
PSYCHOMETRIC PROPERTIES OF THE **ACCEPTANCE AND ACTION QUESTIONNAIRE FOR WEIGHT-RELATED DIFFICULTIES** IN OVERWEIGHT AND OBESE VETERANS

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BACKGROUND: THEORY

- Experiential avoidance (EA):
 - Change, control, avoid unwanted thoughts, feelings, sensations
- Outcomes:
 - Unwanted sensations intensify
 - Healthy behavior change thwarted
 - Avoiding exercise
 - Emotional eating
 - Eating in response to cravings/cues
 - Poor health outcomes
 - Lower quality of life



BACKGROUND: HISTORY OF THE MEASURE



- 2004: AAQ developed
 - Condition-specific process measures of EA needed
- 2008: AAQW developed (22 items)
- 2008-2014: Various AAQW factor structures identified
- 2016: AAQW-R derived from CFA (10 items), with 3 factors
- Portuguese ↔ English/American? Women ↔ Men?

PARENT STUDY: B-ACT STUDY

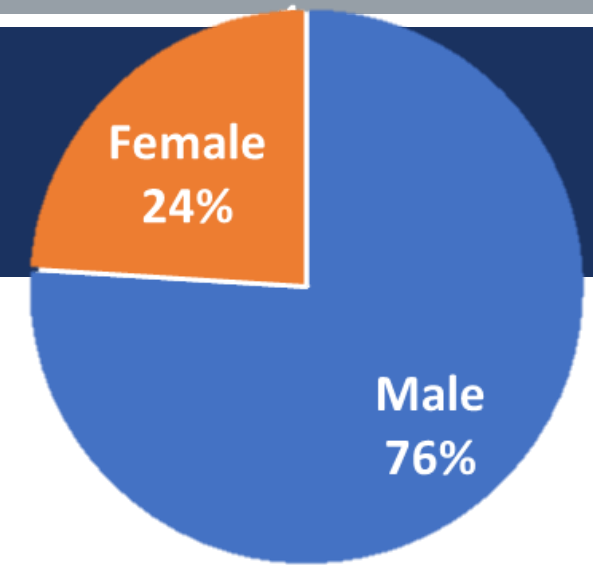


- Overweight/obese Veteran participants
- Completed behavioral weight loss program (MOVE!)
- Enrolling in adjunctive treatment for binge/stress/emotional eating (B-ACT study)
- Measures completed at B-ACT baseline:
 - AAQW (22 item)
 - AAQW-R* (10 items extracted from AAQW)
 - AAQ-II
 - Weight Self-Stigma Questionnaire (WSSQ)
 - Obesity-Related Quality of Life (ORWELL-97)
 - Binge Eating Scale (BES)
 - Eating Disorder Examination (EDE)
 - PTSD CheckList – Civilian (PCL-C)
 - Depression Sx: Patient Health Questionnaire (PHQ-9)



PARTICIPANTS

- *MOVE!* completers ($N = 89$)
- $M_{\text{age}} = 56.73 \pm 9.99$ years
- Overweight/obese ($M_{\text{BMI}} = 36.89 \pm 7.20 \text{ kg/m}^2$)
- 53% household incomes less than \$40,000/year
- 59% less than a bachelor's degree in education
- 58% unmarried and/or not living with a partner
- Mean recent weight loss 2.27% ($\pm 4.02\%$)
- 9% meeting DSM-5 criteria for current BED



Race/Ethnicity	% of sample
White	69
Black	19
Hispanic/Latino	6
Pacific Islander	1
Asian	2
Other	3

CURRENT STUDY AIMS

1. Examine the **psychometric properties** of the **AAQ-II, AAQW, and AAQW-R**
 - Internal reliability (Cronbach's alpha)
 - Convergent/divergent validity (Pearson product-moment correlation coefficients)
2. **Examine the factor structure** of the English **AAQW-R**
 - Exploratory factor analysis
3. **Compare factors** to those identified by Palmeira et al. (2016)
...in a sample of primarily male, overweight/obese Veterans



ITEMS

AAQW-R

- | | |
|-----|---|
| 2. | When I have negative feelings, I use food to make myself feel better. |
| 9. | I need to feel better about how I look in order to live the life I want to. |
| 10. | Other people make it hard for me to accept myself. |
| 11. | If I'm overweight, I can't live the life I want to. |
| 13. | If I gain weight, that means I have failed. |
| 16. | My eating urges control me. |
| 17. | I need to get rid of my eating urges to eat better. |
| 19. | If I eat something bad, the whole day is a waste. |
| 20. | I should be ashamed of my body. |
| 21. | I need to avoid social situations where people might judge me. |

AAQW

- | | |
|-----|--|
| 1. | It's OK to feel fat. (R) |
| 3. | I try to suppress thoughts and feelings that I don't like about my body or weight by just not thinking them. |
| 4. | I am not in control of what I eat. |
| 5. | I try hard to avoid feeling bad about my weight or how I look. |
| 6. | I am in control of how much physical activity I do. (R) |
| 7. | When I evaluate my weight or my appearance negatively, I am able to recognize that this is just a reaction, not an objective fact. (R) |
| 8. | In order to eat well and do physical activity, I need to feel like it. |
| 12. | If I feel unattractive, there is no point in trying to be intimate. |
| 13. | If I gain weight, that means I have failed. |
| 14. | I'm in control of my eating behavior. |
| 15. | I don't have what it takes to be healthy for life. |
| 16. | My eating urges control me. |
| 17. | I need to get rid of my eating urges to eat better. |
| 18. | I am a stable person. |
| 22. | I will always be overweight. |

RATING

Below you will find a list of statements. *Please rate the truth of each statement as it applies to you.* Use the following scale to make your choice.



		Never True	Very seldom true	Seldom true	Sometimes true	Frequently true	Almost always true	Always True
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P1. It's O

Imagine that the following thoughts occurred to you right now. *How valid or believable would each be?*

For each question, please circle a number from 1 through 7.

P2. When use fo better

P3. I try t feelir my b

		Not at all believable						Completely believable
P17.	I need to get rid of my eating urges to eat better	1	2	3	4	5	6	7
P18.	I am a stable person	1	2	3	4	5	6	7
P19.	If I eat something bad, the whole day is a waste	1	2	3	4	5	6	7

AIM I: PSYCHOMETRIC PROPERTIES OF THE AAQ-II, AAQW, AND AAQW-R

Internal Consistency

Measure	α	Items
AAQ-II	0.95	7
AAQW	0.89	22
AAQW-R	0.86	10

Correlations among EA measures

Measure	AAQ-II	AAQW	AAQW-R
AAQ-II	I		
AAQW	0.65**	I	
AAQW-R	0.62**	0.95**	I

* $p < .05$

** $p < .01$

AIM 1: PSYCHOMETRIC PROPERTIES OF THE AAQ-II, AAQW, AND AAQW-R

Convergent & Divergent Validity

Construct	AAQ-II	AAQW	AAQW-R
Weight Self-Stigma	0.57**	0.75**	0.72**
Obesity-related QOL	0.48**	0.57**	0.63**
Binge Eating	0.46**	0.63**	0.63**
Weight Concern	0.40**	0.50**	0.51**
Shape Concern	0.46**	0.54**	0.57**

* $p < .05$

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Shape Concern	0.46**	0.54**	0.57**
BMI	0.04	0.19	0.23*
PTSD Symptoms	0.67**	0.36**	0.36**
Depression Symptoms	0.71**	0.47**	0.44**

* $p < .05$

** $p < .01$

AIM 2: EXAMINE THE FACTOR STRUCTURE OF THE **AAQW-R**

- Principal Axis Factoring
- Varimax rotation
- Eigenvalues suggest 1-factor structure > 3-factor structure
- Palmeira et al. found second-order structure with 3 subfactors
- Structures:
 - Single factor
 - 3-factor specified

AIM 2: EXAMINE THE FACTOR STRUCTURE OF THE AAQW-R

3-factor structure			
	1	2	3
If I gain weight, that means I have failed	.776		
I should be ashamed of my body	.747	.382	
If I eat something bad, the whole day is a waste	.589		
I need to avoid social situations where people might judge me	.548	.438	
Other people make it hard for me to accept myself	.414	.321	.330
I need to feel better about how I look in order to live the life I want to		.802	
If I'm overweight, I can't live the life I want to		.551	
I need to get rid of my eating urges to eat better		.486	
When I have negative feelings, I use food to make myself feel better			.791
My eating urges control me	.381		.625

AIM 3: AAQW-R PORTUGUESE FACTORS

1. Weight stigma

- contains items assessing “experiences of internalized stigma related to one’s weight”

2. Weight as a barrier to living

- the tendency to “move away from a valued life due to one’s weight or body shape”



3. Food as control

- the tendency to “use food as a coping mechanism to deal with negative emotions”



Item	Palmeira et al. Subscale	Present Factor
Other people make it hard for me to accept myself	Weight stigma	1
If I eat something bad, the whole day is a waste	Weight stigma	1
I should be ashamed of my body	Weight stigma	1
I need to avoid social situations where people might judge me	Weight stigma	1
If I gain weight, that means I have failed	Weight as Barrier to Living	1
I need to feel better about how I look in order to live the life I want to	Weight as Barrier to Living	2
If I'm overweight, I can't live the life I want to	Weight as Barrier to Living	2
I need to get rid of my eating urges to eat better	Food as Control	2
When I have negative feelings, I use food to make myself feel better	Food as Control	3
My eating urges control me	Food as Control	3

Weight Stigma | Weight as Barrier | Food as Control

**Convergent
& Divergent
Validity
of
New Factors**

Construct	Factor 1	Factor 2	Factor 3
Weight Self-Stigma	.69**	.55**	.49**
Obesity-related QOL	.58**	.58**	.32**
Binge Eating	.51**	.46**	.68**
Weight Concern	.42**	.46**	.39**
Shape Concern	.51**	.52**	.32**
BMI	.21 (p=.054) Vs .49**	.18 (p=.099) Vs .42**	.18 (p=.099) Vs .40**
PTSD Symptoms	.30**	.33**	.25**
Depression Symptoms	.36**	.38**	.37**

* $p < .05$

** $p < .01$

PARTICIPANT COMPARISON

Current study

- $N = 89$
- 76% male
- Completed behavioral weight loss program
- $M_{\text{age}} = 56.73 \pm 9.99$ years
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- 53% household incomes less than \$40,000/year

Palmeira, Cunha, Pinto-Gouveia, Carvalho, & Lillis

- $N = 425$
- 0% male
- 215 normal weight women from the general population
 - $M_{\text{age}} = 29.55 \pm 9.52$ years
 - $M_{\text{BMI}} = 21.49 \pm 1.73$ kg/m²
 - 46.7% “medium to high socio-economic status”
- 210 overweight or obese treatment seeking
 - $M_{\text{age}} = 40.14 \pm 12.19$ years
 - $M_{\text{BMI}} = 31.14 \pm 5.31$ kg/m²
 - 65.7% “low to medium socio-economic status”

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More men, older,
greater BMI

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SUMMARY:

IN THIS SAMPLE OF MOSTLY MALE, OW/OB AMERICAN VETERANS...

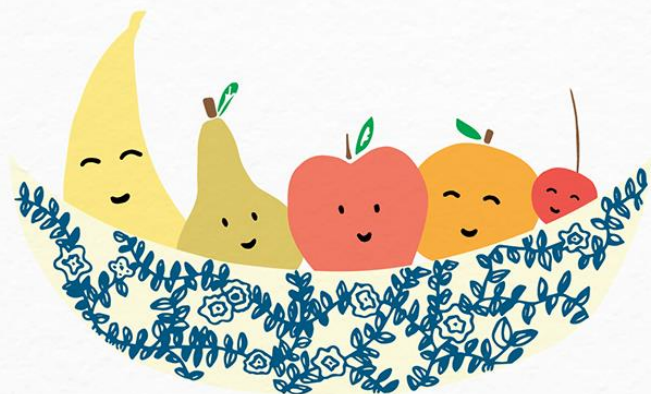
1. AAQW and AAQW-R tap into **eating- and weight-specific constructs**
2. **AAQW-R** seems as **psychometrically sound** as the longer AAQW
 - Only AAQW-R significantly correlated with BMI
 - Adequate reliability and validity
 - Shorter scale
3. **AAQW-R** appears to have **3 factors**
 - Largely comport with the AAQW-R subscales
 - Possible differences in the latent construct for this sample



LIMITATIONS

- Small sample ($N = 89$)
 - 5-10 subjects per item recommended for EFA
- 10-item AAQW-R extracted from AAQW
 - Context
 - Question stem/anchors
- Limited psychometric analyses
 - Reliability: test-retest reliability
 - Validity: content validity; criterion validity; sensitivity to change
 - Single factor structure possible

THANKS TO...



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