

Table 1. Frequency of NEQ responses (N = 121).

1. How hungry are you usually in the morning?					
	<i>Not at all</i>	<i>A little</i>	<i>Somewhat</i>	<i>Moderately</i>	<i>Very</i>
N (%)	2 (1.7%)	12 (9.9%)	12 (9.9%)	75 (62.0%)	20 (16.5%)
2. When do you usually eat for the first time?					
	<i>Before 9 AM</i>	<i>9:01 to 12 PM</i>	<i>12:01 to 3 PM</i>	<i>3:01 to 6 PM</i>	<i>6:01 or later</i>
N (%)	72 (59.5%)	34 (28.1%)	13 (10.7%)	2 (1.7%)	0 (0%)
3. Do you have cravings or urges to eat snacks after supper, but before bedtime?					
	<i>Not at all</i>	<i>A little</i>	<i>Somewhat</i>	<i>Very much so</i>	<i>Extremely so</i>
N (%)	59 (48.8%)	41 (33.9%)	7 (5.8%)	13 (10.7%)	1 (0.8%)
4. How much control do you have over your eating between supper and bedtime?					
	<i>None at all</i>	<i>A little</i>	<i>Some</i>	<i>Very much</i>	<i>Complete</i>
N (%)	38 (31.4%)	25 (20.7%)	18 (14.9%)	25 (20.7%)	15 (12.4%)
5. How much of your daily food intake do you consume after suppertime?					
	<i>0% (none)</i>	<i>1–25% (up to a quarter)</i>	<i>26–50% (about half)</i>	<i>51–75% (more than half)</i>	<i>76–100% (almost all)</i>
N (%)	68 (56.2%)	44 (36.4%)	6 (5.0%)	3 (2.5%)	0 (0%)
6. Are you currently feeling blue or down in the dumps?					
	<i>Not at all</i>	<i>A little</i>	<i>Somewhat</i>	<i>Very much so</i>	<i>Extremely so</i>
N (%)	57 (47.1%)	41 (33.9%)	12 (9.9%)	7 (5.8%)	4 (3.3%)
7. When you are feeling blue, is your mood lower in the:					
	<i>Early morning</i>	<i>Late morning</i>	<i>Afternoon</i>	<i>Early evening</i>	<i>Late evening/nighttime</i>
N (%)	64 (52.9%)	3 (2.5%)	25 (20.7%)	14 (11.6%)	15 (12.4%)
8. How often do you have trouble getting to sleep?					
	<i>Never</i>	<i>Sometimes</i>	<i>About half the time</i>	<i>Usually</i>	<i>Always</i>
N (%)	42 (34.7%)	57 (47.1%)	12 (9.9%)	9 (7.4%)	1 (0.8%)
9. Other than only to use the bathroom, how often do you get up at least once in the middle of the night?					
	<i>Never</i>	<i>Less than once a week</i>	<i>About once a week</i>	<i>More than once a week</i>	<i>Every night</i>
N (%)	68 (56.2%)	20 (16.5%)	6 (5.0%)	8 (6.6%)	19 (15.7%)
10. Do you have cravings or urges to eat snacks when you wake up at night?					
	<i>Not at all</i>	<i>A little</i>	<i>Somewhat</i>	<i>Very much so</i>	<i>Extremely so</i>
N (%)	38 (31.4%)	12 (9.9%)	0 (0%)	1 (0.8%)	2 (1.7%)
11. Do you need to eat in order to get back to sleep when you awake at night?					
	<i>Not at all</i>	<i>A little</i>	<i>Somewhat</i>	<i>Very much so</i>	<i>Extremely so</i>
N (%)	41 (33.9%)	8 (6.6%)	1 (0.8%)	1 (0.8%)	2 (1.7%)
12. When you get up in the middle of the night, how often do you snack?					
	<i>Never</i>	<i>Sometimes</i>	<i>About half the time</i>	<i>Usually</i>	<i>Always</i>
N (%)	38 (31.4%)	13 (10.7%)	0 (0%)	0 (0%)	2 (1.7%)
13. When you snack in the middle of the night, how aware are you of your eating?					
	<i>Not at all</i>	<i>A little</i>	<i>Somewhat</i>	<i>Very much so</i>	<i>Completely</i>
N (%)	3 (2.5%)	3 (2.5%)	2 (1.7%)	2 (1.7%)	7 (5.8%)
14. How much control do you have over your eating while you are up at night?					
	<i>None at all</i>	<i>A little</i>	<i>Some</i>	<i>Very much</i>	<i>Complete</i>
N (%)	5 (4.1%)	5 (4.1%)	0 (0%)	4 (3.3%)	1 (0.8%)

Table 2. Criteria used to identify patients with night eating behaviour (N = 20).

Criteria	Description	N (%)
Evening hyperphagia	Consume > 25% daily intake after suppertime (item 5 \geq 2)	7 (35%)
Nocturnal ingestions	Get up at least once a week in the middle of the night (item 9 \geq 2) <i>and</i> craves to eat snacks <i>or</i> eats in order to get back to sleep <i>or</i> snacks in the middle of the night (items 10/11/12 \geq 1)	11 (55%)
Both	Evening hyperphagia <i>and</i> nocturnal ingestions	2 (10%)

Table 3. Differences between patients with and without night eating behaviour (NEB). Student's t and Wilcoxon's r are reported as summary statistics for comparisons of continuous variables, χ^2 for chi-squared tests. $p < 0.05$ are shown in bold.

Demographic and anthropometric data	With NEB (N = 20)	Without NEB (N = 101)	stats	p
	Mean \pm SD / N (%)	Mean \pm SD / N (%)		
Age (years)	45.6 \pm 7.81	44.05 \pm 11.61	0.74	0.464
Gender (female)	14 (70%)	80 (79.2%)	0.37	0.542
Body mass index (kg/m ²)	48 \pm 9.01	46.87 \pm 6.39	0.00	0.994
Psychiatric comorbidity				
Mood disorders	12 (60%)	43 (42.6%)	1.40	0.236
Major depressive disorder	1 (5%)	14 (13.9%)	-	0.461
Bipolar spectrum disorders	11 (55%)	29 (28.7%)	4.09	0.043
Bipolar disorder type 1	3 (15%)	2 (2%)	-	0.031
Bipolar disorder type 2	6 (30%)	15 (14.9%)	1.72	0.190
Cyclothymic disorder	2 (10%)	12 (11.9%)	-	0.999
Panic disorder	5 (25%)	17 (16.8%)	0.30	0.584
Eating disorders	11 (55%)	32 (31.7%)	3.01	0.083
Binge-eating disorder	10 (50%)	31 (30.7%)	1.98	0.159
Bulimia nervosa	2 (10%)	4 (4%)	-	0.258
Eating and mood disorders comorbidity	9 (45%)	19 (18.8%)	5.05	0.025
Night Eating Questionnaire (NEQ)				
Total score	17.95 \pm 6.21	8.97 \pm 3.81	-0.56	0.000
Morning anorexia	1.6 \pm 1.05	1.75 \pm 0.93	0.10	0.275
Evening hyperphagia	4.75 \pm 2.1	3.52 \pm 1.38	-0.23	0.012
Mood/sleep	4.4 \pm 3.02	2.78 \pm 2.15	-0.20	0.027
Nocturnal ingestions	5.85 \pm 5.8	0.19 \pm 1.1	-0.65	0.000
Bulimic Investigatory Test, Edinburgh (BITE)				
Symptom score	17.9 \pm 7.62	12.31 \pm 8.22	-0.27	0.004
Severity score	2.45 \pm 2.48	1.36 \pm 1.76	-0.21	0.024
Symptom Checklist – 90 (SCL-90)				
Somatization	1.25 \pm 0.85	0.73 \pm 0.57	-0.22	0.016
Obsessive compulsion	0.75 \pm 0.52	0.49 \pm 0.63	-0.23	0.011
Interpersonal sensitivity	0.81 \pm 0.78	0.57 \pm 0.63	-0.12	0.206
Depression	0.9 \pm 0.78	0.56 \pm 0.58	-0.18	0.055
Anxiety	0.76 \pm 0.66	0.45 \pm 0.48	-0.16	0.076
Hostility	0.49 \pm 0.51	0.34 \pm 0.51	-0.15	0.113
Phobic anxiety	0.44 \pm 0.49	0.16 \pm 0.38	-0.23	0.010
Paranoid ideation	0.79 \pm 0.77	0.52 \pm 0.59	-0.12	0.177
Psychoticism	0.54 \pm 0.67	0.24 \pm 0.38	-0.21	0.020
Sleep	1.28 \pm 1.18	0.64 \pm 0.83	-0.23	0.011
Global Severity Index	0.81 \pm 0.61	0.49 \pm 0.47	-0.20	0.027

Table 4. Association between demographic and clinical variables and Night Eating Questionnaire (NEQ) total and subscales scores. Spearman's r and Wilcoxon's r are reported, respectively, for associations with continuous and categorical variables. p < 0.05 are shown in bold.

	NEQ total score		NEQ morning anorexia		NEQ evening hyperphagia		NEQ mood/sleep		NEQ nocturnal ingestions	
	r	p	r	p	r	p	r	p	r	p
Demographic and anthropometric data										
Age (years)	-0.05	0.680	-0.30	0.003	0.06	0.616	-0.05	0.686	-0.10	0.374
Gender (female)	-0.07	0.441	-0.06	0.479	-0.08	0.353	-0.12	0.180	0.09	0.304
Body mass index (kg/m ²)	-0.03	0.792	-0.12	0.264	-0.01	0.958	-0.11	0.307	0.09	0.407
Psychiatric comorbidity										
Mood disorders	0.22	0.016	0.06	0.508	0.04	0.668	0.24	0.008	0.16	0.078
Major depressive disorder	-0.03	0.725	-0.07	0.456	-0.02	0.834	0.02	0.839	-0.07	0.429
Bipolar spectrum disorders	0.25	0.005	0.11	0.220	0.06	0.546	0.24	0.008	0.22	0.015
Bipolar disorder type 1	0.13	0.149	0.09	0.312	-0.10	0.296	0.10	0.292	0.33	0.000
Bipolar disorder type 2	0.23	0.013	-0.07	0.419	0.12	0.206	0.21	0.021	0.22	0.018
Cyclothymic disorder	0.02	0.807	0.20	0.033	0.00	0.966	0.04	0.626	-0.14	0.139
Panic disorder	0.20	0.029	0.14	0.118	0.04	0.677	0.21	0.024	0.09	0.304
Eating disorders	0.24	0.010	0.15	0.101	0.03	0.773	0.09	0.317	0.15	0.105
Binge-eating disorder	0.24	0.009	0.16	0.086	0.08	0.365	0.09	0.341	0.11	0.247
Bulimia nervosa	0.06	0.514	0.10	0.291	-0.09	0.304	0.07	0.458	0.04	0.677
Eating and mood disorders	0.27	0.003	0.08	0.359	0.01	0.906	0.23	0.012	0.22	0.015
Bulimic Investigatory Test, Edinburgh (BITE)										
Symptom score	0.36	0.000	0.18	0.120	0.07	0.590	0.23	0.035	0.33	0.001
Severity score	0.19	0.094	0.00	0.997	0.01	0.958	0.01	0.909	0.33	0.001
Symptom Checklist – 90 (SCL-90)										
Somatization	0.38	0.000	0.13	0.249	0.18	0.123	0.43	0.000	0.18	0.120
Obsessive compulsion	0.43	0.000	0.19	0.098	0.05	0.668	0.47	0.000	0.18	0.117
Interpersonal sensitivity	0.33	0.001	0.19	0.093	0.08	0.463	0.49	0.000	0.10	0.392
Depression	0.38	0.000	0.04	0.728	0.09	0.410	0.52	0.000	0.15	0.190
Anxiety	0.41	0.000	0.15	0.188	0.12	0.288	0.48	0.000	0.16	0.155
Hostility	0.35	0.001	0.19	0.098	0.15	0.180	0.41	0.000	0.04	0.714
Phobic anxiety	0.28	0.007	0.05	0.678	0.04	0.744	0.34	0.001	0.16	0.161
Paranoid ideation	0.38	0.000	0.17	0.140	0.12	0.290	0.50	0.000	0.15	0.180
Psychoticism	0.36	0.000	0.15	0.180	0.09	0.407	0.45	0.000	0.20	0.093
Sleep	0.41	0.000	0.06	0.630	0.12	0.307	0.32	0.001	0.22	0.049
Global Severity Index	0.46	0.000	0.16	0.164	0.14	0.239	0.55	0.000	0.17	0.130

Table 5. Differences in Night Eating Questionnaire (NEQ) total and subscales scores among patients without and with different mood disorders. Kruskal-Wallis' χ^2 are reported. Post-hoc contrasts are based on Dunn test with Benjamini-Hochberg correction. $p < 0.05$ are shown in bold. Abbreviations: w/o MD = without mood disorders; MDD = major depressive disorder; CYC = cyclothymic disorder; BDs = bipolar disorder type 1 or 2.

	w/o MD (N = 66)	MDD (N = 15)	CYC (N = 14)	BDs (N = 26)	χ^2	p	Post-hoc contrasts
	Mean \pm SD	Mean \pm SD	Mean \pm SD	Mean \pm SD			
NEQ total score	9.30 \pm 4.75	10.00 \pm 4.69	10.00 \pm 2.91	13.88 \pm 7.07	9.89	0.020	BDs > w/o MD
NEQ morning anorexia	1.67 \pm 0.95	1.67 \pm 1.11	2.21 \pm 0.97	1.65 \pm 0.8	4.78	0.189	-
NEQ evening hyperphagia	3.65 \pm 1.59	3.80 \pm 1.66	3.86 \pm 1.1	3.81 \pm 1.77	0.47	0.926	-
NEQ mood/sleep	2.48 \pm 2.03	3.33 \pm 2.77	3.36 \pm 2.62	4.15 \pm 2.52	8.93	0.030	BDs > w/o MD
NEQ nocturnal ingestions	0.61 \pm 2.14	0.33 \pm 1.29	0.00 \pm 0.00	3.5 \pm 5.59	16.13	0.001	BDs > w/o MD, MDD, CYC