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The Counseling Center Assessment of Psychological Symptoms (CCAPS): Merging Clinical Practice, Training, and Research

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The goal of this article is to present information about a standardized multidimensional measure of psychological symptoms, the Counseling Center Assessment of Psychological Symptoms (CCAPS; Locke et al., 2011; Locke, McAleavey, et al., 2012; McAleavey, Nordberg, Hayes, et al., 2012), developed to assess difficulties specific to college students' mental health. We provide (a) a brief review and summary of the psychometric and research support for the CCAPS; (b) examples of the use of the CCAPS for various purposes, including clinical, training, policy, and counseling center advocacy; and (c) implications of the integration of routine outcome monitoring and feedback for the future of training, research, and clinical practice. In particular, the article emphasizes how the assimilation of and symbiotic relationship between research and practice can address the scientist–practitioner gap.

Keywords: outcome monitoring, feedback, naturalistic settings, practice-oriented research

Most psychotherapists are very busy and constantly managing many different demands and responsibilities at any given time. Some of the main tasks of a clinician include conducting an assessment, conceptualizing the client's areas of distress to determine a treatment plan, relating to the client therapeutically, and using psychological interventions effectively. But in addition, clinicians must find time for their other responsibilities, such as paperwork and documentation, answering e-mails and phone calls, and coordinating care. In addition to coping with these intense and challenging work demands, many clinicians are now facing increased pressure to demonstrate their knowledge of, and ability to implement, evidence-based practices. However, it is also recognized that there still is a divide between research and clinical practice, and that many psychotherapists do not use empirical findings or standardized data in their clinical practice (Castonguay, Youn, Xiao, Muran, & Barber, 2015). One way that has been proposed to help address this gap is through "practice-oriented research," in which empirical imperialism (Castonguay, 2011) is avoided, and instead, clinicians are active participants in key aspects of research, including the design and/or implementation of the research protocols. This bottom-up approach fosters and encourages a sense of joint ownership, mutual collaboration, and respect between researchers and clinicians in conducting psychotherapy research that is clinically relevant and scientifically rigorous (Castonguay, Barkham, Lutz, & McAleavey, 2013).

One approach within practice-oriented research—patient-focused research—has the potential to address the scientist–practitioner gap by carefully assessing and tracking clients' progress over the course of treatment, and providing timely and relevant feedback to psychotherapists to inform their clinical practice (Castonguay et al., 2013). This type of research is designed to provide clinicians with tools to augment their clinical decision making with directly applicable data. The goal of this article is to present information about a standardized measure, the Counseling Center Assessment of Psychological Symptoms (CCAPS; Locke et al., 2011; Locke, McAleavey, et al., 2012; McAleavey, Nordberg, Hayes, et al., 2012), as one such research tool to aid clinical practice. The CCAPS is a multidimensional, psychometrically sound instrument that was developed by counseling center staff specifically for college students and their mental health needs. In this article, we discuss the benefits and challenges associated with the use of standardized outcome assessment, and how this measure can aid clinicians in their clinical tasks, such as treatment planning and implementation, as well as document change that occurs in psychotherapy. Additionally, we discuss future implications for training, research, and practice.

The CCAPS

The CCAPS was first developed by staff members at the University of Michigan's Counseling and Psychological Services in 2001 for the purpose of creating a high-quality, multidimensional assessment instrument that was low cost and clinically useful for college counseling centers. With the goal of using the CCAPS to meet clinical, research, and administrative needs of the counseling center field, while also contributing valuable information to the science of mental health in college students, the instrument, along with all related research and clinical reports, was donated to the

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Center for Collegiate Mental Health (CCMH; ccmh.psu.edu) for ongoing research and development as a service to the field of university and college counseling centers (Locke, Bieschke, Castonguay, & Hayes, 2012).

The CCMH represents a collaborative, long-term, multidisciplinary effort blending the expertise of mental health treatment providers, psychological researchers, university administrators, information science and technology leaders, and industry partners to pursue the related goals of accurately describing college student mental health at a national level, conducting large-scale psychotherapy research and improving the range of clinical tools available to practitioners in the higher education setting. As a practice–research network (PRN), its ultimate goal is to create mutually beneficial and interdependent relationships among a large number of collaborators, all of whom are invested in data collection and research that will enhance the mental health services provided to college students (Castonguay, Locke, & Hayes, 2011; Hayes, Locke & Castonguay, 2011).

To achieve the necessary collaboration between clinicians and researchers, it was important for the CCMH to establish a sense of community "including shared ownership of the kinds of data gathered and the research conducted" (Locke, Bieschke, et al., 2012, p. 238). Therefore, to avoid the pitfall of creating more work for already strained counseling centers, the CCMH began with standardizing the data gathered during, as well as for the purposes of, routine clinical practice. That is, the CCAPS was designed to be used as an integral part of regular counseling center procedures to aid initial assessment, treatment planning, and outcome monitoring and evaluation. Reflecting the idea of merging and confounding research and clinical tasks (Castonguay, 2011, 2013), the instrument is used by clinicians as a way to simultaneously collect internally valid data for empirical purposes and to obtain immediately actionable information to better assess a client's particular needs. By being housed within the CCMH, a large international PRN, the use of the CCAPS provides both clinicians and researchers vast amounts of data that can be used to address both science and practice relevant questions.

The first widely distributed version of the CCAPS developed by staff members at the Counseling and Psychological Services at the University of Michigan included 70 items. The instrument was subsequently reduced and refined through exploratory and confirmatory factor analyses to a 62-item version, the CCAPS-62. The CCAPS-62 has eight factor analytically derived subscales, covering a broad range of symptoms: Depression, Generalized Anxiety, Social Anxiety, Eating Concerns, Substance Use, Family Distress, Academic Distress, and Hostility (Locke et al., 2011). It also includes a general measure of distress, the Distress Index (DI), which is composed of 20 items across the various subscales (Nordberg et al., 2015).

Each subscale and the DI is scored as an average of each of its respective questions, with higher scores indicating higher levels of distress across all subscales and DI. Clients are asked to rate each question on a Likert-type scale ranging from 0 (*not at all like me*) to 4 (*extremely like me*) in terms of how well an item describes them in the past 2 weeks. The CCAPS-62 takes approximately 7 to 10 min to complete and is easy to read (8.7-grade reading level).

The CCAPS-62 has been demonstrated to have good convergent validity with other established measures of related domain-specific distress (e.g., the Alcohol Use Disorders Identification Test [Saunders, Aasland, Babor, de la Fuente, & Grant, 1993], the Beck Depression Inventory [Beck, Ward, Mendelson, Mock, & Erbaugh, 1961], the Beck Anxiety Inventory [Beck, Epstein, Brown, & Steer, 1988], and the Patient Health Questionnaire–9 [Kroenke, Spitzer, & Williams, 2001]; Locke et al., 2011; McAleavey, Nordberg, Hayes, et al., 2012), as well as appropriately low correlations with unrelated domains (McAleavey, Nordberg, Hayes, et al., 2012). It has also been shown to have acceptable 1- and 2-week test–retest reliability in nonclinical samples, ranging from .76 for Academic Distress to .92 for Depression. Table 1 includes the aforementioned statistics related to the CCAPS-62, as well as the amount of change needed to demonstrate reliable change, as defined by Jacobson and Truax (1991). These scores range from .71 for Substance Use to 1.16 for Academic Distress.

In direct response to feedback from CCMH members, a briefer version of the CCAPS was developed. The CCAPS-34 is a 34-item instrument developed for clinical and research purposes of obtaining repeated measurement of outcomes in counseling. All items of the CCAPS-34 are present in the CCAPS-62 under the same

Table 1
Statistics Related to the CCAPS-62

	Test–retest reliability[a]		Internal consistency[b] (alpha)	Clinical significance cutoff scores[c] (n = 15,027)		Reliable change[d,f]	Normative and clinical benchmark M (SD)	
	1-week (n = 46)	2-week (n = 52)	(n = 142,560)	Low cut point	Elevated cut point	(n = 142,560)	Normative[e] (n = 15,027)	Clinical[b] (n = 142,560)
Depression	.93	.92	.92	1.09	1.70	.89	.81 (.74)	1.55 (.94)
Generalized Anxiety	.78	.84	.85	1.25	1.70	1.03	.98 (.80)	1.63 (.94)
Social Anxiety	.83	.89	.84	1.72	2.50	.98	1.52 (.84)	1.84 (.96)
Academic Distress	.92	.76	.82	1.42	2.40	1.17	1.23 (.84)	1.83 (1.02)
Eating Concerns	.89	.90	.89	1.09	1.80	.88	.98 (.80)	.98 (.87)
Family Distress	.92	.91	.83	.98	1.83	.96	.77 (.77)	1.28 (.96)
Hostility	.91	.83	.86	.82	1.43	.85	.65 (.69)	.99 (.86)
Substance Use	.87	.90	.85	.70	1.40	.70	.70 (.83)	.74 (.85)

Note. CCAPS-62 = Counseling Center Assessment of Psychological Symptoms-62.
[a] As reported in Locke et al. (2011), Table 9. [b] As reported in the *CCAPS user manual* (Center for Collegiate Mental Health, 2015a), p. 21. [c] As reported in the *CCAPS user manual* (Center for Collegiate Mental Health, 2015a), p. 22. [d] As reported in the *CCAPS user manual* (Center for Collegiate Mental Health, 2015a), p. 23. [e] As reported in McAleavey, Nordberg, Hayes, et al. (2012), Table 4. [f] Calculated using Jacobson and Truax (1991).

subscales, and the DI is comprised of the same items in both instruments. The CCAPS-34 has seven subscales adapted from the CCAPS-62, with two major changes: The Substance Use subscale of the CCAPS-62 becomes Alcohol Use in the CCAPS-34 because all subscale items refer to alcohol, and the Family Distress subscale is removed. The CCAPS-34 takes approximately 2 to 3 min to complete, is easy to read for college students (ninth-grade level), can be used as a brief assessment instrument at any point in treatment, and, because of its brevity, may be better suited for repeated measurements on a schedule best suited to the center's policies, procedures, administration, and clinical needs. Table 2 shows the subscale correlations between the CCAPS-62 and CCAPS-34 versions. These range from .92 for Eating Concerns to .98 for Academic Distress and Hostility.

The CCAPS-34 was developed using item response theory, input from experienced counseling center clinicians, factor analysis, and correlations with subscales from the CCAPS-62 (Locke et al., 2012). The CCAPS-34 subscale scores have shown acceptable convergent and discriminant validity with established related measures in the field, sensitivity to change (Youn et al., 2012), and adequate test–retest reliability, with 1- and 2-week reliability in nonclinical samples ranging from .77 for Academic Distress and Eating Concerns to .83 for Social Anxiety and the DI (Locke et al., 2012). Table 3 includes the main statistics related to the CCAPS-34, as well as the amount of change required in each CCAPS-34 subscale to demonstrate reliable change, based on Jacobson and Truax's (1991) definition. These scores range from .79 for the DI to 1.40 for Academic Distress. For most of the CCAPS-34 subscales, a significant percent of clients have shown reliable improvement, ranging from 19% to 50% for clients that presented with distress in the various subscales (McAleavey et al., 2015).

Despite the CCAPS' strengths as a multidimensional assessment tool, a general distress score, the DI, was developed in response to multiple requests from clinicians, administrators, and CCAPS users. The DI tracks a client's general distress level and is comprised of items from several different subscales. It was developed through evaluation of several different statistical models, resulting in a final bifactor model. In order to allow for seamless integration between the CCAPS-62 and CCAPS-34 over time, the DI is calculated only from CCAPS-34 items. Thus, it is identical for the CCAPS-62 and CCAPS-34, and can be compared between the two. The DI has been shown to have good concurrent and discriminant validity with other established measures in the field (e.g., .89 correlation with the Outcome Questionnaire (OQ)-45 total score), and adequate test–retest reliability, with a .88 2-week reliability score (Nordberg et al., 2015).

Table 2
Equivalent Subscale Correlations Between the CCAPS-62 and CCAPS-34

Subscales	Correlation[a]
Depression	.96
Generalized Anxiety	.96
Social Anxiety	.97
Academic Distress	.98
Eating Concerns	.92
Family Distress	n/a[b]
Hostility	.98
Substance/Alcohol Use	.97

Note. CCAPS-62 = Counseling Center Assessment of Psychological Symptoms-62; CCAPS-34 = Counseling Center Assessment of Psychological Symptoms-34.
[a] As reported in the *CCAPS user manual* (Center for Collegiate Mental Health, 2015a), p. 22. [b] There is no Family Distress subscale for the CCAPS-34.

The DI augments the CCAPS subscales by providing a quick and easy assessment of a client's general psychological distress, but it should not replace a close examination of the subscales, which address the important question, "In what ways is this person distressed?" By asking this question and assessing several conceptually and psychometrically distinct domains relevant to college students, the CCAPS subscales provide clinicians with a granular characterization of their clients' symptoms. The subscales can potentially differentiate someone who is quite anxious about their academic success from someone whose eating behaviors are uncontrolled, and this is an important clinical strength. (For a discussion of the pros and cons, both clinical and empirical, of a single measure of distress vs. a multidimensional assessment of clinical problems, see McAleavey, Nordberg, Kraus, & Castonguay, 2012).

To aid clinical and research purposes, the CCAPS instruments also include cutoff scores, which are specific points on each subscale used as interpretive thresholds. Each subscale, including the DI, has two cut scores—*low* and *elevated* cut points—that divide it into three ranges that indicate varying levels of severity and risk: low, mild, and elevated. Different processes were employed to develop the two cut scores for each subscale, which were designed to answer separate clinical questions. The first cut score helps address the clinical question "At what point on the subscale do scores resemble a nonclinical population more than a clinical population?" Having this information allows counselors to determine whether or not a client's level of distress is clinically meaningful or whether it is below clinical concern, and therefore could be used to inform triage, treatment initiation, and planning. Most of the CCAPS-62 subscales are able to successfully differentiate clinical and nonclinical groups (McAleavey, Nordberg, Hayes, et al., 2012), indicating that scores above the low cut point should be viewed as potentially problematic or of mild severity, whereas scores below this threshold are closer to a nonclinical average.

The second cut point for each subscale and the DI, the elevated cut point, was designed to identify areas of distress that were more likely to be problematic or cause specific clinical issues that need further review. For five of the CCAPS-62 subscales—Depression, Generalized Anxiety, Social Anxiety, Eating Concerns, and Substance Use—these cut points were derived using receiver-operator characteristic curves and diagnostic information. As there are no diagnostic correlates for the remaining three subscales (Hostility, Family Distress, and DI), their elevated cut points represent the 70th percentile of client scores (McAleavey, Nordberg, Hayes, et al., 2012). There is evidence that some of the CCAPS-62 subscales are quite effective at discriminating diagnostic groups from clients who had not been diagnosed with specific disorder. For example, the elevated cut point was derived for the Social Anxiety subscale to predict diagnosis of social phobia (McAleavey, Nordberg, Hayes, et al., 2012). Tables 1 and 3 show the low and elevated cut scores for the CCAPS-62 and 34, respectively.

Table 3
Statistics Related to the CCAPS-34

	Test–retest reliability[a]		Internal consistency[b] (alpha)	Clinical significance cutoff scores[c] (n= 15,027)		Reliable Change Index[c,e]	Normative and clinical benchmark	
	1-week (n = 86)	2-week (n = 47)	(n = 233,615)	Low cut point	Elevated cut point	(n = 233,615)	Normative[d] (n = 15,027)	Clinical[b] (n = 233,615)
Depression	.87	.86	.89	1.00	1.75	1.05	.72 (.78)	1.42 (1.03)
Generalized Anxiety	.86	.85	.83	1.30	2.10	1.06	1.03 (.80)	1.73 (1.01)
Social Anxiety	.85	.81	.83	1.65	2.50	1.09	1.42 (1.34)	1.79 (1.01)
Academic Distress	.79	.74	.83	1.45	2.50	1.40	1.20 (1.08)	1.85 (1.11)
Eating Concerns	.82	.77	.89	1.07	1.50	1.33	.94 (.67)	.91 (1.11)
Hostility	.81	.75	.84	.74	1.33	.99	.59 (.42)	.82 (.82)
Alcohol Use	.79	.78	.83	.64	1.10	1.11	.66 (.37)	.63 (.88)
Distress Index	.88	.83	.92	1.21	2.15	.80	.94 (.70)	1.57 (.84)

Note. CCAPS-34 = Counseling Center Assessment of Psychological Symptoms-34.
[a] As reported in Table 5 of Locke, McAleavey, et al. (2012). [b] As reported in the *CCAPS user manual* (Center for Collegiate Mental Health, 2015a), p. 21. [c] As reported in the *CCAPS user manual* (Center for Collegiate Mental Health, 2015a), p. 23. [d] As reported in Table 4 of McAleavey et al. (2015). [e] Calculated using Jacobson and Truax (1991).

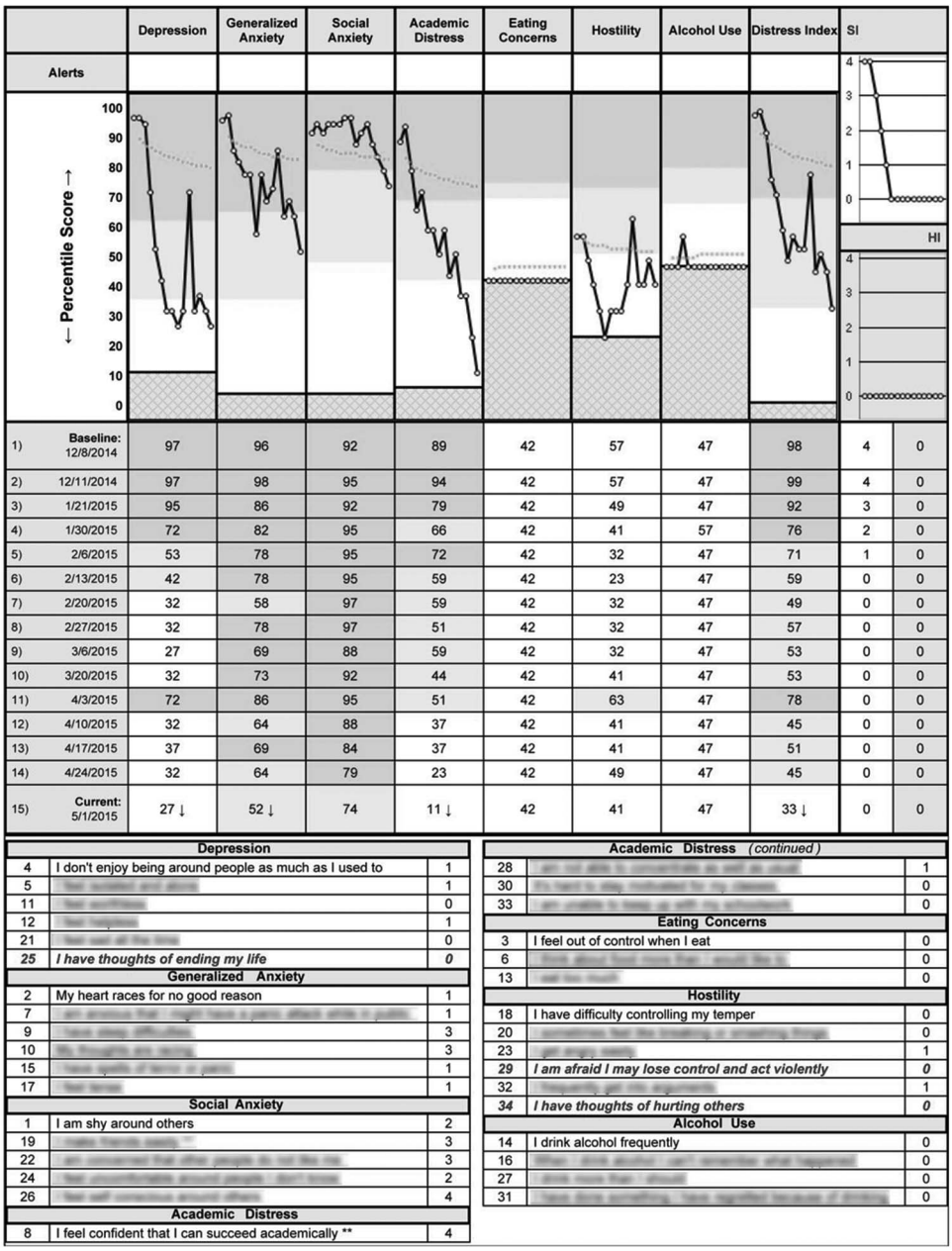
Profile Report

The CCAPS instruments can be administered in several ways, including pen and paper, but it is recommended that users administer it through electronic medical record (EMR) software, such as Titanium Schedule (partnered with CCMH), Point N Click, Medicat, or Pyramed, because these provide automated scoring and the generation of a clinical profile report. The integration of data standards into the EMR software used for day-to-day clinical practice at counseling centers provides assurance that the CCAPS questions and answers cannot be changed or edited, which is key to meaningful aggregation and sharing of data.

Figure 1 shows an example of a client's CCAPS-34 profile report.[1] The profile report includes graphical and tabular presentations of up to 15 administrations of the CCAPS, suicidal ideation (SI) and homicidal ideation (HI) responses, graphical representations of the different cut scores, as well as corresponding distress zones and floor zones. It also includes several types of feedback for the clinician, which are calculated from a customizable baseline administration. The individual answers to the CCAPS questions (found in the tabular section of the profile report) and the subscale scores (illustrated in the graphical layout) can be clinically useful in providing practitioners with a snapshot of the areas of distress for a given client. For example, for the most current administration, the CCAPS responses displayed in Figure 1 show that the client still experienced mild distress in the Generalized Anxiety and Social Anxiety subscales, as illustrated by the scores in the yellow (light gray) zone in the graph or table. The CCAPS instruments can also provide additional clinical utility because they allow comparison of an individual's subscale scores with those of a large clinical sample, that is, comparing an individual's level of distress across multiple subscales, with that of other students seeking services at college counseling centers. To this end, in the CCAPS-62 and CCAPS-34 profile reports, individual answers are aggregated into subscale scores and then displayed as percentiles based on a normative clinical sample. To report results, percentiles were selected over raw scores or normalized scores (e.g., t or z scores) because they offer several advantages for interpretation in clinical settings. By using the natural distribution of scores in a clinical population, percentiles inherently and intuitively compare an individual's subscale score with the referent population. Percentiles are also more meaningful and easily interpreted than raw scores when considering multiple subscales simultaneously, because the same raw score on two different subscales may represent two different relative levels of distress, compared with the population of college counseling clients. For example, in Figure 1, a percentile score of 74 in the Social Anxiety subscale can be interpreted to mean that the client's self-reported scores are greater than 74% of clients in the normative sample for that subscale.

However, the limitations of the use of percentiles should also be noted. Depending on the subscale and its distribution, the percentiles may be more susceptible to floor effects. For example, the Eating Concerns subscale is more positively skewed; relatively small changes in the raw score at the low end of the scale may produce large percentile changes. Alternatively, at the high end of the scale, large raw score change produce much smaller changes in the corresponding percentile score. In general, this reflects the CCAPS' minimal ceiling effect (it has very good sensitivity in the high-distress ranges of all subscales) and relatively common floor effects (its inherent limitations of meaningful discrimination between low-distress scores). These characteristics are useful because clients more frequently present with high-distress scores when seeking treatment. For example, the client's scores depicted in Figure 1 reveal high levels of distress across several subscales at baseline, including Depression, Generalized Anxiety, Social Anxiety, Academic Distress, and the DI. The CCAPS profile report also provides clinicians with information on critical items that assess SI and HI. The answers to these items are highlighted in the profile report, both as graphical displays as well as in the individual items table, so that counselors can quickly review and conduct risk assessment with their clients using CCAPS data.

[1] The client's information has been de-identified to ensure confidentiality.



		Depression	Generalized Anxiety	Social Anxiety	Academic Distress	Eating Concerns	Hostility	Alcohol Use	Distress Index	SI	
1)	Baseline: 12/8/2014	97	96	92	89	42	57	47	98	4	0
2)	12/11/2014	97	98	95	94	42	57	47	99	4	0
3)	1/21/2015	95	86	92	79	42	49	47	92	3	0
4)	1/30/2015	72	82	95	66	42	41	57	76	2	0
5)	2/6/2015	53	78	95	72	42	32	47	71	1	0
6)	2/13/2015	42	78	95	59	42	23	47	59	0	0
7)	2/20/2015	32	58	97	59	42	32	47	49	0	0
8)	2/27/2015	32	78	97	51	42	32	47	57	0	0
9)	3/6/2015	27	69	88	59	42	32	47	53	0	0
10)	3/20/2015	32	73	92	44	42	41	47	53	0	0
11)	4/3/2015	72	86	95	51	42	63	47	78	0	0
12)	4/10/2015	32	64	88	37	42	41	47	45	0	0
13)	4/17/2015	37	69	84	37	42	41	47	51	0	0
14)	4/24/2015	32	64	79	23	42	49	47	45	0	0
15)	Current: 5/1/2015	27 ↓	52 ↓	74	11 ↓	42	41	47	33 ↓	0	0

	Depression	
4	I don't enjoy being around people as much as I used to	1
5	[illegible]	1
11	[illegible]	0
12	[illegible]	1
21	[illegible]	0
25	*I have thoughts of ending my life*	*0*
	Generalized Anxiety	
2	My heart races for no good reason	1
7	[illegible]	1
9	[illegible]	3
10	[illegible]	3
15	[illegible]	1
17	[illegible]	1
	Social Anxiety	
1	I am shy around others	2
19	[illegible]	3
22	[illegible]	3
24	[illegible]	2
26	[illegible]	4
	Academic Distress	
8	I feel confident that I can succeed academically **	4

	Academic Distress *(continued)*	
28	[illegible]	1
30	[illegible]	0
33	[illegible]	0
	Eating Concerns	
3	I feel out of control when I eat	0
6	[illegible]	0
13	[illegible]	0
	Hostility	
18	I have difficulty controlling my temper	0
20	[illegible]	0
23	[illegible]	1
29	*I am afraid I may lose control and act violently*	*0*
32	[illegible]	1
34	*I have thoughts of hurting others*	*0*
	Alcohol Use	
14	I drink alcohol frequently	0
16	[illegible]	0
27	[illegible]	0
31	[illegible]	0

Figure 1. Sample Counseling Center Assessment of Psychological Symptoms-34 (CCAPS-34) client feedback report with 15 administrations.

Treatment Monitoring and Feedback

The CCAPS profile report provides three types of clinical feedback for clinicians. First, for the current administration, simple graphical arrows notify clinicians if the client has achieved a reliable change index for a given subscale or the DI, compared with the baseline score. This information lets counselors know whether the amount of change achieved is clinically significant and beyond measurement error for a specific subscale or the DI, compared with the initial level of distress with which their clients presented. For example, in Figure 1, the Depression, Generalized Anxiety, and Academic Distress subscales and the DI all have graphical arrows for the current administration, signaling that this client's change in these subscales is clinically significant.

The two additional types of clinical feedback are based on the expected treatment response literature (e.g., Finch, Lambert, & Schaalje, 2001; Lueger et al., 2001; Lutz, Martinovich, & Howard, 1999). Based on each client's initial severity level in the subscales and the DI, counselors are provided with an expected treatment response trajectory, as demarked by the dotted line in Figure 1. As clients continue in treatment, for a specific session number, their CCAPS subscale scores are compared with the average expected

subscale scores of clients who started at a similar baseline score. Patient-focused psychotherapy research has suggested that the integration of these types of tools can aid identify clients at risk for treatment failure, and increase odds of positive treatment outcome (Lutz et al., 2006).

In addition to this expected change curve, the CCAPS profile report also provides an "off-track" alert system that is intended to alert clinicians if a client is not making expected progress. An alert is generated if a client's change is less than what can be expected for 90% of clients who have similar baseline subscale scores for a given session number and subscale. This alert indicates to counselors that their client may be "off track" compared with the projected change of similar clients at a particular session for a particular subscale, and that this may warrant additional clinical attention.

Using the CCAPS in Clinical Training and Practice

In terms of frequency of use, the CCAPS-62 is best suited for initial and posttreatment assessments (McAleavey, Nordberg, Hayes, et al., 2012), given its more comprehensive nature, sensitivity around the mean of counseling center clients, and inclusion of family-related questions. However, this does not preclude it from being used to monitor ongoing treatment, as some clinicians and counseling centers do administer the CCAPS-62 as a repeated measure. In general, clinicians find the range of items under each CCAPS-62 subscale clinically useful during initial assessment, and comparing the same items at termination provides a useful check on treatment effects. The CCAPS-34 was specifically developed for repeated measurement. Therefore, it is recommended that the CCAPS-62 be used pre–post, whereas the CCAPS-34 be administered as frequently as possible during treatment, optimally at every session. However, counseling center variability has seen the CCAPS-34 administered at various alternative intervals, such as every 2 weeks or every third session.

Although the CCAPS was principally developed to monitor symptomatology change over time, this is not its only clinical use. For example, the instrument has also been administered in order to document progress from session to session when it is consistently used with short intervals (i.e., at every session; Martin, Hess, Ain, Nelson, & Locke, 2012). Not only do counselors describe benefitting from monitoring change—clients also perceive this as a positive aspect of their treatment. For example, a client reported that the CCAPS "was used for my safety by monitoring the progression of my suicidal thoughts" (Martin et al., 2012, p. 254). The CCAPS may not only serve as a way to track change in general—it may also identify and provide guidance in monitoring specific distressing areas as well as aid risk assessment for both the counselor and the client. For example, a counselor trainee reported that when a client endorses high SI or HI, he will seek supervision prior to meeting with the client as a way to prepare for the session as well as prioritize this discussion with the client.

The CCAPS can also provide an alternative outlet through which clients share distressing issues with their counselors. For a variety of reasons, clients may be reluctant to address certain issues. For example, they may perceive their difficulties as embarrassing or shameful to disclose. Clients might also be reticent to discuss issues in which they themselves are feeling ambivalent about or do not want to change. A counselor trainee shared an instance in which she used the CCAPS responses to highlight the discrepancy between a client's reported alcohol use and the elevated subscale scores. Initially, the client dismissed his alcohol use as normative when compared with his peers, but by pointing out the distress he reported in his use in the CCAPS, the trainee was able to help the client express the ambivalence he felt regarding his increased use since starting college. Alternatively, clients may not even be cognizant of having difficulties or deem certain issues as being the primary concern and focus for counseling. For example, a client presented to the counseling center reporting increased depressive symptoms, which became the main focus of treatment. However, as the sessions progressed and the mood symptoms improved, the Generalized Anxiety subscale scores worsened. When the client was presented with this data, she reported being surprised, as she had not considered her anxiety symptoms to be a problem. Regardless of the reason, the CCAPS can serve as a different avenue through which the counselors can become aware of their clients' areas of distress. For example, as one counselor noted, "Sometimes what was most helpful was not necessarily the information in the CCAPS but rather our discussion of it . . . it provided a starting place to talk about something we might not have talked about otherwise" (Martin et al., 2012, p. 255). In addition, more than half of counselors reported using the CCAPS to identify and raise awareness of problems with their clients, even when these had not been verbally shared (Martin et al., 2012).

Clients also reported benefitting from ongoing assessment by being provided with feedback on their progress and discussing it with their counselors. A large majority of clients indicated that reviewing the results of the CCAPS with their counselors helped them develop a new perspective of self. For example, clients noted being able to differentiate positive versus negative self-attributes rather than globally labeling themselves as distressed: "I saw some of my positive abilities (like feeling confident about academics) and then some of my negatives I could work on" (Martin et al., 2012, p. 254), which not only may be a first step of change but also may help increase hope. Additionally, clients described that having to answer the questions every week encouraged them to think about their problems and/or their life in general, which helped them prepare for their session with their counselors. Furthermore, tracking outcome through the use of the CCAPS and profile reports can help clients tangibly visualize the progress that they have made, even when they might not be aware of it. This can also aid in making treatment decisions, such as termination, and can highlight the areas of progress and growth and changes implemented in their clients' functioning (Martin et al., 2012).

Counselors have also reported using the CCAPS to assist in conceptualizing their clients' cases, treatment planning, and development of goals. Many counselors described using most of their clients' CCAPS profile reports to discuss therapeutic strategies and goals in supervision (Martin et al., 2012). The multidimensionality of the CCAPS allows counselors to be aware of and consider co-occurring areas of distress that may not be readily apparent. For example, a counselor stated that "with a few clients, I was able to see comorbid eating/substance use that was not part of the stated presenting issue." (Martin et al., 2012, p. 254). In this way, the CCAPS can be a powerful tool that counselors can use in conceptualizing a client's distress in order to tailor a comprehensive treatment plan that can best serve the client.

Counselors also noted that the CCAPS not only helped monitor progress but also highlighted clinically relevant and important

changes. For example, a counselor reported that "it [the CCAPS] alerted me to the fact that something very distressing had happened when several scales shot up after having been previously steady" (Martin et al., 2012, p. 254). Used this way, the CCAPS provides a baseline assessment of expected areas of distress that can be targeted in counseling and monitored for progress or change, and can also capture the effects of other stressful events for a client.

The Use of the CCAPS in Policy

In addition to clinical practice, the CCAPS has also been used by counseling center directors and staff in order to promote policy. A major concern that has been raised for outcome monitoring use is fear that the results will be used to highlight specific staff members' "ineffectiveness" (Boswell, Kraus, Miller, & Lambert, 2015). However, despite these reservations, the CCAPS has been used by counseling centers for varying policy-related missions. For example, counseling centers have used the CCAPS data to summarize and report center-wide activities in a given year. These summaries have included information such as year-to-year changes in mental health trends, increased number of clients seeking services as well as the increased severity levels that clients present with for treatment at counseling centers, and other important useful trends.

Related to these increased needs, counseling centers have used CCAPS data to advocate for increased resources and additional funding opportunities to be better equipped to address the demands placed on them. Counseling centers report sharing the CCAPS data with administrators at their respective universities and colleges as a way to provide tangible numbers that document the need for additional staff members, space, and operating budget (Center for Collegiate Mental Health, 2015b). The multidimensionality of the CCAPS also allows counseling centers to advocate for specific resources, as applicable. For example, for one center, their ability to track and show that the clients at their school had a higher rate on several risk factors, such as SI, self-injury, and past hospitalizations, among other factors, allowed them to secure the addition of a case manager to help manage and triage the clients that they served.

Moreover, counseling centers have relied on CCAPS data to advocate for the services they provide. Based on profile report data, changes in the CCAPS subscales have been used to demonstrate counseling centers' effectiveness, both internally within the center as well as externally with other administrative stakeholders in the university or college system. For example, centers shared that they have used the CCAPS data to highlight their increased effectiveness in treating clients with high distress compared with previous years, which has had positive impact on the staff members. Furthermore, centers have used the data to track and differentiate the effectiveness of the different types of services that they provide, such as psychotherapy, consultation services, and so forth (Center for Collegiate Mental Health, 2015b).

Counseling centers have also been able to advocate for changes and additions to the services they provide by using CCAPS data. Specifically, the CCAPS' ability to document change and the effectiveness of treatment services has allowed counseling centers to argue successfully for the maintenance of the center as a treatment service provider rather than shifting the services to assessment, referrals, or crisis response functions. Additionally, the CCAPS data provides data on the prevalence of clients' different presenting concerns, which can aid in decision making regarding the types of services and professional development workshops to implement at a counseling center. One center reported noting a shift in the prevalent presenting problem from depression to anxiety over time. Therefore, they developed anxiety-focused workshops as well as introduced added professional development tools for their staff members that increased training on assessment and treatment of anxiety symptoms (Center for Collegiate Mental Health, 2015b).

An added, and most unexpected, use of the CCAPS in policy is related to increasing the counseling center's presence on campus and provision of education in the community. Using CCAPS data, centers have been able to provide administrators and campus stakeholders with mental health trend data that have been used for various educational purposes, such as presentations and publications geared toward state and regional financial stakeholders, the greater community, as well as students. Additionally, centers have used the results to educate students on the efficacy of counseling services, which can increase their awareness of the mental health resources available on campus (Center for Collegiate Mental Health, 2015b).

Where Do We Go From Here?

As demonstrated, outcome monitoring is not just about tracking symptom change; it can serve multiple clinical and research roles that augment and improve both practice and empirical findings. The next section discusses future implications of outcome monitoring and feedback for training, research, and clinical practice.

Systematic and Consistent Integration

It can be argued that outcome monitoring should become a systematic and consistent aspect of clinical practice. There is indeed evidence to show that outcome monitoring addresses the most important principle guiding the profession: Do no harm. For example, results show that the systematic integration of outcome monitoring into clinical practice can help identify clients who are at risk for treatment failure and/or deterioration, and provide practitioners with opportunities and tools reduce these negative outcomes (Castonguay et al., 2013; Lambert, 2010; Lutz et al., 2006).

As part of treatment, most practitioners already conduct, formally or informally, some type of monitoring of their clients' changes. However, by systematically and explicitly integrating outcome monitoring with clinical procedure through the use of standardized measures such as the CCAPS, counselors would have access to information that can be used to augment their clinical awareness of their client's functioning and needs, as well as to evaluate whether treatment is achieving the expected changes and progress. For the advantages of such outcome monitoring to be adopted and assimilated into clinical practice, it must not require clinicians to drastically change their current clinical practices. With true integration of clinical and empirical tools, reliable and frequent feedback on client progress does not need to come at the cost of abandonment of preferred theoretical orientations or significant changes to familiar administrative policies. Instead, outcome monitoring should provide actionable and retainable information that can be assimilated like other forms of knowledge (e.g., supervision, training workshops) into clinical routine with minimal disruption and added benefit. Strategies that may help facilitate the

systematic and consistent integration of outcome monitoring into clinical practice are included.

First, this seamless incorporation needs to occur at the graduate training level (Castonguay, Boswell, Constantino, Goldfried, & Hill, 2010). Counselor trainees have been shown to benefit from continuously monitoring their clients because this provides them with an objective measure of client's progress (e.g., Lambert et al., 2002; Reese, Norsworthy, & Rowlands, 2009). In fact, findings from systematic collection of outcome data have been used to demonstrate to therapists in training that they can be more effective than highly experienced clinicians in treating severe clinical problems such as suicide risk and psychotic symptoms (see Castonguay, Pincus, & McAleavey, 2015). This is one example of how outcome monitoring may not only improve client outcomes but also foster trainees' professional growth and development. In addition to raising trainees' awareness of specific areas of strengths and sense of self-efficacy, it can also identify areas of potential improvement. This type of feedback could motivate trainees to seek extra help from supervision, workshops, additional didactic training, or even personal therapy (Castonguay, Boswell, Zack, et al., 2010; Martin et al., 2012). This increased awareness can also aid with triage, case assignment, and with therapist burnout, because counselors, both in training and experienced, can seek out additional resources as needed. For example, Hayes, McAleavey, Castonguay, and Locke (in press) found that therapists are differentially effective at reducing distress in clients with racial and ethnic minority status. Therefore, if a therapist observes that a number of his or her racial/ethnic minority clients are not showing expected improvement on the CCAPS, he or she could request a temporary adjustment of his or her upcoming case assignment, explore (on his or her own and/or with colleagues) what may be contributing to this situation, and seek additional supervision and/or resources that may incorporate multicultural training to aid their treatment. Such use of empirical observations could help the therapist to develop his or her clinical competence, while optimizing the counseling center's effort to be most attuned to their clients' needs. Throughout their graduate career, the systematic assessment would also provide students with data regarding their own progress, which can increase their self-esteem, understanding, and self-efficacy as counselors.

Another way to facilitate the systematic incorporation of outcome monitoring is to encourage all stakeholders to work together to create and maintain a "culture of use" within counseling centers, such that it becomes an assumption of practice—a component of day-to-day intervention with all clients that is emphasized in administrative, clinical, and training discussions that is allowed the necessary time to be actualized, and that is monitored and reinforced. The same systematic incorporation in clinical practice outside of counseling centers might be fostered by the provision of financial incentives or compensation to therapists. As noted by Boswell et al. (2015), this is a common practice in the medical field: Physicians charge insurance companies to review their patients' medical charts, which benefits both the patients, because they receive adequate care, and the physicians, as they are able to get compensated for their time reviewing the records. However, this practice has not yet expanded to the mental health field. Instead, with the systematic integration of outcome monitoring, counselors would be asked to spend their own time reviewing the assessment tools without compensation. Therefore, in order to expand the use of outcome monitoring and facilitate its incorporation into clinical practice, it may be of great benefit to aid insurance companies in recognizing their relevance, and thus encourage them to provide the financial compensation appropriate for their use. Potential difficulties on this type of incentives should also be noted. If therapists were to be financially reimbursed every time an outcome measure is completed, they would have to be vigilant about maintaining a balance between anticipated benefits and risks. For example, if a client presents in crisis, then a clinician would have to determine whether it is appropriate to administer the instrument, given the clinical needs, and/or the possibility of undue pressure on clients.

Outcome and Feedback: What Else Is Possible?

Presently, outcome monitoring and feedback has been predominantly related to clients' symptoms. However, it does not need to be: Monitoring can be expanded from symptomatology to other important aspects of the client's lives, such as general health and interpersonal functioning, as well as other areas that treatment helps target, such as changed self-perspective or increased tolerance toward one's own mistakes.

In addition to outcome monitoring, feedback could be expanded to go beyond an alert system of clients that are deteriorating or that fail to change as expected. There already are systems that provide alternative kinds of feedback to counselors, such as suggestions and tools to strengthen the therapeutic alliance, assessment of the client's social support and motivation level, as well as notification of important changes in life events that may be adding stress (Lambert, 2010). Other outcome monitoring infrastructures provide counselors with guidance on principles of change that may be relevant to clients, depending on the level and area of distress that they present (Kraus & Castonguay, 2010). These types of feedback can be relevant without imposing drastic changes to the therapist's theoretical orientation and existing background. It may foster the development of individualized treatment plans by providing clinicians with suggested resources that are evidence based and that would help address the immediate clinical difficulties that transcend treatment approaches.

Another way to expand and build upon current outcome monitoring systems is to receive feedback from clients regarding helpful and hindering events that took place during session. In a study designed and conducted as part of a full collaboration between clinicians and researchers, such feedback was obtained via the use of the Helpful Aspects of Therapy measure (Castonguay, Boswell, Zack, et al., 2010). After each session, clients completed the measure and indicated the helpful and hindering events during the therapy session, which the therapists deemed clinically relevant and important information for them to learn throughout the sessions (Castonguay, Nelson, et al., 2010). Despite the fact that the therapists were from differing theoretical backgrounds, they reported being able to incorporate this feedback to aid in selecting relevant interventions as well as to make adjustments in later sessions to make treatment more responsive to their client's needs. Additionally, systematically asking clients what is helpful during therapy, rather than just at termination, could have treatment implications for clients, as they consistently assess and consolidate what they have learned in therapy and perhaps feel more hopeful with their progress and gains.

In terms of frequency, outcome monitoring does not need to be limited to once-a-week or to postsession. It can be expanded to assess and track in-between session events. There is an increased

emphasis in the field to use ecological momentary assessment (EMA), which allows clients to report on symptoms, affect, and behavior as close to their experience in time as possible in between therapy sessions (e.g., Shiffman, Stone, & Hufford, 2008). Therefore, incorporating EMA as part of outcome monitoring would allow clinicians to have potentially clinically relevant information about their clients even before their next scheduled session, which may have great therapeutic value—as well as possibly increasing our understanding of change processes. For example, EMA data could be integrated to foster the implementation (or to provide insights about the lack thereof) of planned between sessions activities across various theoretical orientations, including psychodynamic therapy (Nelson & Castonguay, 2012) to facilitate change. Additionally, clinicians could use EMA data to monitor when core principles of therapeutic change, such as corrective experiences (Goldfried, 1980), occur, as well as the factors that may have facilitated such experiences in daily life (Castonguay & Hill, 2012). Continued outcome assessment outside of sessions could also provide clients with invaluable information about events that impact clients functioning and symptom fluctuation, such as situational or interpersonal stressors, which in turn can be processed as part of in-session therapeutic work.

For all of these and other potential expansions of outcome monitoring, we hope that efforts will be made to assess the effectiveness of the innovations as they are implemented in clinical routine. Perhaps the major advantage of outcome monitoring is that it intrinsically confounds clinical and empirical tasks. Conducting empirical investigations with and on outcome monitoring is an example of "clinically syntonic research," in which clinicians fully integrate research and practice by not being able to provide a clear-cut answer to questions such as: "Right now, am I gathering clinical information or am I collecting data?" (Castonguay, Nelson, et al., 2010, p. 352). The continued use and expansion of outcome monitoring would increase clinical data collected, which could then, in turn, be used to conduct further research studies to improve care. For example, depending on a client's initial severity, area of distress, and past treatment history, refined clinical tools could provide clinicians with valuable information in informing case assignment and treatment course. In this manner, research can be fully and seamlessly integrated into clinical practice and training in a symbiotic manner; conducting treatment will lead to research data, analysis of research data will facilitate clinical practice and understanding, and the field of psychotherapy research at large uncovers a bit more.

Conclusion

The current article presented an outcome monitoring assessment tool, the CCAPS, as a psychometrically valid, multidimensional measure that has been adopted and used within CCMH, a large PRN of counseling centers in the United States and internationally. To adhere to the mission of the PRN of providing mutually beneficial and symbiotic relationships between the various collaborators and stakeholders, the standardized use of the CCAPS has permitted rigorous research to be conducted, while allowing flexible adjustments that are attuned and sensitive to the various clinical needs and counseling center resources. In addition to the outcome monitoring purposes for which it was developed, the CCAPS instruments and profile reports have effectively been used for various clinical, training and center advocacy purposes. Through the continued development of the CCAPS, the various stakeholders involved in CCMH have advocated and implemented what appears to be core strategies for successful practice-oriented research, including giving priority to helpful clinical tools, fostering a reciprocal level of engagement and ownership, as well as attending to clinicians' concerns about the use and the value of the data collected as part of clinical routine (Castonguay, Youn, et al., 2015). By facilitating the seamless integration of research and clinical tasks, within the context of an active collaboration at every step of the establishment and improvement of a large PRN, we believe that the CCAPS and CCMH can be examples of how practice-oriented research can help address the scientist–practitioner gap.

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