Use and Value of the 7-Item Binge Eating Disorder Screener in Clinical Practice

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ABSTRACT

Objective: To evaluate physician knowledge of and attitudes about binge-eating disorder (BED) and the value and ease-of-use of the 7-item Binge Eating Disorder Screener (BEDS-7) in clinical practice.

Methods: Two internet surveys (wave 1: April 15–May 6, 2015; wave 2: August 19–25, 2015) were administered to primary care physicians serving adults (PCPs-adults) and psychiatrists. Wave 1 invitees were US-based physicians spending ≥ 50% of their time in direct patient care and reporting "no" to "some to average" experience with eating-disorder patients. Respondents completing wave 1 qualified for wave 2.

Results: Among the 1,047 physicians who responded, 313 did not meet at least 1 of the screening criteria, including 3.15% of respondents who spent < 50% of their time in direct patient care. Overall, 122 PCPs-adults and 123 psychiatrists completed both waves. Physician groups spent similar mean ± SD amounts of time providing direct patient care (PCPs-adults: 94.66% ± 8.4%, psychiatrists: 91.15% ± 12.2%). Based on composite scores, BED knowledge increased from wave 1 to wave 2 in PCPs-adults ($P < .001$) and psychiatrists ($P < .05$). Composite scores pertaining to knowledge of and comfort with diagnosing and treating BED were lower for PCPs-adults than psychiatrists in both waves (all $P < .001$). Based on wave 2 responses, the BEDS-7 was used by 32.0% of PCPs-adults and 26.8% of psychiatrists. All BEDS-7 users (100%) indicated the screener was "very" or "somewhat" valuable, and nearly all users (psychiatrists: 100%, PCPs-adults: 97.4%) reported it was "very" or "reasonably" easy to use. BEDS-7 users reported that important uses of the screener included assisting clinicians in identifying BED patients and encouraging/initiating doctor-patient discussions about BED.

Conclusions: These results support the utility of the BEDS-7 in clinical practice, with BEDS-7 users reporting that it is a highly valued and easy-to-use screener. Furthermore, both PCPs-adults and psychiatrists acknowledged the importance of being knowledgeable about BED.

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Binge-eating disorder (BED) was first recognized as a distinct eating disorder in the *Diagnostic and Statistical Manual of Mental Disorders*, Fifth Edition (*DSM-5*).[1] Two studies[2,3] from the 2001–2003 US National Comorbidity Survey Replication reported 12-month and lifetime BED prevalence estimates of 1.2% and 2.6%, respectively, in the United States based on *DSM-IV-TR* criteria. In a recent study,[4] among a representative US adult sample who participated in the National Health and Wellness Survey, 12-month and lifetime BED prevalence estimates based on the *DSM-5* were 1.64% and 2.03%, respectively.

Despite the higher prevalence of BED compared with other eating disorders,[2,3] a lack of awareness of BED by primary care physicians[5] and inadequate physician-patient communication regarding BED[6] may result in its underdiagnosis. In a survey[5] of physician knowledge about binge-eating and obesity treatment recommendations, 41.6% of respondents reported that they never assessed binge eating. Further highlighting the lack of attention by physicians regarding BED, a study[7] documenting patient experiences with BED noted that patients perceived health care professionals as inadequately understanding BED. Another study[6] revealed that patients and psychiatrists viewed the core aspects of BED differently; this discrepancy contributed to ineffective communication.

To aid physicians in screening for BED, the patient-reported 7-item Binge Eating Disorder Screener (BEDS-7)[8] was developed to examine eating patterns and behaviors in the past 3 months. Candidate screener items were developed based on input from clinical experts on BED so that *DSM-5* criteria were accurately represented and tested with patients to ensure ease of comprehension and response.[8] On the basis of a comprehensive psychometric evaluation, the BEDS-7 items were selected to maximize sensitivity (100% of respondents receiving a BED diagnosis via clinical interview screened positive), maintain reasonable specificity (38.7% of respondents not receiving a BED diagnosis via clinical interview screened negative), and preserve the content of the *DSM-5* criteria.[8] Other screening and diagnostic instruments[9,10] based on *DSM-5* criteria for eating disorders are available. The Eating Disorder Screen for Primary Care[9] is a clinician-administered 5-item screener that can be used to identify potential eating disorders in primary care populations or university students for purposes of referral for further evaluation. The Eating Disorder Assessment for *DSM-5* (EDA-5)[10] is a clinician-administered diagnostic instrument that is intended for use by clinicians to diagnose anorexia nervosa, bulimia nervosa, or BED. In contrast to these other instruments, the BEDS-7 is the only available screening tool that is specific for BED.[8] Structured interviews (such as the EDA-5,[10] Structured Clinical Interview for *DSM-IV*,[11] and the Eating Disorders Examination[12]) are the gold standard for diagnosing eating disorders, but these interviews require training for the clinician and time with the patient that is often unavailable.[13] The BEDS-7 is a brief patient-reported screening tool

Clinical Points

- Primary care physicians serving adults and psychiatrists acknowledge the importance of being knowledgeable about binge-eating disorder (BED).
- Knowledge of and confidence in diagnosing and treating BED were higher in psychiatrists than in primary care physicians serving adults.
- Primary care physicians serving adults and psychiatrists reported that the 7-item Binge Eating Disorder Screener was a valuable and easy-to-use tool.

that concisely reflects the *DSM-5* criteria and as such is less burdensome than structured interviews based on the BED diagnostic guidelines. The objective of this study was to evaluate physician knowledge of and attitudes about BED and to describe the value and ease-of-use of the BEDS-7 in clinical practice.

METHODS

Study Design and Respondents

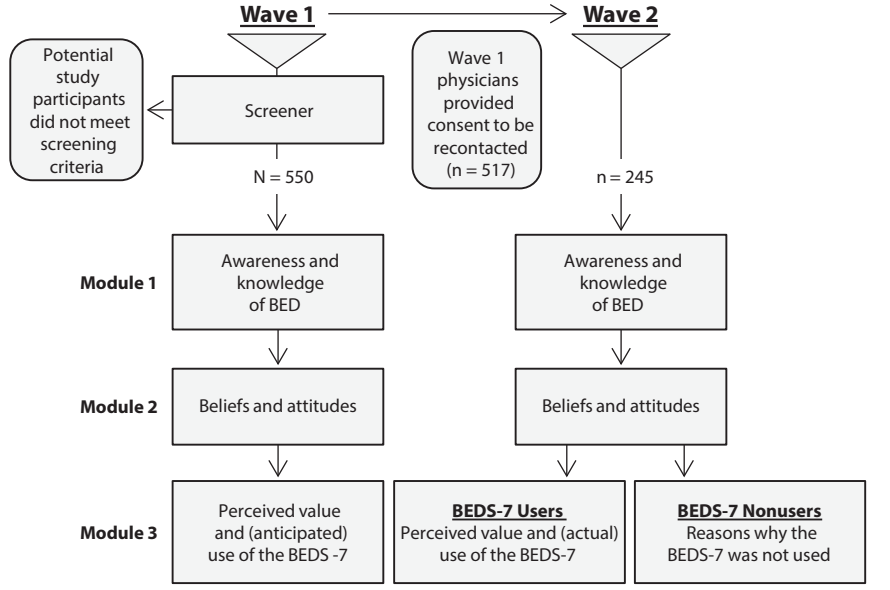
In this longitudinal study, web-based surveys were administered to primary care physicians serving adults (PCPs-adults) and psychiatrists at 2 time points (wave 1: April 15–May 6, 2015; wave 2: August 19–25, 2015) (Figure 1). The surveys were developed by Shire Development LLC (Lexington, Massachusetts) in collaboration with RTI Health Solutions (Research Triangle Park, North Carolina) and were administered by Nielsen, an online data collection company, utilizing US physician panels. The study was conducted in accordance with ethical principles of the 2008 Declaration of Helsinki and was reviewed and approved by the RTI International Institutional Review Board. Informed consent was obtained before survey participation.

The wave 1 survey included an introduction to a downloadable version of the BEDS-7 and an invitation to use it in clinical practice. For wave 1, e-mail invitations were sent to a randomly selected subset of physicians from a web panel. Participants were required to be licensed US-based medical doctors; to spend ≥ 50% of their time in direct patient care; to be currently practicing in family or general medicine, primary care, or internal medicine (for PCPs-adults) or in psychiatry (for psychiatrists); and to self-report "no," "little," or "some or average" experience with patients with eating disorders. Inclusion criteria were selected for participants to best represent typical practicing PCPs-adults and psychiatrists (ie, not eating disorder specialists). Wave 1 respondents who provided permission to be recontacted were invited to participate in wave 2. Physicians who completed wave 1 received a $35 gift card; those who completed wave 2 received an additional $42 gift card. A prespecified quota of 245 respondents was set for wave 2.

Assessments

Survey assessments (Supplementary Table 1) examined physicians' knowledge of BED (based on a composite percentage of each respondent's correct response to the 11 knowledge assessment items; higher scores indicate greater knowledge). Correct responses to the knowledge assessment items were not provided to participants between completing wave 1 and starting wave 2. Survey assessments also examined beliefs and attitudes about the importance of being knowledgeable about BED (based on a composite score from 3 items; higher scores indicate greater acknowledgment of the importance of being knowledgeable about BED), confidence in diagnosing and treating BED (based on a composite score of 3 items; higher scores indicate greater confidence), and the appropriateness of and comfort with drug treatment for

Figure 1. Study Design



Abbreviations: BED = binge-eating disorder, BEDS-7 = 7-item Binge Eating Disorder Screener.

Table 1. Physician Characteristics

Characteristic	PCPs-Adults (n = 122)	Psychiatrists (n = 123)
Male, n (%)	85 (69.7)	77 (62.6)
Race, n (%)		
White	81 (66.4)	94 (76.4)
Black/African American	7 (5.7)	3 (2.4)
American Indian or Alaska Native	1 (0.8)	0
Asian	30 (24.6)	22 (17.9)
Other	3 (2.5)	4 (3.3)
Medical specialty/subspecialty, n (%)		
Family or general medicine	37 (30.3)	…
Internal medicine	81 (66.4)	…
Primary care	4 (3.3)	…
Psychiatry	0	123 (100.0)
None, no subspecialty	…	38 (30.9)
General adult	…	81 (65.9)
Addictions	…	4 (3.3)
Eating disorder experience, n (%)		
No experience	2 (1.6)	0
Little experience	18 (14.8)	13 (10.6)
Some or average experience	102 (83.6)	110 (89.4)
Percentage of time in direct patient care, mean ± SD	94.66 ± 8.4	91.15 ± 12.2
Years of postresidency practice, mean ± SD	19.39 ± 9.8	16.99 ± 10.4
Use of Practice Fusion, yes, n (%)	25 (20.5)	28 (22.8)
Adult patients seen per month, n (%)		
0–99	8 (6.6)	36 (29.3)
100–199	18 (14.8)	33 (26.8)
200–299	15 (12.3)	29 (23.6)
300–399	39 (32.0)	19 (15.4)
400–499	25 (20.5)	3 (2.4)
≥ 500	17 (13.9)	3 (2.4)
Patient caseload with suspected BED, n (%)		
< 1	27 (22.1)	7 (5.7)
1–4	45 (36.9)	57 (46.3)
5–9	27 (22.1)	40 (32.5)
10–14	12 (9.8)	11 (8.9)
15–19	6 (4.9)	6 (4.9)
≥ 20	5 (4.1)	2 (1.6)
Type of practice, n (%)		
Solo practice	29 (23.8)	29 (23.6)
Group practice, single specialty	46 (37.7)	34 (27.6)
Group practice, multispecialty	28 (23.0)	14 (11.4)
University-based practice	7 (5.7)	15 (12.2)
Hospital-based practice	11 (9.0)	23 (18.7)
Other	1 (0.8)	8 (6.5)

Abbreviations: BED = binge-eating disorder, PCPs-Adults = primary care physicians serving adults.

BED (based on responses to 2 items; higher scores indicate greater comfort). In wave 1, physicians' awareness of and perceived value of the BEDS-7 were also assessed. The wave 2 survey addressed BEDS-7 use; the actual value of, ease of, and likelihood of using the BEDS-7 in the future; and reasons for using or not using the BEDS-7.

Data Presentation and Analysis

Analyses focused on respondents completing both waves. For BED knowledge, the mean was taken across each participant's composite percentage of correct responses. For beliefs and attitudes about the importance of being knowledgeable about BED, confidence in diagnosing and treating BED, and appropriateness of and comfort with drug treatment for BED, composite scores were generated by summing responses to items addressing each of the key concepts. Data are presented using descriptive statistics by physician type (PCPs-adults vs psychiatrists) and BEDS-7 use (users vs nonusers). BEDS-7 users were defined as respondents reporting use of the BEDS-7 in clinical practice during wave 2. Means were compared using paired *t* tests (wave 1 vs wave 2) or independent *t* tests (PCPs-adults vs psychiatrists, BEDS-7 users vs BEDS-7 nonusers). Categorical variables were compared using χ^2 or Fisher exact tests. Statistical significance was set at $P < .05$.

RESULTS

Disposition and Characteristics

Approximately 26,000 web survey e-mail invitations were sent to physician panelists, of which 1,047 responded. Among those physicians who responded, 313 did not meet at least 1 of the screening criteria, including 3.15% of respondents who spent < 50% of their time in direct patient care, and 74 withdrew during the screening process. A total of 660 of 973 physicians (67.8%) met all screening criteria.

Among those who qualified for the survey, 90 PCPs-adults were declined, as the target physician-type subquota was met, and 20 physicians (3.0%) withdrew prior to survey completion. A total of 550 respondents (PCPs-adults: n = 278, psychiatrists: n = 272) completed wave 1; 517 respondents (94%) agreed to be recontacted for wave 2. The prespecified target response rate of 47% (245/517) was obtained for wave 2 after 1 week, with 122 PCPs-adults and 123 psychiatrists completing both waves. Most respondents were male, white, and had "some or average" experience with eating disorders (Table 1). Physician groups were similar in terms of their mean time spent providing direct patient care and years of experience; PCPs-adults tended to see more patients per month and to have fewer BED patients and were more likely to work in group practice than psychiatrists (Table 1). At the time of the wave 2 survey, 32.0% of PCPs-adults (n = 39) and 26.8% of psychiatrists (n = 33) reported using the BEDS-7 in clinical practice. BEDS-7 users had been in practice for more years than nonusers (users: PCPs-adults, 20.64 ± 8.1 and psychiatrists, 18.39 ± 10.3; nonusers: PCPs-adults, 18.80 ± 10.5 and psychiatrists: 16.48 ± 10.5).

Knowledge of BED

For BED knowledge, the composite percentage of correct responses increased significantly from wave 1 to wave 2 in PCPs-adults (total: $P < .001$, nonusers: $P < .001$) and psychiatrists (total: $P < .05$, nonusers: $P < .01$) (Table 2). On average, the composite percentage of correct responses among PCPs-adults was lower than among psychiatrists (both waves: $P < .001$). Knowledge items for which there were notably lower percentages of PCPs-adults than psychiatrists who responded correctly in both waves were related to diagnostic criteria (not knowing that marked distress must be present and that BED cannot be diagnosed in a patient with bulimia) and to the availability of pharmacotherapy for BED (not knowing that

Table 2. Items and Composite Scores for BED Knowledge by Physician Type and Wave[a]

	PCPs-Adults					
	Wave 1			Wave 2		
	User (n = 39)	Nonuser (n = 83)	Total (n = 122)	User (n = 39)	Nonuser (n = 83)	Total (n = 122)
Item, n (%)						
BED is included as a diagnosis in the *DSM-5* (correct response: true)	32 (82.1)	68 (81.9)	100 (82.0)	34 (87.2)	75 (90.4)	109 (89.3)
Defines, in part, an "episode of binge eating" (a sense of lack of control over eating)	26 (66.7)	59 (71.1)	85 (69.7)	30 (76.9)	64 (77.1)	94 (77.0)
Not included in the *DSM-5* criteria for BED (eating high-calorie foods)	25 (64.1)	39 (47.0)	64 (52.5)	31 (79.5)	46 (55.4)	77 (63.1)
Must be present for a diagnosis of BED (marked distress)	10 (25.6)	18 (21.7)	28 (23.0)	7 (17.9)	24 (28.9)	31 (25.4)
Minimum frequency of binge-eating episodes (at least once a week for 3 months)	18 (46.2)	27 (32.5)	45 (36.9)	12 (30.8)	23 (27.7)	35 (28.7)
BED can be diagnosed in a patient with bulimia (correct response: false)	4 (10.3)	13 (15.7)	17 (13.9)	7 (17.9)	15 (18.1)	22 (18.0)
BED occurs in both men and women (correct response: true)	39 (100.0)	82 (98.8)	121 (99.2)	39 (100.0)	79 (95.2)	118 (96.7)
BED cannot be diagnosed in adults of normal weight (correct response: false)	35 (89.7)	76 (91.6)	111 (91.0)	32 (82.1)	77 (92.8)	109 (89.3)
BED is less common among US adults than either anorexia or bulimia (correct response: false)	25 (64.1)	54 (65.1)	79 (64.8)	26 (66.7)	51 (61.4)	77 (63.1)
There is an FDA-approved treatment for the treatment of moderate to severe BED in adults (correct response: true)	24 (61.5)	37 (44.6)	61 (50.0)	28 (71.8)	59 (71.1)	87 (71.3)
FDA-approved treatment for the treatment of BED (only lisdexamfetamine dimesylate)	11 (28.2)	19 (22.9)	30 (24.6)	18 (46.2)	28 (33.7)	46 (37.7)
BED composite percent correct, mean ± SD	58.04 ± 19.0	53.89 ± 17.0*	55.22 ± 17.7**,†	61.54 ± 13.7	59.26 ± 16.6	59.99 ± 15.8**
	Psychiatrists					
	Wave 1			Wave 2		
	User (n = 33)	Nonuser (n = 90)	Total (n = 123)	User (n = 33)	Nonuser (n = 90)	Total (n = 123)
Item, n (%)						
BED is included as a diagnosis in the *DSM-5* (correct response: true)	33 (100.0)	82 (91.1)	115 (93.5)	33 (100.0)	87 (96.7)	120 (97.6)
Defines, in part, an "episode of binge eating" (a sense of lack of control over eating)	29 (87.9)	80 (88.9)	109 (88.6)	28 (84.8)	83 (92.2)	111 (90.2)
Not included in the *DSM-5* criteria for BED (eating high-calorie foods)	20 (60.6)	62 (68.9)	82 (66.7)	20 (60.6)	69 (76.7)	89 (72.4)
Must be present for a diagnosis of BED (marked distress)	24 (72.7)	70 (77.8)	94 (76.4)	23 (69.7)	68 (75.6)	91 (74.0)
Minimum frequency of binge-eating episodes (at least once a week for 3 months)	13 (39.4)	31 (34.4)	44 (35.8)	12 (36.4)	37 (41.1)	49 (39.8)
BED can be diagnosed in a patient with bulimia (correct response: false)	13 (39.4)	36 (40.0)	49 (39.8)	14 (42.4)	46 (51.1)	60 (48.8)
BED occurs in both men and women (correct response: true)	33 (100.0)	90 (100.0)	123 (100.0)	33 (100.0)	89 (98.9)	122 (99.2)
BED cannot be diagnosed in adults of normal weight (correct response: false)	31 (93.9)	77 (85.6)	108 (87.8)	27 (81.8)	80 (88.9)	107 (87.0)
BED is less common among US adults than either anorexia or bulimia (correct response: false)	26 (78.8)	72 (80.0)	98 (79.7)	24 (72.7)	70 (77.8)	94 (76.4)
There is an FDA-approved treatment for the treatment of moderate to severe BED in adults (correct response: true)	27 (81.8)	62 (68.9)	89 (72.4)	29 (87.9)	77 (85.6)	106 (86.2)
FDA-approved treatment for the treatment of BED (only lisdexamfetamine dimesylate)	24 (72.7)	52 (57.8)	76 (61.8)	25 (75.8)	59 (65.6)	84 (68.3)
BED composite percent correct, mean ± SD	75.21 ± 15.1	72.12 ± 17.3‡	72.95 ± 16.7§	73.83 ± 16.7	77.27 ± 16.5	76.35 ± 16.6

[a]Composite percentage of each respondent's correct response to the 11 individual knowledge assessment items.
*$P < .001$ vs wave 2 (nonusers—same physician group).
**$P < .001$ vs psychiatrists (total—same wave).
†$P < .001$ vs wave 2 (total population—same physician group).
‡$P < .01$ vs wave 2 (nonusers—same physician group).
§$P < .05$ vs wave 2 (total population—same physician group).
Abbreviations: BED = binge-eating disorder, *DSM-5* = *Diagnostic and Statistical Manual of Mental Disorders*, Fifth Edition, FDA = US Food and Drug Administration, PCPs-Adults = primary care physicians serving adults.

lisdexamfetamine dimesylate is the only US Food and Drug Administration [FDA]–approved treatment for BED). The percentages of psychiatrists who correctly indicated that a BED diagnosis requires that binge-eating episodes occur ≥1 time per week for 3 months and that BED cannot be diagnosed in a patient with bulimia were lower than those for all other items.

In wave 2, the percentages of BEDS-7 users (PCPs-adults and psychiatrists) who correctly endorsed statements indicating that there is an FDA-approved treatment for moderate to severe BED in adults and that lisdexamfetamine dimesylate is the only FDA-approved treatment for BED were numerically higher than for BEDS-7 nonusers in both waves. Conversely, the percentages of BEDS-7 users who correctly endorsed statements indicating that a sense of lack of control, in part, defines an episode of binge eating and that BED cannot be diagnosed in a patient with bulimia were numerically lower than BEDS-7 nonusers in both waves.

Beliefs and Attitudes Related to BED

Endorsement of beliefs and attitudes related to the importance of being knowledgeable about BED was high among PCPs-adults and psychiatrists in both waves (Figure 2A and 2B). For PCPs-adults, composite scores related to the importance of being knowledgeable about BED remained steady across waves and were significantly higher for BEDS-7 users than nonusers in wave 2 ($P < .05$). For psychiatrists, composite scores related to the importance of being knowledgeable about BED significantly decreased from wave 1 to wave 2 overall and in BEDS-7 nonusers (both $P < .05$).

In both waves, composite scores related to confidence in diagnosing and treating BED were significantly higher among psychiatrists than PCPs-adults (both waves, $P < .001$). Among PCPs-adults, composite scores regarding confidence in diagnosing and treating BED significantly decreased from wave 1 to wave 2 in the overall group ($P < .05$) and in BEDS-7 nonusers ($P < .01$) but not in BEDS-7 users; scores were significantly higher among BEDS-7 users than nonusers (both waves: $P < .001$, Figure 2C). Among psychiatrists, scores for confidence in diagnosing and treating BED were similar across waves overall but were significantly higher among BEDS-7 users than nonusers during wave 2 ($P < .05$, Figure 2D).

Composite scores related to appropriateness of and comfort with pharmacotherapy for BED in both waves were generally low, indicating that respondents did not agree that pharmacotherapy was appropriate for BED and that they were not comfortable using pharmacotherapy for BED. However, composite scores tended to be slightly higher among psychiatrists and PCPs-adults (Figure 2E and 2F). Among PCPs-adults, significantly higher percentages of BEDS-7 users than nonusers agreed that it was appropriate to treat BED with pharmacotherapy and that they were comfortable doing so (both waves, $P < .01$). Among psychiatrists, there were no significant differences in composite scores between wave 1 and wave 2 or between BEDS-7 users and nonusers.

Issues Related to the BEDS-7

Awareness of the BEDS-7. Significantly more BEDS-7 users than nonusers were aware of the BEDS-7 at wave 1 (PCPs-adults: 30.8% vs 6.0%, psychiatrists: 27.3% vs 10.0%, both $P < .001$, Supplementary Figure 1).

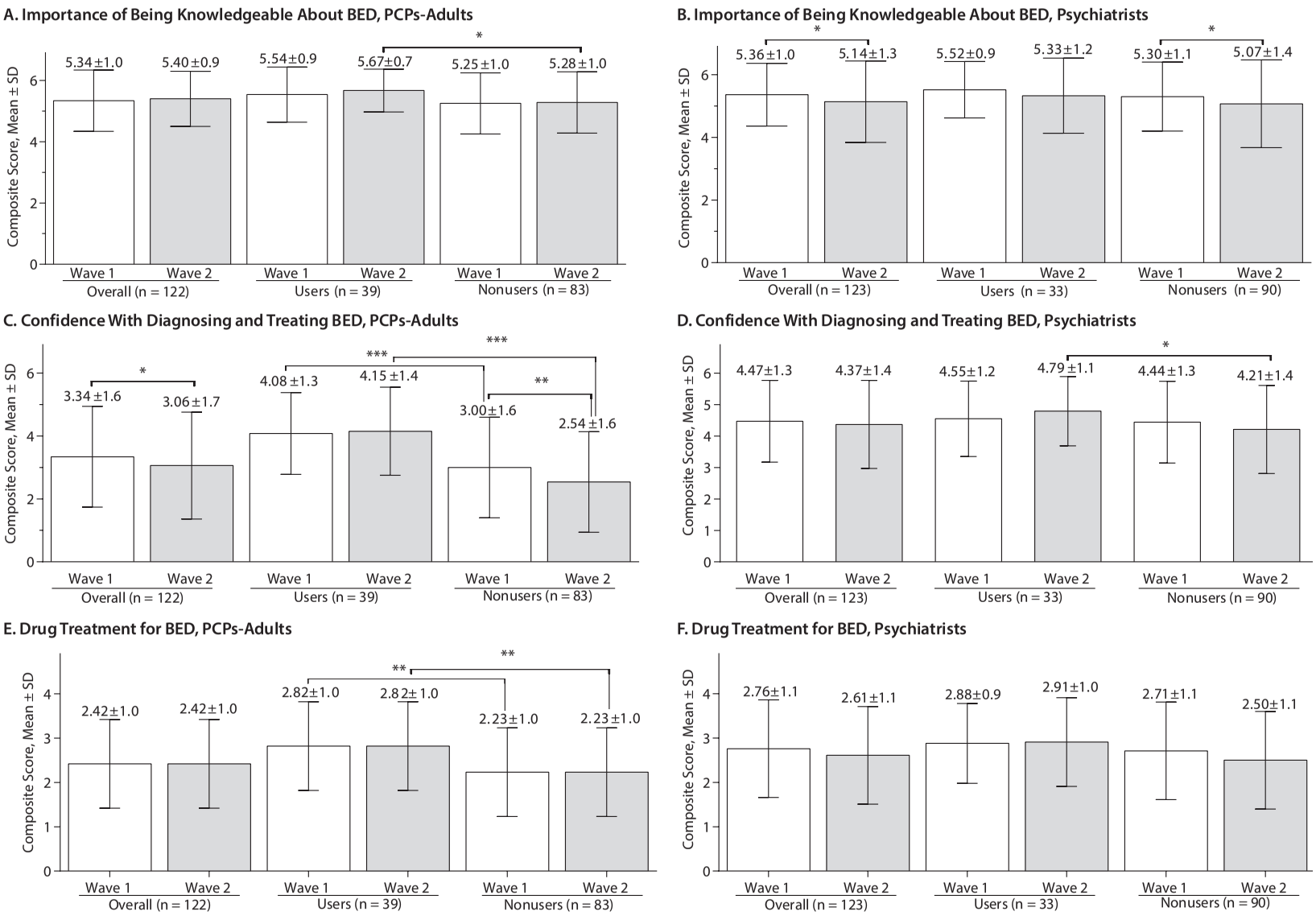
Value, ease, and likelihood of using the BEDS-7. A majority of physicians (>75%) reported that the BEDS-7 was "very" or "somewhat" valuable (Figure 3A) and was "very" or "reasonably" easy to use (Figure 3B) and that they were "very" or "moderately" likely to use the BEDS-7 in the future (Figure 3C). Among PCPs-adults, the anticipated value of the BEDS-7 was significantly higher in BEDS-7 users than nonusers during wave 1 ($P < .001$). Among PCPs-adults who were BEDS-7 users, the percentage reporting that the BEDS-7 was "very" easy to use increased significantly from wave 1 to wave 2 ($P < .05$). Among BEDS-7 users, the likelihood of using the BEDS-7 in the future significantly increased from wave 1 to wave 2 in PCPs-adults and psychiatrists (both $P < .05$).

Use of the BEDS-7. Most physicians used the BEDS-7 in 1–4 patients (PCPs-adults: 39.5%, psychiatrists: 56.3%) or 5–9 patients (PCPs-adults: 26.3%, psychiatrists: 21.9%); approximately half of these patients screened positive for possible BED. Among physicians who had a patient screen positive for possible BED (PCPs-adults: n = 29, psychiatrists: n = 24), they most often conducted further evaluation (PCPs-adults: 44.8%, psychiatrists: 70.8%) or made a formal BED diagnosis (PCPs-adults: 65.5%, psychiatrists: 54.2%). The most important uses for the BEDS-7 reported by users were assisting in identifying patients with BED and encouraging/initiating discussion on binge eating between physicians and patients (Supplementary Table 2). The most frequently reported reason for not using the BEDS-7 among nonusers was forgetting it was available (Supplementary Table 2).

DISCUSSION

The results of this survey demonstrate that both PCPs-adults and psychiatrists generally acknowledge the importance of being knowledgeable about BED and indicate that the BEDS-7 is a valuable and easy-to-use tool. Knowledge of BED and confidence in diagnosing and treating BED were higher in psychiatrists than PCPs-adults. The most pronounced knowledge gaps for PCPs-adults were related to the exclusionary nature of bulimia for a BED diagnosis, the importance of marked distress for a BED diagnosis (despite the substantial evidence supporting its importance in BED[14–18]), the existence of an approved pharmacotherapy for BED, and the required symptom/frequency duration for a BED diagnosis. Compared with other facts about BED, psychiatrists were less likely to be aware of the required symptom/frequency duration and the exclusionary nature of bulimia required for a BED diagnosis. The knowledge gap regarding the symptom frequency/duration criteria for BED may, in part, be the result of the change in this criterion from the *DSM-IV-TR* (at least 2 binge days per week for 6 months[19]) to the *DSM-5* (occurring on average at least 1 binge episode per week for ≥3 months[1]).

Figure 2. Beliefs and Attitudes About BED Among PCPs-Adults and Psychiatrists by Wave for BEDS-7 Users and Nonusers[a]



[a]Composite scores for the importance of being knowledgeable about BED are based on 3 items scored as 0 (do not agree), 1 (somewhat agree), or 2 (strongly agree); higher scores indicate higher levels of agreement. Composite scores for confidence with diagnosing and treating BED are based on 2 items scored as 0 (do not agree), 1 (somewhat agree), or 2 (strongly agree) and 1 item reverse scored as 0 (strongly agree), 1 (somewhat agree), or 2 (do not agree); higher scores indicate greater level of confidence. Composite scores for comfort with drug treatment for BED are based on 2 items scored as 0 (do not agree), 1 (somewhat agree), or 2 (strongly agree); higher scores indicate higher levels of comfort. *P < .05. **P < .01. ***P < .001.

Abbreviations: BED = binge-eating disorder, BEDS-7 = 7-item Binge Eating Disorder Screener, nonusers = BEDS-7 nonusers, PCPs-adults = primary care physicians serving adults, users = BEDS-7 users.

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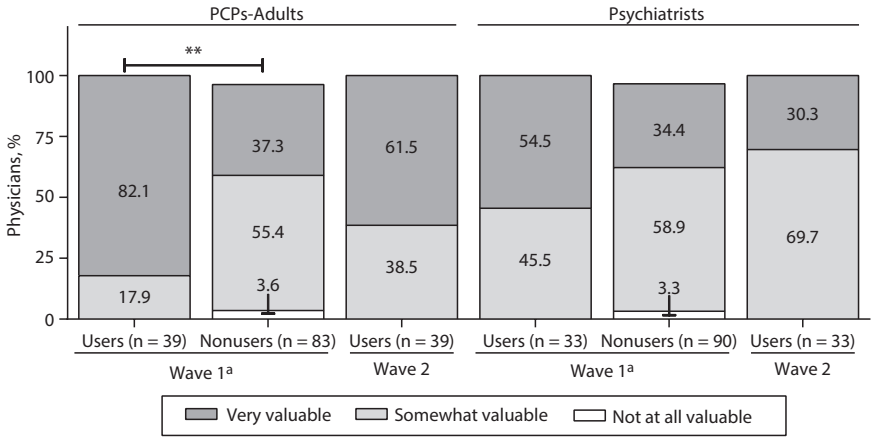
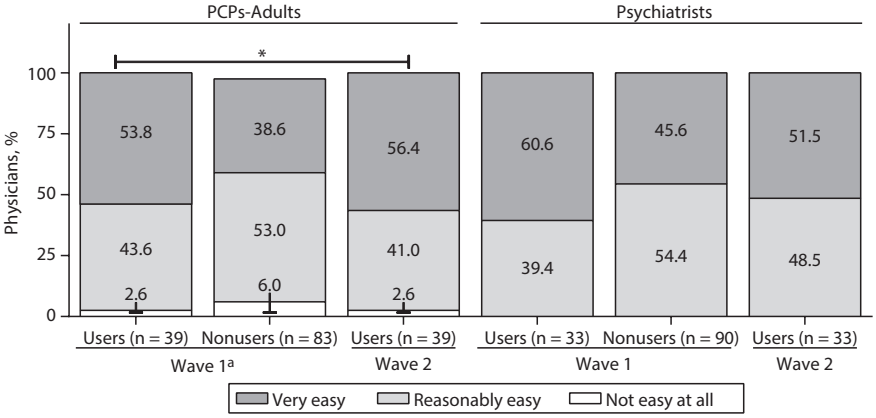
Figure 3. Physician-Reported Value, Ease, and Likelihood of Using the BEDS-7

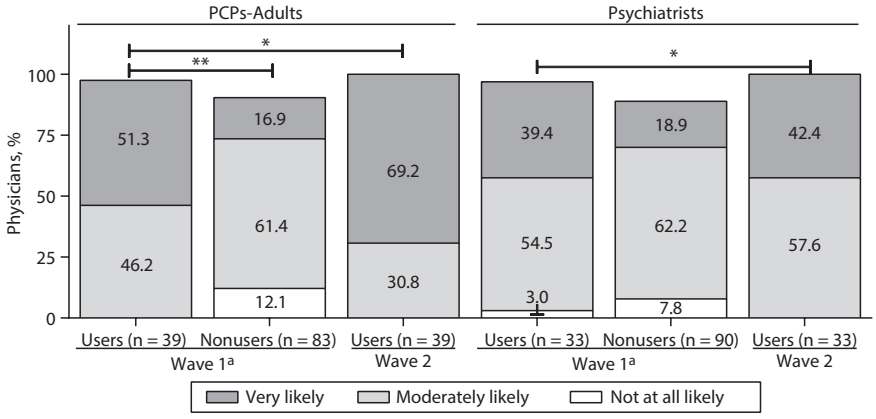
A. Perceived Value (wave 1) and Actual Value (wave 2) of the BEDS-7



B. Ease-of-Use of the BEDS-7



C. Likelihood of Using the BEDS-7



[a]Reported "not sure" in wave 1: perceived and actual value of the BEDS-7 (3.6% of PCP-adults nonusers, 3.3% of psychiatrist nonusers); ease-of-use of the BEDS-7 (2.4% of PCP-adults nonusers); likelihood of using the BEDS-7 (2.6% of PCP-adults users, 9.6% of PCP-adults nonusers, 3.0% of psychiatrist users, and 11.1% of psychiatrist nonusers).

*$P < .05$.

**$P < .001$.

Abbreviations: BEDS-7 = 7-item Binge Eating Disorder Screener, nonusers = BEDS-7 nonusers, PCPs-Adults = primary care physicians serving adults, users = BEDS-7 users.

The observed knowledge gaps regarding BED in physicians are consistent with previous reports. In one survey,[20] one-third of primary care providers who considered themselves familiar with BED did not recognize essential BED diagnostic criteria. In another physician survey,[21] 26.9% of respondents could not correctly identify a case vignette portraying an individual with BED. Patient surveys also indicate that physicians would benefit from additional BED education, as patients perceive health care professionals as having inadequate understanding of BED[7] and as having different views of core aspects of BED.[6] Taken together, knowledge gaps in PCPs-adults and psychiatrists related to the *DSM-5* BED diagnostic criteria suggest that health care professionals would benefit from educational materials focusing on diagnosing and treating BED. Recognizing that PCPs-adults may be the first health care professionals to detect an eating disorder in an individual,[22] increasing their awareness of BED through the BEDS-7 could improve outcomes by facilitating earlier diagnosis and treatment.

Both physician types exhibited significant increases in the composite percentage of correct responses pertaining to BED knowledge from wave 1 to wave 2, with increases observed in PCPs-adults and psychiatrists who were BEDS-7 nonusers. The increased BED knowledge from wave 1 to wave 2 is theorized to be the result of increased exposure to BED between completion of the wave 1 survey and initiation of the wave 2 survey and due to access to the BEDS-7 screener. The lack of a significant increase in knowledge among BEDS-7 users may be partially attributed to their higher overall scores during wave 1 and to preexisting attitudes related to their exposure to eating disorders. Beliefs related to the importance of being knowledgeable about BED were high for PCPs-adults and psychiatrists, but composite scores for psychiatrists significantly decreased from wave 1 to wave 2. This decrease was largely attributable to BEDS-7 nonusers, who exhibited a significant decrease from wave 1 to wave 2; these nonusers also attributed lower value to being knowledgeable about BED during wave 1.

Confidence in diagnosing and treating BED was significantly higher among psychiatrists than PCPs-adults. This increased confidence among psychiatrists may result from a greater BED-related knowledge base among these specialists. Consistent with this hypothesis, another recent study[9] found that psychiatrists were more likely than family practitioners to use the *DSM-5* as a source of information when diagnosing BED, which could be an indication that psychiatrists have increased awareness of and knowledge concerning BED diagnostic guidelines. Scores related to the appropriateness of and comfort with drug treatment for BED were low in both physician groups and only slightly greater among psychiatrists, despite the fact that psychiatrists exhibited increased knowledge of the availability of an approved pharmacotherapy for BED. This discrepancy suggests that, although psychiatrists are aware of the pharmacotherapeutic option for BED, they may not be comfortable prescribing it. This lack of comfort may be due to several factors, including that the approved pharmacotherapy for adults with moderate to severe BED—lisdexamfetamine dimesylate—is an amphetamine-based agent, which is a controlled substance,[23] and that psychosocial therapies have been more widely used as treatment strategies for BED than pharmacotherapies.[24,25]

The majority of respondents rated the BEDS-7 as valuable ("very" or "somewhat" valuable) and easy to use ("very" or "somewhat" easy). Consistent with the trends observed for value and ease-of-use, a majority of respondents reported that they were likely ("very likely" or "moderately likely") to use the BEDS-7. Among BEDS-7 users, the most important uses for the BEDS-7 included assisting physicians in identifying patients with possible BED and encouraging and initiating patient-physician discussions. These findings align with the purpose for developing the BEDS-7, which was to develop a screening tool to identify individuals with probable BED so they can then be referred for further evaluation.[8] Among BEDS-7 nonusers, the most frequent reason cited for not using the BEDS-7 was forgetting it was available, being focused on other patient issues and health concerns, or lack of time. As the BEDS-7 was designed to help physicians screen patients suspected of possible BED,[8] further educating physicians on the existence and ease-of-use of the BEDS-7 could facilitate its use in clinical settings.

Several study limitations should be considered when interpreting these data. First, it cannot be stated that study participants are representative of all practicing PCPs-adults or psychiatrists due to (1) the limited information available in regard to the web panel, (2) the sampling method employed, and (3) the small sample size in relation to the overall number of practicing PCPs-adults and psychiatrists in the United States. Second, sample selection bias may have influenced the wave 2 data, which included only the first 245 respondents who responded. The use of a prespecified quota for wave 2 also does not allow for accurate determination of a wave 2 participation rate because the calculated rate could be a substantial underestimation of the participation rate that would have been observed if all of the wave 1 respondents had been allowed to participate if they elected to do so. Third, this study assessed associations and was not designed to examine or suggest causal relationships. Fourth, although the study sampled respondents from different geographic regions, regional differences were not examined as part of the study. It should also be noted that the BEDS-7 was developed to maximize sensitivity to ensure detection of those with BED; a 100% sensitivity rate and 38.7% specificity rate was obtained in the screeners' development study.[8]

CONCLUSIONS

Knowledge of BED and confidence with diagnosing and treating BED were higher among psychiatrists than PCPs-adults, but both physician groups acknowledged the importance of being knowledgeable about BED. These results suggest there is a need for further increases in knowledge of and comfort with diagnosing and treating BED, especially among PCPs-adults. Among PCPs-adults and psychiatrists

who used the BEDS-7 in clinical practice, it was considered a highly valued, easy-to-use screener. Results from this study support the utility of the BEDS-7 screener, a brief patient-reported, *DSM-5* criteria-based tool for BED, in real-world clinical practice. The BEDS-7 can be valuable in assisting clinicians in identifying BED patients and encouraging/initiating doctor-patient discussions about BED.

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THE PRIMARY CARE COMPANION
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Supplementary Material

Article Title: The Use and Value of the 7-Item Binge Eating Disorder Screener in Clinical Practice

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List of Supplementary Material for the article

1. Table 1
2. Table 2
3. Figure 1

Disclaimer

This Supplementary Material has been provided by the author(s) as an enhancement to the published article. It has been approved by peer review; however, it has undergone neither editing nor formatting by in-house editorial staff. The material is presented in the manner supplied by the author.

Table 1. Summary of Key Survey Questions

BED Knowledge
• BED is included as a diagnosis in the *DSM-5* (correct response: true)
• Defines, in part, an "episode of binge eating" (a sense of lack of control over eating)
• Not included in the *DSM-5* criteria for BED (eating high-calorie foods)
• Must be present for a diagnosis of BED (marked distress)
• Minimum frequency of binge-eating episodes (at least once a week for 3 months)
• BED can be diagnosed in a patient with bulimia (correct response: false)
• BED occurs in both men and women (correct response: true)
• BED cannot be diagnosed in adults of normal weight (correct response: false)
• BED is less common among US adults than either anorexia or bulimia (correct response: false)
• There is an FDA-approved treatment for the treatment of moderate to severe BED in adults (correct response: true)
• FDA-approved treatment for the treatment of BED (only lisdexamfetamine dimesylate)
Beliefs and Attitudes: Importance of Being Knowledgeable About BED
• It is important for general practitioners to be knowledgeable about BED*
• It is important for psychiatrists to be knowledgeable about BED*
• BED impacts patients' functioning and quality of life*
Beliefs and Attitudes: Confidence in Diagnosing and Treating BED
• I would feel comfortable answering questions and discussing BED with patients*
• I would feel comfortable diagnosing a patient with BED*
• I would most likely refer a patient with BED for treatment rather than treat the patient myself†
Beliefs and Attitudes: Drug Treatment for BED
• Medications can be appropriate for the treatment of BED*
• I would be comfortable prescribing a schedule II medication indicated for the treatment of BED*
Use of the BEDS-7 (wave 1 [Anticipated]/wave 2 [Actual])
• Anticipated/actual value of the BEDS-7 to clinical practice
• Anticipated/actual ease of using the BEDS-7 with a patient
• Anticipated/actual types of patients appropriate for BED screening
• Anticipated/actual likelihood to continue using the BEDS-7 in clinical practice

Abbreviations: BED=binge-eating disorder, BEDS-7=7-Item Binge Eating Disorder Screener, *DSM-5=Diagnostic and Statistical Manual of Mental Disorders,* Fifth Edition, FDA=US Food and Drug Administration.

*****Scored as 0 (do not agree), 1 (somewhat agree), or 2 (strongly agree).

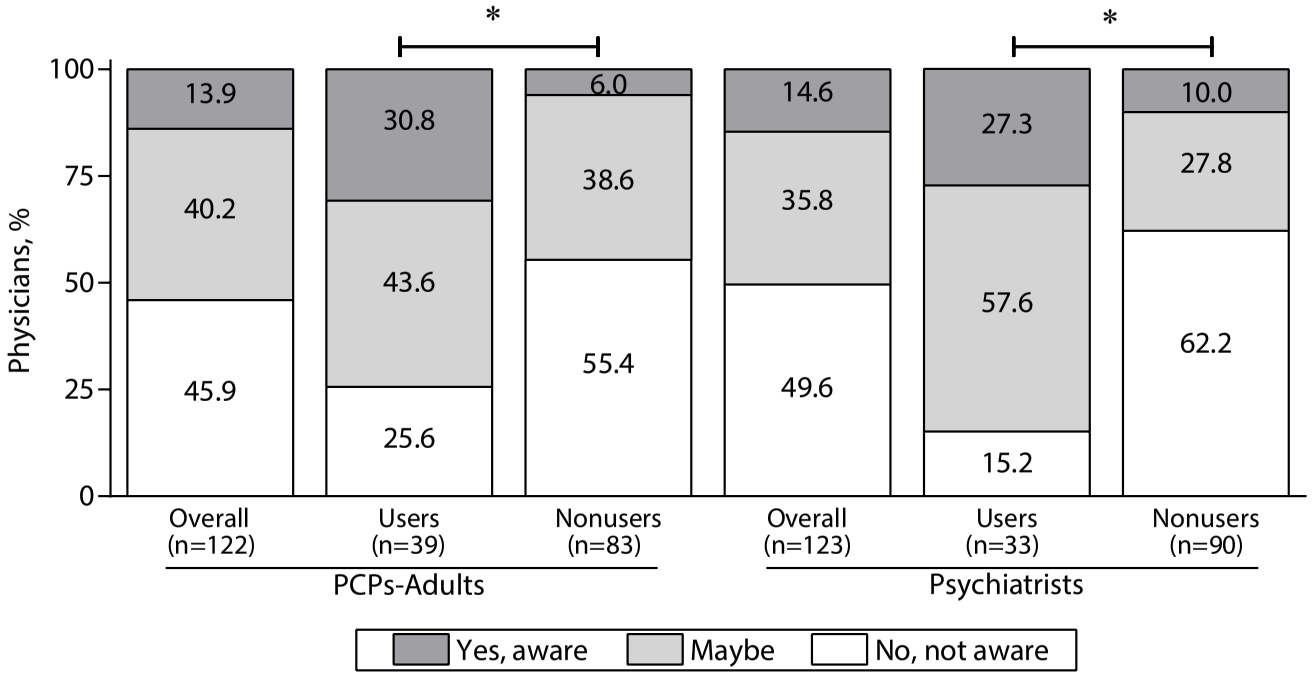
†Scored as 0 (strongly agree), 1 (somewhat agree), or 2 (do not agree).

Table 2. Important Uses For and Reasons for Not Using the BEDS-7

	PCPs-Adults	Psychiatrists
Important uses for the BEDS-7 among BEDS-7 users, n (%)	**n=39**	**n=33**
Assisting clinicians in identifying a patient that may have BED	28 (71.8)	29 (87.9)
Encouraging/initiating binge-eating discussions between clinicians and patients	28 (71.8)	22 (66.7)
Informing patients about BED	25 (64.1)	20 (60.6)
Informing clinicians about BED	19 (48.7)	17 (51.5)
Assisting clinicians in seeking appropriate consults or referrals	15 (38.5)	12 (36.4)
Other	0	0
Reasons for not using the BEDS-7 among BEDS-7 nonusers, n (%)	**n=83**	**n=90**
Forgot it was available	46 (55.4)	40 (44.4)
Tend to be more focused on other patient issues and health concerns	42 (50.6)	21 (23.3)
Not enough time during appointments	38 (45.8)	22 (24.4)
Did not have any patients for which screening for BED might be useful	28 (33.7)	33 (36.7)
Assess for BED through clinical interviews or other tools	12 (14.5)	29 (32.2)
Do not feel knowledgeable enough about BED	8 (9.6)	2 (2.2)
Do not find screening tools in general to be valuable	6 (7.2)	10 (11.1)
Did not know how to use the BEDS-7	4 (4.8)	0
Other	2 (2.4)	1 (1.1)

Abbreviations: BEDS-7=7-Item Binge Eating Disorder Screener, nonusers=BEDS-7 nonusers, PCPs-adults=primary care physicians serving adults, users=BEDS-7 users.

Figure 1. Awareness of the BEDS-7 at Wave 1 in BEDS-7 Users and Nonusers



Abbreviations: BEDS-7=7-Item Binge Eating Disorder Screener, nonusers=BEDS-7 nonusers, PCPs-adults=primary care physicians serving adults, users=BEDS-7 users.
*P<.001.