reliability and validity and is associated with a wide range of psychosocial and behavioural health outcomes (16).

Acceptance and Action Questionnaire-Weight

The Acceptance and Action Questionnaire-Weight (AAQ-W) is a 22-item questionnaire that assesses experiential avoidance related to body weight, food and eating (17). Higher scores indicate more weight-related experiential avoidance. The AAQ-W has demonstrated good reliability and validity (17).

Bull's Eye

The *Bull's Eye* assesses the ability to take action consistent with one's stated values and goals (18). Participants identify their personal values and goals in four areas (health, relationships, work and leisure) and then indicate on a dartboard how consistent their behaviour has been with those stated values and goals, with marks closer to the centre indicating greater consistency. Marks are converted into a Likert scale from 1 to 7, with higher scores indicating greater consistency of behaviour to stated values. The Bull's Eye has shown good reliability and validity (18). The Bull's Eye can give general context to how participants perceive they are functioning in important domains based on their own values and goals.

PROMIS Initiative Short Forms

Depression, anxiety, quality of life and satisfaction with relationships were assessed using standardized measures from the National Institutes of Health PROMIS (Patient-Reported Outcomes Measurement Information System) initiative (19). The *Depression-Short Form* measures depression using four self-report, Likert scale items. Higher scores indicate more depression. The *Anxiety-Short Form* measures anxiety using four self-report Likert scale items. Higher scores indicate more anxiety. The *PROMIS Global* form is a 10-item self-report measure that assesses physical and mental quality of life. Higher scores indicate better quality of life. The *Satisfaction with Relationships-Short Form* measures relationship satisfaction using four self-report Likert scale items. Higher scores indicate greater satisfaction with relationships. PROMIS measures are well established with population norms and good validity (19).

Analyses

First, samples 1 and 2 were compared on demographic characteristics, acceptance-based treatment targets and psychological characteristics. Next, sample 2 was split into sample 2/high ID and sample 2/low ID (refer to Participants section), and the three groups were compared on the same variables. For categorical variables, including gender, race/ethnicity, highest education and income, Pearson chi-square analyses were used for both the two- and three-sample comparisons. In the two-sample comparison, *t*-tests were used for independent samples for the continuous variables. In the three-sample comparison, for the continuous variables, the analyses were run in two ways. First, one-way ANOVAs with planned comparisons amongst the three groups were used with the Bonferroni adjustment. Next, ANCOVAs were used, controlling for the demographic variables that were significantly different (or approached significance) amongst the three groups (BMI, age, gender and income), with planned comparisons amongst the three groups using Bonferroni adjustment. Results remained unchanged when BMI and demographic variables were controlled for, so only unadjusted results from the one-way ANOVAs are presented. An α of 0.05 was used for significance. Statistical analyses were performed using SPSS STATISTICS, version 22.

Results

Demographic characteristics and anthropometrics

Comparison of samples 1 and 2

As shown in Table 1, both samples 1 and 2 were predominantly female and Caucasian with sample 1 having a significantly higher proportion of women than sample 2. Sample 1 was significantly younger than sample 2. The samples did not differ on self-reported racial/ethnic background, or educational attainment. Both samples were relatively well educated with the majority reporting middle income; sample 2 had more participants in the highest-income group. The samples did not differ on BMI with sample 1 having a mean BMI of 37.6 and sample 2 having a mean BMI of 35.8, although the difference approached significance ($p = 0.08$).

Three-sample comparison

Within sample 2, 54% of the sample met criteria for high ID (score of 4 or greater for men and 5 or greater for women). Thus, for the three-sample comparisons, sample 2/high ID consisted of 105 participants and sample 2/low ID consisted of 89 participants. Table 1 shows the demographic characteristics of these two subgroups and compares them with each other and with sample 1. Sample 2/low ID had a higher representation of men than either of the high ID groups. The samples did not differ on self-reported racial/ethnic background, or educational attainment. The three samples did not differ on BMI,

Table 1 Comparison between sample 1 (high ID sample) and sample 2/high ID and sample 2/low ID on demographic variables

	Sample 1 (*N* = 162)	Sample 2 (*N* = 194)	Sample 2 high ID (*N* = 105)	Sample 2 low ID (*N* = 89)	2 group comparison		3 group comparison	
					F/χ^2	*p*	F/χ^2	*p*
Age (M)	50.2[a] (10.9)	54.8 (10.9)	54.9[b] (10.2)	54.8[b] (11.8)	−3.97	<0.0001	7.84	<0.0001
BMI (M)	37.6 (5.3)	35.8 (11.9)	36.7 (15.6)	34.8 (4.9)	1.74	0.08	2.53	0.08
Gender (%)						0.02	9.99	0.007
Female	85.2	75.3	81.0	68.5				
Male	14.8	24.7	19.0	31.5				
Race/ethnicity (%)					3.4	0.64	14.0	0.171
Caucasian	88.3	89.7	91.4	87.6				
Hispanic/Latino	5.6	2.6	0	5.6				
African American	3.7	3.6	5.7	1.1				
Native American	0.6	0.5	0	1.1				
Asian American	0	0.5	1.0	0				
Other/mixed race	1.9	3.1	1.9	4.5				
Highest education (%)					5.97	0.20	10.7	0.22
High school	7.5	5.2	2.9	8.0				
Vocational training	5.7	1.6	0	3.4				
Some college	22.0	23.3	25.7	20.5				
College/university degree	36.5	36.3	35.2	37.5				
Graduate or professional	28.3	33.7	36.2	30.7				
Income (%)					14.8	0.011	22.78	0.012
$0–$25,000	9.9	6.4	7.8	4.7				
$25,001–$50,000	23	15.0	13.7	16.5				
$50,001–$75,000	24.8	21.4	26.5	15.3				
$75,001–$100,000	21.1	25.1	26.5	23.5				
$100,001–$125,000	13.7	12.3	10.8	14.1				
>$125–$000	7.5	19.8	14.7	25.9				

Note. Different superscripts indicate mean differences in three-sample planned comparisons using Bonferroni adjustment.
BMI, body mass index; ID, internal disinhibition.

although the omnibus F approached significance ($p = 0.08$). The Bonferroni-adjusted tests for mean differences were not significant.

Acceptance-based treatment targets

Table 2 shows the means, standard deviations and group differences for the two- and three-sample comparisons on the AAQ-II, AAQ-W and Bull's Eye subscales.

Two-sample comparison (Table 2)

As hypothesized, sample 1 reported higher levels of experiential avoidance and weight-related experiential avoidance than sample 2. In addition, they reported that their behaviours were less values consistent than did sample 2 in work, relationships, health and leisure.

Three-sample comparison (Table 2)

In both experiential avoidance and weight-related experiential avoidance, sample 2/high ID was similar to sample 1, and both were significantly higher on avoidance than sample 2/low ID. The same pattern emerged for values-consistent behaviour in the realms of work, relationships and leisure with sample 1 and sample 2/high ID reporting significantly less values-consistent behaviour than sample 2/low ID. In the area of health, sample 2/high ID did not differ from either sample 1 or sample 2/low ID, while sample 1 reported significantly less values-consistent behaviour than sample 2/low ID.

Psychological characteristics

Table 3 shows the means, standard deviations and group differences on ID and ED, and the PROMIS subscales for sample 1, sample 2, sample 2/high ID and sample 2/low ID.

Two-sample comparison (Table 3)

As expected, given the inclusion criteria, sample 1 reported higher levels of ID than sample 2; they also reported higher levels of ED. Sample 1 also reported lower mental and

Table 2 Comparison between samples on acceptance-based treatment targets

	Sample 1 (*N* = 162)		Full sample 2 (*N* = 194)		Sample 2 high ID (*N* = 105)		Sample 2 low ID (*N* = 89)		2 group comparisons		3 group comparisons	
	M	SD	*M*	SD	*M*	SD	*M*	SD	*t*	*p*	*F*	*p*
Experiential avoidance												
General (AAQ-II)	21.8[a]	7.8	17.5	8.0	19.9[a]	7.7	14.8[b]	7.7	4.97	<0.0001	23.05	<0.0001
Weight-related (AAQ-W)	90.3[a]	17.5	77.5	18.6	85.4[a]	16.7	68.3[b]	16.5	18.6	<0.0001	49.55	<0.0001
Values-consistent behaviour (Bull's Eye)												
Work/education	3.9[a]	1.7	4.4	1.9	4.1[a]	1.9	4.8[b]	1.8	−2.33	0.02	6.86	0.001
Relationships	3.9[a]	1.7	4.4	1.8	3.9[a]	1.9	4.8[b]	1.7	−2.14	0.03	8.57	<0.0001
Health	2.2[a]	1.3	2.7	1.4	2.5[ab]	1.4	3.0[b]	1.5	−3.85	<0.0001	9.81	<0.0001
Leisure	2.8[a]	1.5	3.5	1.8	3.1[a]	1.7	4.1[b]	1.8	−4.23	<0.0001	17.38	<0.0001

Note. Different superscripts indicate mean differences in three-sample planned comparisons using Bonferroni adjustment.
AAQ-II, Acceptance and Action Questionnaire-II; AAQ-W, Acceptance and Action Questionnaire-Weight; ID, internal disinhibition; SD, standard deviation.

Table 3 Comparison between samples on psychological characteristics

	Sample 1 (*N* = 162)		Full sample 2 (*N* = 194)		Sample 2 high ID (*N* = 105)		Sample 2 low ID (*N* = 89)		2 group comparisons		3 group comparisons	
	M	SD	*M*	SD	*M*	SD	*M*	SD	*t*	*p*	*F*	*p*
Internal disinhibition	6.2[a]	1.6	4.4	2.3	6.2[a]	1.3	2.35[b]	1.4	8.19	<0.0001	246.31	<0.0001
External disinhibition	4.6[a]	1.2	3.7	1.6	4.8[a]	1.5	3.0[b]	1.5	5.98	<0.0001	39.76	<0.0001
Quality of life (PROMIS)												
Physical health QOL	14.6[a]	2.0	15.3	2.3	15.0[ab]	2.4	15.7[b]	2.1	−3.28	0.001	7.64	0.001
Mental health QOL	13.0[a]	2.4	14.5	2.9	13.8[a]	2.9	15.4[b]	2.6	−5.20	<0.0001	24.14	<0.0001
Depression (PROMIS)	7.6[a]	3.4	6.4	3.1	7.1[a]	3.3	5.6[b]	2.6	3.39	0.001	11.42	<0.0001
Anxiety (PROMIS)	8.6[a]	3.0	7.3	3.0	8.2[a]	3.0	6.2[b]	2.7	4.01	<0.0001	19.25	<0.0001
Satisfaction with relationships (PROMIS)	15.2[a]	3.4	16.1	3.5	15.2[a]	3.6	17.1[b]	3.0	−2.35	0.019	10.56	<0.0001

Note. Different superscripts indicate mean differences in three-sample planned comparisons using Bonferroni adjustment.
ID, internal disinhibition; PROMIS, Patient-Reported Outcomes Measurement Information System; SD, standard deviation.

physical quality of life, less satisfaction with relationships and fewer coping skills. In addition, they reported higher levels of depression and anxiety than did sample 2.

Three-sample comparison (Table 3)

Sample 1 and sample 2/high ID did not differ from each other and reported higher levels of ID than did sample 2/low ID; these two samples also reported higher levels of ED than did sample 2/low ID. Sample 1 and sample 2/high ID did not differ from each other but reported lower mental quality of life, less satisfaction with relationships and higher levels of both depression and anxiety than did sample 2/low ID. Sample 2/high ID did not differ from either sample 1 or sample 2/low ID in the area of physical quality of life. Sample 1 reported lower physical quality of life than did sample 2/low ID.

Discussion

The current study examined the demographic, psychological and behavioural characteristics of a behavioural weight loss treatment-seeking sample of individuals with overweight/obesity reporting high levels of ID, a risk factor for poor response to standard behavioural weight loss treatment (6,7). First, this high ID sample was compared with an unselected treatment-seeking sample. Next, the unselected sample was divided into two subgroups, those meeting vs. not meeting the criteria for high ID. Of note, just over half of the unselected treatment-seeking

sample reported high levels of ID. As hypothesized, both groups of participants with high ID reported higher levels of general and weight-related experiential avoidance, and less values-consistent behaviour in the domains of work, relationships and leisure compared with the sample of participants reporting low levels of ID.

The high levels of experiential avoidance reported amongst individuals across samples who reported high ID suggest that they may be using food as an unhealthy coping strategy to try to change or influence their thoughts, feelings or bodily sensations. Previous research has demonstrated that the relationship between experiential avoidance and disinhibition (not distinguished by internal vs. external) in individuals who are overweight/obese was accounted for by expectations that eating will alleviate distress (20). Acceptance-based interventions attempt to undermine such coping strategies by teaching individuals how to be more mindful and open, allowing for more flexible behaviour (e.g. choosing a healthier food and exercising) even when negative cognitions or emotions are present. In a previous pilot study of participants who were overweight and reporting high levels of ID, greater decreases in weight-related experiential avoidance predicted better weight loss outcomes (13). The lower levels of reported values-consistent behaviour suggest that both of the high ID samples are having more difficulty living in accordance with their own desired ideals. Acceptance-based interventions also focus on values commitment even in the presence of difficult barriers and could help promote greater behaviour-values congruence by clarifying the link between everyday health choices and the broader context of desired living across multiple life domains. Taken together, acceptance-based strategies that focus on reducing experiential avoidance and increasing values-consistent behaviour may be particularly appropriate for individuals with overweight/obesity who report high ID.

Participants in both high ID samples also reported more psychological impairment as evidenced by lower physical and mental quality of life, and higher depression and anxiety, as compared with demographically similar participants. These findings are consistent with the robust literature showing that experiential avoidance is associated with a range of poor psychosocial functioning (9,10,16). In addition, our previous work has shown that experiential avoidance is associated with poorer mental and physical quality of life in individuals with overweight/obesity and high ID (21). It is unclear from this and previous cross-sectional work whether individuals with poorer quality of life experience more distress and, therefore, engage in more experiential avoidance, or whether experiential avoidance itself leads to poorer quality of life. It may be that targeting experiential avoidance in the context of a behavioural weight loss programme will have benefits beyond weight loss in this group and may positively impact quality of life and psychological functioning. Indeed, acceptance-based treatments, such as Acceptance and Commitment Therapy, have been shown to be effective for a range of psychosocial problems (10).

This study was able to compare two groups reporting high ID, one that was specifically selected for this characteristic and one drawn from an unselected sample of treatment-seeking participants with overweight/obesity. Across psychological and behavioural characteristics, these groups were largely similar to each other and different from a group reporting low levels of ID. This suggests that identifying individuals with obesity and high scores on the ID subscale could be a potentially useful way to select a subgroup with a constellation of psychological characteristics that may be particularly responsive to acceptance-based therapies. This relatively brief, easy to administer, commonly used scale appears to function as an adequate screening measure for selecting individuals who report higher experiential avoidance, lower values attainment and higher levels of psychological distress. Given Forman and colleagues' (12) findings that their acceptance-based intervention produced superior weight losses only in those reporting high levels of emotional eating and disinhibition at baseline, it may be appropriate to target integrated acceptance-based behavioural weight loss treatments to this subgroup.

There were some demographic differences amongst the groups that should be noted. All three samples were largely female, Caucasian and highly educated; however, the two high ID samples had a lower representation of men, and there were differences in income with fewer participants in the highest-income bracket in the high ID groups. In addition, the sample selected for high ID had marginally significantly higher BMI. However, controlling for these demographic and anthropometric differences in the analyses had no effect on the results. In addition, owing to the differences in BMI inclusion criteria used by the two studies (sample 1 range, 30–50; sample 2 range, 27.5–45), it is unclear whether these findings would generalize to other treatment-seeking overweight/obese samples with differential inclusive criteria. Future research should examine whether those who self-identify as high in ID tend to be heavier. Additionally, given the overall homogeneity of both samples, the generalizability of these findings is limited. Finally, it should be noted that this cross-sectional study was unable to directly examine the relationships amongst the ID, acceptance-based targets, and psychosocial functioning and weight loss-related outcomes.

Initial research on acceptance-based behavioural weight loss programmes indicates that those most likely to benefit from such an approach may be characterized by relatively high levels of disinhibition and emotional eating (12). Our study showed that participants scoring higher on the ID subscale of the Eating Inventory report high levels of experiential avoidance, less values-consistent behaviour and poorer mental health profiles, whether or not they have self-identified as having such difficulties. This suggests that an acceptance-based approach may be uniquely suited to those who are overweight or obese and report high levels of ID.

Conflict of Interest Statement

The authors report no conflicts of interest.

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