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Clinician and patient characteristics and cognitions that influence weighing practice in cognitive-behavioral therapy for eating disorders

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Abstract

Objective: Clinicians commonly fail to weigh patients appropriately in cognitive-behavioral therapy for eating disorders (CBT-ED), despite guidelines stressing the need to do so. This study considered the possible patient- and clinician-based reasons why this element of treatment is omitted.

Method: Seventy-four CBT-ED clinicians were presented with vignettes that varied in patient diagnosis and distress levels, to determine whether those characteristics influenced different clinician weighing practices. Clinicians' own attitudes to weighing and their anxiety levels were also assessed, to determine whether they were related to weighing intentions.

Results: Clinicians were more likely to weigh patients with anorexia nervosa than patients with bulimia nervosa, probably due to focusing on physical risk. However, they were less likely to weigh patients who were distressed at the prospect, despite that course of action being particularly clinically indicated. Clinicians were more likely to weigh patients if they had positive beliefs about the value of doing so, and if they were not prone to making unsupported exceptions in delivering this technique.

Discussion: This study provides evidence that clinicians use weighing differently according to the patient's presentation and their own beliefs, rather than working within guidelines. Education, training and supervision are suggested to help clinicians address this failure to weigh patients in the most therapeutic way.

Key words: Weighing; anorexia nervosa; bulimia nervosa; beliefs; distress

Clinician and patient characteristics and cognitions that influence weighing practice in cognitive-behavioral therapy for eating disorders

Eating disorders are serious mental health conditions, which have significant personal and societal, health and economic costs (Beat, 2015; National Institute for Health and Care Excellence [NICE], 2017). While they can be life-long if left untreated, eating disorders often respond to treatment, with over 45% of individuals with anorexia nervosa or bulimia nervosa making a full recovery (Steinhausen, 2002; Steinhausen, & Weber, 2009). Therefore, it is important that evidence-based, effective treatment should be offered and delivered to patients with eating disorders. Cognitive-behavioral therapy for eating disorders (CBT-ED) currently has the strongest evidence base for adult patients (e.g., Hay, 2013). It is the most widely recommended treatment for adults with eating disorders, including anorexia nervosa and bulimia nervosa (NICE, 2017). However, CBT-ED is commonly delivered poorly, with key elements being omitted in routine practice (e.g., Mulkens, de Vos, de Graaff & Waller, 2018; Waller, Stringer & Meyer, 2012).

A key element of evidence-based CBT-ED is regular, open weighing of the patient, so that the patient is aware of their weight and can connect it more accurately to their eating pattern. Such open weighing acts as an exposure-based intervention for anxiety about weight, as well as allowing the patient to test their beliefs about weight rising out of control, whatever is eaten (Waller & Mountford, 2015).

Unfortunately, when reporting on routine clinical practice, patients and clinicians alike report that many clinicians offering CBT do not weigh their patients at all (e.g., Cowdrey & Waller, 2015; Mulkens et al., 2018; Waller et al., 2012) or weigh them blindly, without telling the patient their weight (Forbush, Richardson & Bohrer, 2015). These deviations from protocol are likely to mean that many patients do not get the optimum experience of CBT-ED, as they do not experience the emotional or cognitive challenges that open weighing can afford them.

Such failure to deliver the behavioral elements of an intervention is a common pattern when clinicians ‘drift’ from evidence-based treatment (Waller, 2009). Therapist drift has been

linked to a number of clinician characteristics (Waller & Turner 2016) – particularly their cognitions and emotions (especially anxiety). Therefore, it is possible that these clinician characteristics might influence clinicians' weighing behaviors when delivering CBT-ED. However, it is also possible that clinicians' weighing practices are influenced by patients' characteristics. One such characteristic is diagnosis, where the patient's level of physical risk due to being underweight (e.g., collapse, cardiac complications) might mean that clinicians are more likely to weigh the patient (Forbush et al., 2015). Another potential characteristic that might influence clinicians' weighing behaviors is the patient's emotional state, where greater distress might make clinicians withdraw from asking the patient to undertake any task that they fear might worsen that distress (e.g., Turner et al., 2014). Such concerns on the part of clinicians are likely to result in their making 'broken leg exceptions' (Meehl, 1973), whereby they conclude that open weighing is not applicable to this particular client, despite a lack of evidence to justify such exceptions (Meyer, Farrell, Kemp, Blakey & Deacon, 2014).

To summarise, despite the clear importance of weighing patients (Waller & Mountford, 2015), the evidence to date suggests that weighing practices are inconsistent in CBT-ED. Clinicians' decisions about whether and how to weigh their patients in CBT-ED appear to be influenced by patient and clinician characteristics. A number of clinician characteristics should be considered. For example, older and male clinicians are more likely to use exposure-based methods such as weighing (van Minnen et al., 2010). Professions where training includes more behavioural elements (psychology, nursing, dietetics) are also more likely to use weighing. In contrast, clinicians who have higher levels of anxiety, do not value open weighing and who tend to make exceptions for patients are less likely to use weighing appropriately. However, the evidence to date is largely correlational.

Therefore, this study aimed to determine the links between patient characteristics (diagnosis and distress) and clinicians' stated intentions to weigh the patient. The design involved manipulating case detail via vignette presentations. The study also examined the role of clinician emotion (anxiety) and beliefs in determining those intentions to weigh. The beliefs included 'broken leg exceptions' (irrelevant pseudo-justifications for not using a therapeutic

method) and broader beliefs about the benefits and drawbacks of open weighing. It was hypothesised that: 1) clinicians would weigh patients differently according to whether they were diagnosed with anorexia nervosa or bulimia nervosa; 2) clinicians would be less likely to weigh patients who were highly distressed, particularly if that distress was specifically focused on weight; and 3) clinician characteristics (age, gender, experience, discipline, anxiety, beliefs about open weighing, and 'broken leg exceptions') would be associated with their planned weighing behaviors. Given the clear task demands, it was expected that the overall level of reported appropriate weighing behavior would be higher than is reported in surveys (e.g., Mulkens et al., 2018). However, the manipulation should be effective over and above any elevation of overall reporting of appropriate weighing.

Method

Ethics

Ethical approval for this project was granted by the University of Sheffield's Research Ethics Committee. Participants gave informed consent, and data were fully anonymised.

Design

This study employed a quantitative, within-subjects design. In an online survey, self-report questionnaires and a series of vignettes were used to assess the impact of patient and clinician characteristics on clinicians' anticipated weighing behaviors.

Participants

A sample size analysis (G*Power) was used to determine the sample size needed to minimize the risk of type 2 error. Assuming a medium effect size ($f = 0.25$), a power of 0.8, and an alpha of .05, the within subject design required a sample of 28 clinicians. If the effect size were lower ($f = 0.20$), then the necessary sample size would be 42 clinicians. Therefore, the recruitment target was set at 42.

The sample consisted of 74 clinicians who reported that they used CBT for eating disorders with adults. Thus, the study was adequately powered. They were recruited via snowball sampling, using contacts in eating disorder services in different countries. Eight clinicians were male (10.8%), 65 were female (87.8%), and one chose not to disclose their

gender. Clinicians ranged in age from 24 to 64 years, with a mean age of 38.65 years (*SD* = 10.27). Their years of experience using CBT for eating disorders ranged from 0 to 27 years, with a mean experience of 7.30 years (*SD* = 6.71). (One person indicated that they had less than one year's experience, but the remainder all reported at least one year's experience.) Clinicians described themselves as psychologists (*n* = 36, 48.6%), CBT therapists (*n* = 12, 16.2%), psychotherapists (*n* = 6, 8.1%), nurses (*n* = 5, 6.8%), or 'other' professionals (*n* = 15, 20.3%, including assistant psychologists, psychiatrists, social workers, an occupational therapist and a dietitian). Clinicians practiced in a range of countries, including the UK (*n* = 35, 47.3%), Canada (*n* = 18, 24.3%), USA (*n* = 7, 9.5%), Italy (*n* = 7, 9.5%), and others New Zealand (*n* = 7, 9.5%).

Measures and Procedure

Participants completed an online survey, using Qualtrics. Initially, they provided demographic information (e.g., age, gender, duration in practice). Participants were each shown six patient vignettes (varying in patient diagnosis and level of distress), presented in a randomised order to exclude order effects. For each vignette, they rated the likelihood that they would engage in each of six different weighing behaviors with the patient (see below). They then completed self-report questionnaire measures assessing their cognitive and emotional characteristics.

Vignettes. A core clinical vignette was developed by the authors to provide basic information about an adult female patient presenting to eating disorder services for CBT. Six vignettes were created by varying the clinical material, with three clients described as being diagnosed with anorexia nervosa and three with bulimia nervosa (no body mass index was stated for patients with either diagnosis). For each diagnosis, one patient was described as calm, one was described as distressed about general life events, and one was described as distressed about their weight. These vignettes were reviewed and approved by two consultant clinical psychologists working in eating disorder services. Each participant was presented with all six vignettes, to determine their intended weighing behaviour under each condition.

Weighing behaviors. The weighing behaviors assessed were selected to reflect: two

guideline-compliant behaviors (weigh the patient; weigh the patient and tell them their weight); and four commonly reported (Waller & Mountford, 2015) clinician behaviors that were non-compliant with guidelines (rely on patient self-reported weight; ask someone else to weigh; judge patient weight by eye; delay weighing until another session). For each of the six vignettes, the participants rated their anticipated likelihood of engaging in each weighing behavior on an 11-point Likert-scale, using 10% intervals from 0% to 100% likelihood.

Anxiety. Clinician anxiety was assessed using the Intolerance of Uncertainty Scale-Short Form (IUS-12; Carleton, Norton, & Asmundson, 2007). This 12-item self-report measure assesses two factors: prospective anxiety (the anticipation of uncertainty) and inhibitory anxiety (inaction when faced with uncertainty) (McEvoy & Mahoney, 2011). Reponses are based on a five-point Likert scale. The IUS-12 has strong psychometric properties, with clear factor loadings for the items in each subscale, very strong correlation with the original 27-item version (r = .96), excellent internal consistency (α = .85-.91), and good discriminative and clinical validity relative to measures of anxiety and depression (Carleton et al., 2007). In this study, it showed good internal consistency for the prospective anxiety (α = .84) and inhibitory anxiety subscales (α = .88). Clinicians' scores were slightly below the mean for a non-clinical sample (Carleton et al., 2007) for prospective anxiety (M = 14, SD = 4.56) and inhibitory anxiety (M = 7.55, SD = 3.19).

Beliefs about open weighing were assessed by asking clinicians to rate their agreement with six statements, using a 7-point Likert scale (item range = 1-7). Four statements consisted of negative beliefs about open weighing (‘Someone other than the CBT therapist should weigh the patient’; ‘Weighing the patient and telling them their weight damages the therapeutic relationship in CBT’; ‘In CBT sessions, weighing the patient and telling them their weight is harmful to them’; ‘In CBT sessions, weighing the patient and telling them their weight makes them angry or confrontational’). The remaining two items consisted of positive beliefs about open weighing (‘In CBT sessions, weighing the patient and telling them their weight helps to reduce the patient's anxiety about weight’; ‘In CBT sessions, weighing the patient and telling them their weight helps them understand the relationship

between food and weight'). These questions were developed by the authors based on clinical experience, so no previous psychometrics were available. In this study, these questions demonstrated adequate internal consistency for positive beliefs (α = .76) and negative beliefs (α = .71), though it is recognised that the low number of items makes Cronbach's alpha unreliable. Clinicians' mean scores were lower for negative beliefs, ranging from 1.50 (*SD* = .94) to 2.72 (*SD* = .1.26), and higher for positive beliefs, ranging from 5.74 (*SD* = .86) to 6.45 (*SD* = 1.01).

'Broken leg exceptions'. The Broken Leg Exception Scale (BLES, Meyer et al., 2014) assesses patient characteristics that might lead clinicians to exclude that patient from exposure tasks. The original measure was adapted to make it specific to open weighing. The adapted BLES was termed The Broken Leg Exception Scale for Open Weighing (BLES-OW), and was a 16-item self-report scale (available from the authors). Items were scored on a 4-point Likert scale (item range = 0-3), with a higher score indicating a greater tendency to make such exceptions. The BLES-OW has strong internal consistency (α = .95) and strong average inter-item correlation (mean = .641), each of which indicates some item redundancy. The mean score on the BLES-OW was 5.46 (*SD* = 7.47). Considering the convergent validity of the BLES-OW, the mean score on this measure was moderately to strongly correlated in the expected directions with all six of the Beliefs about Open Weighing ($r = \pm .36$ to .71, $P < .001$ in all cases). However, it was not associated with scores on the IUS Prospective Anxiety (r = .02, *NS*) or Inhibitory Anxiety scales (r = .14, *NS*). Therefore, it appears that the BLES-OW has convergent validity relative to beliefs about weighing, but not relative to general anxiety features.

Data Analysis

Data were analysed using SPSS (version 23). A large proportion of the data violated the assumption of normality. Therefore, non-parametric statistics were utilized. Where appropriate, the acceptable alpha level was set at p = .001, to minimize the likelihood of Type 1 error. To address the key within-subject hypotheses, Wilcoxon and Friedman tests (with post hoc Wilcoxon tests) were used to address hypotheses 1 and 2. The effect size (*tau* – Pallant, 2007) was calculated for any significant pairwise differences. Hypothesis 3 was tested using

Spearman's *rho* correlations.

Results

As expected, given the task demands, clinicians' reported weighing behavior intentions were strongly in the direction of guideline compliance. They reported a high intended likelihood of weighing (M = 91.62%, SD = 1.55) or openly weighing the patient (M = 92.28%, SD = 1.32). In contrast, they reported a low likelihood of relying on self-reported weight (M = 7.08%, SD = 1.77), judging weight by eye (M = 7.08%, SD = 1.77), delaying weighing (M = 11.03%, SD =1.54), or asking someone else to weigh the patient (M = 5.47%, SD =1.79).

Impact of patient characteristics on clinicians' weighing intentions

Hypothesis 1 was tested by comparing rated likelihood of engaging in each of the weighing behaviors according to the patient's diagnosis. Table 1 demonstrates that clinicians were significantly more likely to anticipate weighing a patient who was diagnosed with anorexia nervosa, though they were no more likely to do so openly. Conversely, clinicians were significantly more likely to rely on the patient's self-reported weight if they were diagnosed with bulimia nervosa. The effect sizes for those differences (*tau*) were small to moderate.

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Insert Table 1 about here

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To test hypothesis 2, the likelihood of engaging in each weighing behavior was compared across patients' emotional states (calm; generally distressed; distressed about weight). Table 2 demonstrates that clinicians were significantly less likely to intend to weigh or open weigh if the patient was distressed specifically about weight than if the patient was calm. Such weight distress was also more likely to result in the clinician being more likely to delay weighing the patient. Again, the effect sizes for all those differences (*tau*) were small to moderate.

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Insert Table 2 about here

Impact of clinician characteristics on clinicians' weighing intentions

Hypothesis 3 was tested by using a range of statistical tests to determine whether clinician characteristics were related to their intended weighing behaviors. Preliminary analyses (Mann-Whitney tests; Kruskal-Wallis tests; Spearman's correlations) showed that there was no effect of clinician gender, profession, age or duration of clinical experience ($p > .05$ in all cases). Therefore, the remaining analyses did not control for those factors.

Beliefs about open weighing. Table 3 shows the association between clinicians' beliefs about open weighing and their likelihood of engaging in different weighing behaviors. The pattern of correlations (Spearman's *rho*, $p > .001$) shows that clinicians' negative beliefs about open weighing were not linked to their likelihood of weighing the patient. In contrast, clinicians' intended weighing behaviors were linked to their positive beliefs about open weighing of the patient (particularly that open weighing results in better patient understanding). Clinicians with more positive beliefs about weighing were more likely to intend to engage in guideline-compliant behaviors (weighing/openly weighing), and were less likely to engage in non-compliant behaviors.

Insert Table 3 about here

Broken leg exceptions and anxiety. Table 4 shows the associations between the clinicians' likelihood of using weighing behaviors and their anxiety (intolerance of uncertainty) and tendency to make 'broken leg exceptions'. Clinicians' anxiety was unrelated to their likelihood of undertaking any of the weighing behaviors. In contrast, clinicians who endorsed more broken leg exceptions were less likely to intend to weigh or openly weigh the patient, but they were more likely to intend to rely on the patient's self-reported weight, judge patient weight by eye or delay weighing. In short, while clinician anxiety was not relevant to their intended

weighing behaviors, those clinicians who tend to find reasons for not treating their patient in a routine way were less likely to follow guidelines.

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Insert Table 4 about here

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Summary

Clinicians are less likely to weigh patients who present with bulimia nervosa than if they have anorexia nervosa, and are also less likely to do so if the patient expresses distress about being weighed. However, they are more likely to use weighing appropriately if they who have stronger beliefs about the benefit of open weighing (regardless of their negative beliefs) and if they are less likely to assume that patients should be excluded from routine treatment approaches ('broken leg exceptions'). Clinician anxiety was not related to anticipated weighing practices.

Discussion

This study examined the factors that influence clinicians' weighing intentions when working with patients with eating disorders. The findings provided evidence that clinicians' weighing of patients is not simply related to guidelines, but varies with patient and clinician characteristics.

Clinicians were more likely to weigh patients with anorexia nervosa than those with bulimia nervosa, but were no more likely to weigh them openly. They were more likely to rely on the patients with bulimia nervosa to self-report their weight. This pattern suggests that clinicians are responding to the greater risk that is likely when a patient is underweight (e.g., that the patient might need significant medical intervention if their weight is very low), but not in a way that means that they are more likely to give the anorexia nervosa patient more feedback on their weight. Thus, the clinicians generally respond to risk, but not to any related cognitive needs of the anorexia nervosa patient (Waller & Mountford, 2015).

The other patient characteristic that clinicians responded to was distress about their

weight, which made the clinicians less likely to weigh the patient, less likely to weigh openly, and more likely to delay weighing. In each case, the CBT model would stress that the opposite would be the appropriate clinical course of action, as reduction in the patient's weight distress requires exposure with response prevention – weighing the patient openly, at the time. The outcome of the clinician not weighing the patient is likely to be a short-term reduction in patient distress, but a longer-term enhancement of that distress.

Two clinician characteristics enhanced their likelihood of weighing patients appropriately – positive beliefs about the value of openly weighing the patient (reducing anxiety; enhancing understanding), and a low tendency to find irrelevant reasons to bypass the guidelines (making 'broken leg exceptions'). Negative beliefs did not have the opposite effect, suggesting that clinician actions are driven by positive rather than negative attitudes, in the case of weighing patients. The failure of anxiety to predict the specific practice of weighing is consistent with the findings of previous surveys (Mulkens et al., 2018; Waller et al., 2012). This finding confirms that whilst clinician anxiety has its impact on the implementation of other CBT techniques, the clinician safety behavior of not weighing distressed patients is a general one, and not only found in relatively anxious clinicians.

Guidelines for CBT-ED and most evidence-based therapies for eating disorders stress the importance of weighing patients routinely (Waller & Mountford, 2015), ensuring safety and patient learning. However, guidelines are routinely under-used (e.g., Shafran et al., 2009), meaning that open weighing of patients with eating disorders is not used by the majority of clinicians in routine practice (e.g., Forbush et al., 2015; Mulkens et al., 2018; Waller et al., 2012). While demand characteristics mean that the proportion of clinicians stating an intention to weigh patients was much higher in this study, the patterns of difference and association allow us to reach firm conclusions about the patient factors (diagnosis; weight distress) and clinician factors (lower belief in the positive value of weighing; making broken leg exceptions) that reduce compliance with guidelines on weighing patients.

This study had a number of limitations, which should be addressed in future research. These included the cross-sectional design, the use of questionnaire measures, and the use of

vignettes. An observational study in real life settings would be an important next step in this research. First, the manipulation in the vignettes was based on diagnosis, but did not address body mass index or weight. It is possible that clinicians would respond differently if the patient with anorexia nervosa had a low versus a very low body mass index, or if the patient with bulimia nervosa had a healthy body mass index versus being overweight. Second, it is possible that the role that the clinician played with the patient (e.g., lead/sole therapist; part of a wider team where other people weigh the patient outside the CBT) would influence the likelihood of weighing the patient or doing so openly, so that should be considered in future development of this research. On a related note, it would be useful to understand the service context that clinicians work in (e.g., in-patient, day-patient, out-patient) in order to understand whether some clinical contexts do or do not encourage open weighing by the CBT clinician. It would also be valuable to recruit from a wider range of countries, and to be able to calculate the participation rate (which could not be done in this study, due to the snowball recruitment method). The snowball recruitment method might have had the effect of biasing the findings, as the initial contacts were known to the authors. This means that the participants might already have had a greater likelihood of weighing their patients, and of passing on the survey to colleagues who practiced similarly. Thus, the relatively high overall rate of reported likelihood of weighing might be accounted for in part by this specific task demand. Further details relating to the participants would also have been valuable, including information on the training, licensure and expertise of the participants, and the differences that might have been found between different professionals. These could be considered as grouping variables in future studies, to determine whether they influence clinicians' weighing intentions. Future research might consider the implementation of a control condition, comparing these findings with those relating to a patient without fear of weight gain (e.g., a patient with Avoidant/Restrictive Food Intake Disorder), to test whether clinicians respond to such patients by weighing the patient more or less. A wider issue is that simply weighing the patient is not as powerful as doing so within the broader context of therapy. Therefore, future research in this field should consider not just whether the clinician weighs the patient, but whether it is done as per the evidence-

based protocols for therapies such as CBT for eating disorders (e.g., Waller & Mountford, 2015).

These findings suggest that clinicians should routinely be educated, trained and supervised to ensure that they openly weigh all patients with eating disorders, and understand the importance of using exposure-based approaches to reduce patient distress. They also suggest that key elements of such clinician training will be developing their positive attitudes towards weighing patients (rather than attempting to reduce their negative attitudes), and overcoming the tendency to exclude some patients from being weighed on unsupported grounds. Farrell et al. (2013) have suggested a number of ways in which these changes could be achieved. Even straightforward training sessions on the subject of exposure therapy are relatively effective in changing such attitudes (Deacon et al., 2013; Waller et al., 2016), and should be considered in changing clinician weighing practice. However, creating behavioural change is a complex issue, requiring more than changing beliefs, skills and attitudes. For example, the Theory of Planned Behaviour (Ajzen, 1991) suggests that change also requires the individual to plan and action changes. Therefore, it will also be important to determine whether the proposed training or other interventions (e.g., the use of established behavior change techniques, such as implementation intentions) result in more consistent, guideline-compliant clinician weighing practices.

This study has addressed the reasons why clinicians do or do not use weighing appropriately in cognitive-behavioral treatment of eating disorders. Weighing is key in a much wider range of treatments for eating disorders (Waller & Mountford, 2015). Therefore, further research is needed to extend this work to the delivery of other therapies, and for a wider range of eating disorder diagnoses and patient age groups. This research has the potential to ensure that weighing patients is driven by clinical need, rather than patient or clinician characteristics.

Data availability

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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Conflict of interest

The authors have no financial or other conflicting interests to declare.

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Table 1

Clinicians' intended likelihood of engaging in different weighing behaviors for patients diagnosed with anorexia nervosa or bulimia nervosa

Weighing Behavior	Patient diagnosis				Wilcoxon test		
	Anorexia nervosa		Bulimia nervosa		*z*	*p*	*r*
	M	*SD*	*M*	*SD*			
Weigh patient	92.93	(1.42)	90.32	(1.83)	2.14	.03	.18
Open weigh	92.02	(1.43)	92.64	(1.31)	0.76	*ns*	-
Rely on self-reported weight	5.99	(1.65)	8.31	(1.97)	2.67	.01	.22
Judge weight by eye	11.62	(2.28)	10.99	(2.25)	0.70	*ns*	-
Delay weighing	10.50	(1.84)	11.55	(1.96)	1.22	*ns*	-
Ask someone else to weigh	5.95	(1.94)	5.00	(1.67)	1.29	*ns*	-

Note. ns = non-significant. Significance level set at $p < .05$ (two tailed).

Table 2

Clinicians' intended likelihood of engaging in different weighing behaviors for patients diagnosed with anorexia nervosa and bulimia nervosa who are experiencing different levels of distress

Weighing Behavior	Patient Diagnosis	Level of Patient Distress						Friedman ANOVA		Multiple comparisons test (Wilcoxon test; $p<.05$ one tailed)	*R*
		Calm		General Distress		Weight Distress		X^2	*p* (2-tailed)		
		M	*SD*	*M*	*SD*	*M*	*SD*				
Guideline-compliant:											
Weigh patient	AN	94.19	(1.69)	93.38	(1.70)	91.22	(1.83)	14.49	.001	*NS*	-
	BN	93.92	(1.58)	90.14	(2.14)	86.89	(1.65)	29.78	.001	C>WD	.23
Open weigh	AN	95.42	(1.06)	90.97	(1.91)	89.86	(1.65)	31.71	.001	C>WD	.26
	BN	94.25	(1.59)	93.61	(1.31)	90.00	(1.68)	29.12	.001	C>WD	.24
Not guideline-compliant:											
Rely on self-reported weight	AN	6.76	(1.90)	5.14	(1.58)	6.08	(1.69)	0.84	*ns*	-	-
	BN	8.08	(2.09)	8.51	(2.07)	9.86	(2.22)	1.72	*ns*	-	-
Judge weight by eye	AN	12.16	(2.50)	11.35	(2.36)	11.35	(2.33)	1.20	*ns*	-	-
	BN	10.41	(2.22)	10.81	(2.25)	11.76	(2.36)	5.77	*ns*	-	-
Delay weighing	AN	7.95	(2.03)	9.86	(2.15)	13.38	(2.38)	21.42	.001	C<WD	.21
	BN	7.03	(1.80)	12.88	(2.40)	15.54	(2.43)	22.89	.001	C<WD	.22
Ask someone else to weigh	AN	5.95	(1.99)	5.68	(1.99)	6.22	(1.94)	3.00	*ns*	-	-
	BN	4.59	(1.65)	4.86	(1.67)	5.54	(1.73)	6.62	*ns*	-	-

Note: AN = Anorexia nervosa; BN = Bulimia nervosa; C = Calm; GD = General Distress; WD = Weight Distress; *ns* = Non-significant. Significance level set at $p < .01$.

Table 3

Correlations between clinicians' beliefs about open weighing and their intended likelihood of engaging in different weighing behaviors for patients diagnosed with anorexia nervosa who are experiencing different levels of distress

Weighing Behavior	Patient Level of Distress	Clinician Beliefs about Open Weighing (OW)											
		Negative Beliefs								Positive Beliefs			
		Someone else should weigh the patient		OW damages therapeutic relationship		OW is harmful to the patient		OW makes patients angry		OW reduces patient anxiety		OW improves patient understanding	
		AN	BN	AN	BN	AN	BN	AN	BN	AN	BN	AN	BN
Guideline-compliant:													
Weigh patient	Calm	-.04	-.21	-.25	-.36	-.14	-.32	-.02	-.24	.35	.41*	.42*	.47*
	General Distress	-.22	-.36	-.16	-.38	-.23	-.30	-.20	-.24	.31	.48*	.36	.49*
	Weight Distress	-.20	-.38	-.20	-.29	-.21	-.21	-.03	-.12	.30	.37	.34	.42*
Open weigh	Calm	-.26	-.27	-.34	-.36	-.42*	-.39	-.28	-.21	.35	.30	.41*	.34
	General Distress	-.33	-.42*	-.42*	-.45*	-.37	-.39	-.21	-.32	.37	.34	.45*	.38
	Weight Distress	-.33	-.39	-.35	-.45*	-.37	-.42*	-.08	-.22	.33	.29	.33	.35
Not guideline-compliant:													
Rely on self-reported weight	Calm	.26	.24	.26	.34	.21	.29	.10	.18	-.18	-.29	-.32	-.41*
	General Distress	.22	.27	.19	.33	.21	.28	.30	.15	-.12	-.26	-.32	-.40*
	Weight Distress	.21	.25	.27	.26	.22	.27	.11	.09	-.23	-.22	-.32	-.31
Judge weight by eye	Calm	.25	.29	.40*	.33	.38	.40*	.07	.13	-.43*	-.40*	-.52*	-.49*
	General Distress	.29	.28	.36	.32	.42*	.39	.13	.13	-.41*	-.40*	-.49*	-.48*
	Weight Distress	.29	.29	.33	.32	.40*	.38	.09	.13	-.36	-.38	-.42*	-.47*
Delay weighing	Calm	.06	.19	.25	.31	.14	.28	.03	.23	-.34	-.40*	-.43*	-.45*
	General Distress	.26	.36	.13	.49*	.19	.31	.20	.24	-.27	-.52*	-.39	-.58*
	Weight Distress	.21	.40*	.21	.30	.19	.21	.14	.13	-.22	-.27	-.42*	-.43*
Ask someone else to weigh	Calm	.19	.19	.16	.20	.14	.18	.11	.19	-.02	-.09	-.10	-.15
	General Distress	.24	.25	.27	.28	.25	.25	.18	.19	-.11	-.12	-.20	-.21
	Weight Distress	.28	.33	.33	.39	.28	.34	.16	.20	-.11	-.16	-.25	-.32

Note: OW= Open weighing, AN= Anorexia nervosa, BN= Bulimia nervosa. Adjusted significance level set at $p < .001$ (2-tailed). * $p < .001$.

Table 4

Correlations between clinicians' intolerance of uncertainty and likelihood of making broken leg exceptions, and their intended likelihood of engaging in different weighing behaviors for patients diagnosed with anorexia nervosa or bulimia nervosa who are experiencing different levels of distress

Weighing Behavior	Patient Level of Distress	Clinician Characteristics Correlation Coefficients (r_s)					
		Intolerance of uncertainty				Broken Leg Exceptions	
		Prospective Anxiety		Inhibitory Anxiety			
		Anorexia Nervosa	Bulimia Nervosa	Anorexia Nervosa	Bulimia Nervosa	Anorexia Nervosa	Bulimia Nervosa
Guideline-compliant:							
Weigh patient	Calm	-.09	-.12	-.11	-.21	-.39	-.56*
	General	-.01	-.04	-.10	-.22	-.45*	-.43*
	Weight Distress	-.11	-.02	-.18	-.27	-.41*	-.38
Open weigh	Calm	.02	.01	-.10	-.12	.46*	-.34
	General	-.04	-.04	-.20	-.26	-.44*	-.46*
	Weight Distress	-.04	-.02	-.14	-.17	-.39	.46*
Not guideline-compliant:							
Rely on self-reported weight	Calm	.13	.22	.08	.18	.42*	.46*
	General	.14	.20	.15	.15	.45*	.45*
	Weight Distress	.11	.04	.15	.05	.41*	.45*
Judge weight by eye	Calm	.04	.08	.07	.11	.38	.41*
	General	.09	.06	.11	.11	.40*	.40*
	Weight Distress	-.00	.02	.05	.10	.40*	.46*
Delay weighing	Calm	.10	.05	.11	.15	.40*	.50*
	General	.03	.08	.08	.24	.42*	.46*
	Weight Distress	.09	.12	.16	.33	.42*	.46*
Ask someone else to weigh	Calm	.06	.08	.05	.10	.24	.23
	General	.02	.01	.05	.05	.28	.29
	Weight Distress	-.01	.08	.12	.09	.34	.36

Note: Adjusted significance level set at $p < .001$ (2-tailed). * $p <. 001$