TECHNICAL REPORT ON ITEM REDUCTION, FACTOR LOADINGS, AND OTHER INFORMATION ON PRINCIPAL COMPONENT ANALYSES SUMMARIZED IN Patrick DL, Bushnell DM, Rothman MR. (2004) Performance of Two Self Report Measures for Evaluating Obesity and Weight Loss. *Obesity Research* 12 (1):48-57

PCA Factor Analysis (Promax): OWLQOL 17 item

Original Validation Dataset (n=340)

Total Variance Explained

Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	8.709	51.228	51.228
2	1.352	7.955	59.183

Extraction Method: Principal Component Analysis.
a When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

Structure Matrix

	Component	
	1	2
36 I have difficulty accepting my body BOMW	.823	.676
28 I feel ugly BOMW	.805	.713
25 I feel depressed BOMW	.797	.743
03 I feel guilty when I eat BOMW	.760	.554
33 I envy people who are thin	.749	.381
40 I get discouraged when I try to lose weight	.749	.434
07 I am bothered by what other people say about my weight	.747	.612
01 BOMW, I try to wear clothes that hide my shape	.704	.571
38 I am afraid that I will gain back any weight that I lose	.697	.358
24 I feel frustrated that I am not able to eat what others do BOMW	.696	.544
20 My weight prevents me from doing what I want to do	.589	.841
30 I worry about the future BOMW	.531	.797
22 I worry about the physical stress that my weight puts on my body	.520	.797
02 I feel frustrated that I have less energy BOMW	.624	.750
19 BOMW, I have to pay close attention to personal hygiene	.310	.705
17 BOMW, I try to avoid having my photograph taken	.656	.672
35 I feel that people stare at me BOMW	.621	.645

Extraction Method: Principal Component Analysis. Rotation Method: Promax with Kaiser Normalization.

Component Correlation = 0.7

PCA Factor Analysis (Promax): OWLQOL 17 item
Random (1ˢᵗ) Half of OBES-002 Clinical Trial Dataset (n=641)

Total Variance Explained

	Initial Eigenvalues		
Component	Total	% of Variance	Cumulative %
1	9.364	55.085	55.085
2	1.039	6.110	61.195

Extraction Method: Principal Component Analysis.
a When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

Structure Matrix

	Component	
	1	2
28 I feel ugly BOMW	.847	.635
36 I have difficulty accepting my body BOMW	.838	.659
25 I feel depressed BOMW	.832	.668
07 I am bothered by what other people say about my weight	.813	.543
17 BOMW, I try to avoid having my photograph taken	.791	.518
03 I feel guilty when I eat BOMW	.772	.569
01 BOMW, I try to wear clothes that hide my shape	.749	.465
35 I feel that people stare at me BOMW	.716	.652
33 I envy people who are thin	.715	.438
24 I feel frustrated that I am not able to eat what others do BOMW	.714	.640
38 I am afraid that I will gain back any weight that I lose	.693	.601
40 I get discouraged when I try to lose weight	.679	.600
22 I worry about the physical stress that my weight puts on my body	.493	.845
30 I worry about the future BOMW	.553	.838
20 My weight prevents me from doing what I want to do	.745	.786
19 BOMW, I have to pay close attention to personal hygiene	.544	.708
02 I feel frustrated that I have less energy BOMW	.678	.704

Extraction Method: Principal Component Analysis. Rotation Method: Promax with Kaiser Normalization.

Component Correlation = 0.71

PCA Factor Analysis (Promax): OWLQOL 17 item
Random (2nd) Half of OBES-002 Clinical Trial Dataset (n=641)

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	9.448	55.579	55.579	9.448	55.579	55.579
2	1.102	6.483	62.062	1.102	6.483	62.062

Extraction Method: Principal Component Analysis.
a When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

Structure Matrix

	Component	
	1	2
28 I feel ugly BOMW	.854	.628
36 I have difficulty accepting my body BOMW	.843	.647
25 I feel depressed BOMW	.836	.671
07 I am bothered by what other people say about my weight	.818	.642
17 BOMW, I try to avoid having my photograph taken	.777	.584
03 I feel guilty when I eat BOMW	.764	.595
24 I feel frustrated that I am not able to eat what others do BOMW	.743	.562
35 I feel that people stare at me BOMW	.738	.688
33 I envy people who are thin	.734	.395
01 BOMW, I try to wear clothes that hide my shape	.717	.478
38 I am afraid that I will gain back any weight that I lose	.696	.520
40 I get discouraged when I try to lose weight	.667	.474
30 I worry about the future BOMW	.564	.844
22 I worry about the physical stress that my weight puts on my body	.480	.842
20 My weight prevents me from doing what I want to do	.693	.827
19 BOMW, I have to pay close attention to personal hygiene	.625	.758
02 I feel frustrated that I have less energy BOMW	.683	.743

Extraction Method: Principal Component Analysis. Rotation Method: Promax with Kaiser Normalization.

Component Correlation = 0.71

PCA Factor Analysis (Promax): OWLQOL 17 item
U.S. Population Survey – General Obese (Knowledge Networks Dataset) (n=989)

Total Variance Explained

Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	10.715	63.028	63.028

Extraction Method: Principal Component Analysis.

Component Matrix

	Component
	1
36 I have difficulty accepting my body BOMW	.869
25 I feel depressed BOMW	.860
28 I feel ugly BOMW	.855
07 I am bothered by what other people say about my weight	.822
03 I feel guilty when I eat BOMW	.817
22 I worry about the physical stress that my weight puts on my body	.812
20 My weight prevents me from doing what I want to do	.808
38 I am afraid that I will gain back any weight that I lose	.808
17 BOMW, I try to avoid having my photograph taken	.792
30 I worry about the future BOMW	.786
40 I get discouraged when I try to lose weight	.781
02 I feel frustrated that I have less energy BOMW	.777
35 I feel that people stare at me BOMW	.775
24 I feel frustrated that I am not able to eat what others do BOMW	.775
01 BOMW, I try to wear clothes that hide my shape	.736
33 I envy people who are thin	.732
19 BOMW, I have to pay close attention to personal hygiene	.667

Extraction Method: Principal Component Analysis.

a 1 components extracted.

PCA Factor Analysis (Promax): OWLQOL 17 item
European Population Survey – General Obese (NFO Dataset) (n=2769)

Total Variance Explained

	Initial Eigenvalues		
Component	Total	% of Variance	Cumulative %
1	10.159	59.756	59.756

Extraction Method: Principal Component Analysis.

Component Matrix

	Component
	1
36 I have difficulty accepting my body BOMW	.867
28 I feel ugly BOMW	.846
25 I feel depressed BOMW	.846
03 I feel guilty when I eat BOMW	.789
30 I worry about the future BOMW	.789
07 I am bothered by what other people say about my weight	.781
17 BOMW, I try to avoid having my photograph taken	.778
20 My weight prevents me from doing what I want to do	.777
35 I feel that people stare at me BOMW	.769
38 I am afraid that I will gain back any weight that I lose	.762
24 I feel frustrated that I am not able to eat what others do BOMW	.762
02 I feel frustrated that I have less energy BOMW	.760
22 I worry about the physical stress that my weight puts on my body	.747
40 I get discouraged when I try to lose weight	.738
33 I envy people who are thin	.716
01 BOMW, I try to wear clothes that hide my shape	.709
19 BOMW, I have to pay close attention to personal hygiene	.681

Extraction Method: Principal Component Analysis.

a 1 components extracted.