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Evaluating Therapy Outcome at a University Counseling Center

with The College Adjustment Scales

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Abstract

To assess the effectiveness of time-limited therapy in a university counseling center, 333 clients' pre-counseling and post-sixth session College Adjustment Scales (CAS) scores were compared. Statistical significant decreases in reported symptomatology were found on all CAS scales. Analyses of CAS data for students who were notably distressed prior to receiving counseling also yielded statistically significant differences, with effect sizes revealing moderate to large decreases in symptomatology. Further replicative work is recommended to document the impact and effectiveness of counseling center services.
Evaluating Therapy Outcome at a University Counseling Center
with the College Adjustment Scales

As we approach the 21st century, individuals who provide mental health services are facing a psychological landscape characterized by uncertainty and change. Psychotherapists in many different settings are increasingly being pressured to demonstrate that the services they provide are cost-effective and efficacious (e.g., Goldfried & Wolfe, 1996; Steenbarger, Smith & Budman, 1996; Wells, Burlingame, Lambert, & Hoag, 1996; Whiston, 1996). Along with these mounting accountability pressures, some college and university counseling centers have sustained losses of financial support which have necessitated restrictive measures such as session limits and charging fees to students (Gallagher, Christofidis, Gill, & Weaver-Graham, 1996). The threat of dwindling resources and the contracting of mental health services to external providers (Foos, Ottens, & Hills 1991) underscore the profound need to demonstrate the efficacy and cost-effectiveness of counseling center services (Corazzini, 1997).

A related impact of the current socioeconomic and political climate has been the emergence of brief therapy and time-limited therapy models as the treatment modalities of choice in many mental health settings (e.g., Budman & Gurman, 1988; Koss & Shiang, 1994). During the last several decades, as the movement toward increasing use of brief and time-limited therapy gained strength, researchers have begun to identify client variables that appear to be important in evaluating the appropriateness of briefer approaches to therapy. Koss and Shiang (1994) and Steenbarger (1994) found that these variables include a high level of problem awareness, commitment, and an ability to quickly form a therapist/client alliance. While student clients of
college and university counseling centers may often meet these criteria, research needs to be done to test these findings by examining the effects of time-limited therapy in counseling center settings. This is especially critical in light of the fact that increasing numbers of students are soliciting professional help for more serious psychological problems (Bishop, 1990; Gallagher, Christophidis, Gill, & Weaver-Graham, 1996; Heppner et al., 1994; Stone & Archer, 1990).

Clearly, those of us responsible for providing psychological services to students in colleges and universities must energetically and proactively bring our scientific knowledge, training, and expertise to bear on the challenges which confront us (Corazzini, 1997). This includes the pragmatic use of counseling center resources to gather information concerning the impact and effectiveness of our counseling services. In addition to helping counseling centers demonstrate their value to university administrators, objective, on-going feedback can inform a counselor's understanding of clients' status and facilitate continued professional self-improvement (Johnson & Shaha, 1996).

Despite these needs, limited research using psychometrically sound instruments to measure therapy outcomes in counseling centers has been reported in the literature (Corazzini, 1997; Heppner et al., 1994). Efforts in this area have traditionally been hampered by the use of evaluative devices with poor or unknown psychometric qualities (e.g., client satisfaction surveys) and by the lack of validated instruments which measure more than a single problem area or construct (Lambert, Ogles, & Masters, 1992; Lewis & Magoon, 1987). In addition, frequently used multidimensional assessment and outcome measures such as the MMPI-2 tend to be time intensive to administer, score or interpret (Piotrowski & Keller, 1989). Importantly, these instruments also fail to address some of the problems unique to college students.
In the present study a standardized measure designed specifically for a college population, the College Adjustment Scales (CAS; Anton & Reed, 1991), was used to assess outcomes associated with time-limited counseling in a university counseling center. More precisely, this study hypothesized that statistically significant decreases in reported symptomatology on the CAS would occur following six sessions of individual therapy.

Method

Participants

Subjects for this study were students who sought services at a university counseling center between October of 1993 and March of 1996. Of the 1043 students requesting services during that time, 698 (67%) were females and 345 (33%) were males (M= 24.9 years, SD= 6.4). Nine hundred and forty (90%) of the sample were White, ten (1%) were African American, eight (1%) were Native American, twenty nine (3%) were Hispanic, twenty (2%) were Asian American, and eighteen (2%) were international students. The remaining eighteen individuals checked the "Other" category or did not provide information on their racial/ethnic background. Regarding academic status, 1001 (81%) were undergraduates and 162 (16%) came from graduate programs (the remaining 3% were unknown).

Instrument

The College Adjustment Scales (CAS) is a multidimensional inventory designed specifically to assess the common psychological and developmental problems presented by college and university counseling clients (Anton & Reed, 1991). It consists of 108 items which yield scores on nine scales: Anxiety (AN), Depression (DP), Suicidal Ideation (SI), Substance Abuse (SA), Self-Esteem (SE), Interpersonal Problems (IP), Family Problems (FP), Academic Problems (AP), and
Career Problems (CP). Anton & Reed (1991) reported the results of four studies representing 33 counseling centers in which the internal consistency of CAS scales ranged from .80 to .92, with an overall mean of .86. The same four studies also supported the convergent and discriminant validity of the CAS using multitrait-monomethod research designs. Wiswell (1995) also found evidence supportive of the convergent and criterion-related validity of the CAS, in that it distinguished between individuals exhibiting problems in the nine scale areas and those not seeking treatment. Additional reports have supported the ability of the CAS to correctly distinguish between clinical and non-clinical samples (Nafziger, Couillard, Smith, & Wiswell, 1998) and its clinical utility as a screening instrument (Nafziger, Couillard, & Smith, 1997).

Procedure

Prior to their intake interviews, students seeking psychological services at the Counseling Center completed the CAS, along with a personal data sheet and other intake paperwork. Following their sixth session of therapy, students were again asked to complete the CAS. This six session time frame was based on data showing that the average number of sessions for clients at the Counseling Center throughout the 1990s has been between six to seven sessions. Since past efforts to obtain measures of client outcome or satisfaction at or after termination had met with limited success, a sixth session follow-up measure was initiated to generate more information on the impact of counseling services.

The philosophy of the Counseling Center is grounded in a developmental model that emphasizes wellness rather than pathology. The Center has a policy of time-limited (10 session) therapy, but in a small minority of cases treatment is extended as needed (less than 10% of clients
have more than 10 sessions). Individual, couples, and group therapy are made available to students at no charge.

Counseling Center staff included five professional college counselors (three women and two men), seven graduate assistants, and fifteen practicum students from a psychology doctoral program. Of the professional therapists, four were licensed psychologists and one was a licensed Ph.D. marriage and family therapist. Theoretical orientations of staff were: cognitive with Ericksonian and existential influences, object relations, a self-developed Quantum model, cognitive-behavioral with a strong affective component, and cognitive-behavioral with existential/phenomenological influences. The graduate assistants were in their fourth or fifth year of graduate training; the practicum students were in their third or fourth year of the doctoral program. All staff and graduate students had received training in time-limited therapy prior to their participation in the study.

Results

Of the 1043 students who were seen for an intake interview during the time span of this study, 620 individuals (59%) participated in five or fewer sessions of counseling (including 193 students who did not return for another appointment after their intake interviews). Of the 423 students who participated in six or more sessions of counseling, 333 (79%) completed a second CAS. T-test analyses comparing the means of the follow-up group and pre-test only group revealed no significant differences (p > .05) on any of the CAS scales.

Normative data on the CAS provided by its authors (Anton & Reed, 1991) was originally converted to standardized T scores, which are derived by subtracting raw scores from the mean, dividing the result by the standard deviation, multiplying that number by 10, then adding 50 (Glass
Hence, the mean for the normative sample of $T$ scores is 50, and the standard deviation is 10. Descriptive analyses conducted with our sample indicated that at intake, mean scores on the Anxiety, Depression, and Self-Esteem scales exceeded the 60$T$ level (i.e., greater than one standard deviation above the normative mean). All other mean scores were within the 50$T$-56$T$ range, except for that of the Substance Abuse scale, which was 46$T$. Although most students at intake did not report notable distress in all nine areas assessed by the CAS, the vast majority (86%) of individuals scored 60$T$ and above on at least one CAS scale. Therefore, separate but identical analyses were conducted to assess the impact of treatment (pre- to post-test changes) for the total follow-up sample and for distressed clients whose intake scores exceeded 60$T$ on a particular CAS scale.

For the total follow-up sample, a repeated measures multiple analysis of variance (MANOVA) and post-hoc $t$-tests for dependent means revealed statistically significant ($p < .001$) decreases in scores from pre- to post-test on all nine CAS scales. Pre- and post-test means, standard deviations, and $t$-values for the total follow-up sample are reported in Table 1.

Standardized mean difference (effect size) analyses were also carried out for both the total sample and the distressed clients (60$T$ and above group) on all nine CAS scales. Often more useful than traditional inferential hypothesis testing methods (such as MANOVAs), the standardized mean difference is a descriptive (not inferential) statistic used to assess the practical significance of group differences (Borg & Gall, 1989; Glass, 1976; Glass & Hopkins, 1984; Shaver, 1991; 1993). The
statistic (d) was computed by subtracting the mean score at intake from the mean score after the sixth session of counseling, and then dividing by the sample standard deviation (at intake). Practical significance was evaluated using Cohen's (1988) standards for effect sizes, in which absolute values around or below .20 are considered small, those around .50 are considered moderate, and those around or above .80 are considered large. Effect sizes calculated with the total follow-up sample of the present study ranged from moderately large (dAN = -0.76; dDP = -0.72) to fairly small (dSA = -0.16; dAP = -0.21) (see Table 1).

Table 2 summarizes the analyses conducted on clients whose scores at intake suggested notable distress. Two hundred and sixteen students (65%) had scores of 60 or higher on the Self-Esteem scale. Two hundred and three students (61%) had scores in this range on the Depression scale, and 195 (59%) had scores of 60 or more on the Anxiety scale. The number with scores at or above 60 on the remaining scales were: Suicidal Ideation, 125 (38%); Interpersonal Problems, 129 (39%); Family Problems, 111 (33%); Academic Problems, 98 (29%); Career Problems, 68 (20%); and Substance Abuse, 39 (12%). At intake, the mean scale T scores of these "distressed" groups ranged from 65.04 to 66.69; after six sessions of counseling, they varied from 57.57 to 61.03. A repeated measures MANOVA and post-hoc t-tests for dependent means revealed that these pre-to post-test differences were statistically significant at the p < .001 level for all CAS scales.
the Depression (dDP = -1.02), Anxiety (dAN = -0.95), Substance Abuse (dSA = -0.91), Career Problems (dCP = -0.80) and Suicidal Ideation (dSI = -0.75) scales. Practically significant changes of moderate size were found on the Interpersonal Problems (dIP = -0.65), Self-Esteem (dSE = -0.63), Family Problems (dFP = -0.57) and Academic Problems (dAP = -0.57) scales. This reflects a change of between one-half a standard deviation unit to one full standard deviation unit in the mean scores of groups of student clients initially scoring in the clinically significant range on CAS scales.

Discussion

The purpose of this study was to assess the effectiveness of time-limited psychotherapy in a university counseling center. The CAS, a standardized inventory specifically developed for and normed on a college student population, was used to measure changes in nine common psychological, social, and academic problem areas.

CAS mean scale scores (at intake) revealed that students coming to the Counseling Center most frequently reported problems with depression, anxiety, and self-esteem. Suicidal ideation, interpersonal problems, and family problems were reported less frequently, but were still fairly common. Academic and career problems were reported even less frequently, possibly in part because academic and career counseling were offered by other Student Service offices and not by the Counseling Center. Substance abuse problems were infrequently reported, with our client group's mean being half a standard deviation below the CAS's normative mean for a non-client student population. This finding can probably be explained by the fact that our university is located in a region where the dominant culture espouses religious principles discouraging the use of alcoholic beverages.
Analyses focused on individuals reporting notable distress in specific areas of social, emotional, and/or academic functioning suggested that medium to large practically significant changes occurred over the course of six sessions of counseling. The largest effect size statistics, ranging from -0.75 to -1.02, were found for the Depression, Anxiety, Substance Abuse, and Suicidal Ideation scales, clinical areas which might be thought of as potentially having a more temporary or "state" nature. The practical significance of the changes in scales measuring what might be considered relatively more long-standing, chronic, or "trait"-related problems (e.g., Self-Esteem, Interpersonal Problems, and Family Problems) were more moderate, ranging from -0.57 to -0.65. Still, changes in the moderate range of practical significance in these areas is a notable finding, considering that students reported such relatively stable areas were somewhat affected following six sessions of counseling.

It is also interesting that changes of moderate to large practical significance occurred on the two scales more related to academic functioning, Academic Problems (dAP = -0.57) and Career Problems (DCP = -0.80), despite that fact that the Counseling Center provided no formal career or academic counseling. Positive changes in these areas may have resulted from referrals to other Student Service offices. These findings may also suggest the possibility that college adjustment is a holistic construct and that improvements in psychological and social functioning may have positive ripple effects in other areas, such as academic functioning. While this finding of a global positive impact upon students clearly warrants further research, other researchers have reported similar results (i.e., Wilson, Mason, & Ewing, 1997). If this trend continues, counseling centers would do well to emphasize to administrative entities the effectiveness of their work.
Seligman (1995) has outlined the differences between *efficacy* studies (traditional psychotherapy research which utilizes an experimental design, including random assignment to treatment and control conditions) and *effectiveness* studies (which evaluate outcomes for clients treated in actual clinical settings by typical practitioners). While the strengths of this study are those characteristic of effectiveness studies, these results must be interpreted within the context of several significant limitations characteristic of effectiveness studies in general and of this study in particular.

While the magnitude of the reported positive changes across all problem areas is very encouraging, and it seems likely that students' counseling experiences were in part responsible for facilitating these changes, the methodology utilized in this study does not allow us to rule out other possible explanations. For example, statistical regression to the mean or the impact of non-counseling factors (e.g., time-related reductions in depressive symptoms) may have been responsible for some of the decreases in reported distress. It is not possible to quantify which and how much of the changes reported by students in this study are attributable to counseling.

A second limitation involves difficulties inherent in collecting outcome data in university counseling center settings. In this counseling center, past attempts to obtain a post-test outcome measure at the time of termination had proven largely ineffectual. This was true for a number of reasons, including therapists being unaware that a given session would be the last or students moving on or not bothering to complete “one more questionnaire”. This study's six-session "post-test" was an imperfect compromise which yielded much more follow-up data than had previous efforts. While this study's "pre-test only group" did not differ on the CAS in any significant way from the follow-up sample, systematic difference in variables such as motivation, the nature of
psychological concerns presented, personality characteristics, and/or experiences in therapy may still have been present. Thus, the attrition rate encountered in the present study, although not dissimilar to that generally found in other outcome studies (e.g., Stout, Brown, Longabaugh & Noel, 1996), may have unduly biased the reported findings.

The follow-up sample also included some individuals whose therapy was longer term in nature. While 84% of our sample participated in nine or fewer sessions, for almost 15%, a measure taken after the sixth session represented a mid-point assessment. Therefore, while for most students this study assessed the impact of time-limited therapy, for some it measured the impact only of a partial course of time-limited therapy.

Another limitation of this study involves the generalizability of our sample to a broader student population. The student body at our university differs from that of most colleges and universities in several ways. First, the majority of students at the university are members of the Church of Jesus Christ of Latter-day Saints (Mormons). Second, more students come from a rural background than is likely to be the case at other universities. Finally, the sample included relatively few people of color, so conclusions concerning possible differences in response to counseling based on racial/ethnic group membership cannot be drawn.

These limitations suggest future directions for research. Clearly, research using more diverse counseling center samples is needed. Future outcome studies that assess the effectiveness of services should also gather more data on both on individuals whose "stay" in counseling is very brief (e.g., 3-4 session), and those whose experience in counseling is longer-term. The supplemental use of a quick, inexpensive measure such as the OQ-45 (Wells, Burlingame, Lambert, & Hoag, 1996) which can be administered after every session (or every other session) would help gather
information on individuals who leave therapy after several sessions. Such continuous measurement could also help therapists evaluate the effectiveness and efficiency of their work and provide information on the appropriateness of session-limit policies for specific psychological issues and concerns. Future work could also verify the potential global benefits of counseling on academic performance and student retention (i.e., Wilson et al., 1997).

Despite its limitations, this study found that distressed students reported statistically and practically significant positive changes in a variety of psychological, social and academic problem areas after participating in six sessions of counseling. While heartening, these results have multiple implications, including the responsibility of counseling center staff to assess outcome data. Such objective feedback can provide staff with a clear picture of the nature and degree of client problems at intake, such that services can be more appropriately focused (i.e., if it is discovered that a large number of clients abuse substances, additional resources could be developed or requested). Outcome data can also be used to support administrative decisions on such issues as session limits or fees. Center-wide strengths can also be identified and subsequently emphasized through outreach initiatives.

Ethical guidelines also support internal use of outcome data, since objective feedback is in the best interest of the client. Such data can substantiate individual staff members’ subjective impressions regarding their clients’ progress in therapy, or the data can raise important questions regarding the need for reevaluation. Furthermore, individual staff can receive feedback about their work that can help them recognize areas of personal strength and weakness, such that they can appropriately limit or enhance their practice as necessary.
In the era of "the bottom-line", counseling centers have the responsibility to not only provide high quality services, but also to provide university decision-makers with data demonstrating the effectiveness and impact of psychological services on the well-being and academic functioning of students (Corazzini, 1997). The finding that many students reported significant improvements in personal and academic functioning after six sessions of therapy in a university counseling center is encouraging news supportive of continued counseling center funding.
References


Table 1
CAS Means, Standard Deviations, t Values, and Effect Sizes For Total Follow-up Sample

<table>
<thead>
<tr>
<th>CAS Scale</th>
<th>Intake Mean (SD)</th>
<th>6th Session Mean (SD)</th>
<th>t</th>
<th>d</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxiety</td>
<td>61.01 (8.60)</td>
<td>55.165 (9.36)</td>
<td>12.52*</td>
<td>-0.68</td>
</tr>
<tr>
<td>Depression</td>
<td>62.24 (8.95)</td>
<td>55.83 (10.16)</td>
<td>11.97*</td>
<td>-0.72</td>
</tr>
<tr>
<td>Suicidal Ideation</td>
<td>55.83 (10.74)</td>
<td>52.31 (9.82)</td>
<td>7.43*</td>
<td>-0.33</td>
</tr>
<tr>
<td>Substance Abuse</td>
<td>45.47 (9.34)</td>
<td>43.985 (8.67)</td>
<td>3.53*</td>
<td>-0.16</td>
</tr>
<tr>
<td>Self-Esteem</td>
<td>61.51 (8.43)</td>
<td>57.515 (9.82)</td>
<td>8.69*</td>
<td>-0.47</td>
</tr>
<tr>
<td>Interpersonal Problems</td>
<td>56.81 (9.49)</td>
<td>53.85 (9.64)</td>
<td>6.65*</td>
<td>-0.31</td>
</tr>
<tr>
<td>Family Problems</td>
<td>56.06 (8.42)</td>
<td>54.17 (8.85)</td>
<td>4.40*</td>
<td>-0.22</td>
</tr>
<tr>
<td>Academic Problems</td>
<td>52.85 (11.33)</td>
<td>50.52 (11.59)</td>
<td>4.87*</td>
<td>-0.21</td>
</tr>
<tr>
<td>Career Problems</td>
<td>50.84 (10.40)</td>
<td>48.325 (10.03)</td>
<td>5.70*</td>
<td>-0.24</td>
</tr>
</tbody>
</table>

NOTE: * p<.001
Table 2
CAS Means, Standard Deviations, t Values, and Effect Sizes For T = or > 60 For Each Scale

<table>
<thead>
<tr>
<th>CAS Scale</th>
<th>N</th>
<th>Intake Mean (SD)</th>
<th>6th Session Mean (SD)</th>
<th>t</th>
<th>d</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxiety</td>
<td>195</td>
<td>66.69 (5.18)</td>
<td>58.49 (8.33)</td>
<td>14.93*</td>
<td>-0.95</td>
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<tr>
<td>Depression</td>
<td>203</td>
<td>67.83 (5.78)</td>
<td>58.74 (9.67)</td>
<td>14.39*</td>
<td>-1.02</td>
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<td>Suicidal Ideation</td>
<td>125</td>
<td>67.58 (7.92)</td>
<td>59.81 (9.45)</td>
<td>8.76*</td>
<td>-0.75</td>
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<td>Substance Abuse</td>
<td>39</td>
<td>65.59 (5.11)</td>
<td>57.08 (9.83)</td>
<td>5.52*</td>
<td>-0.91</td>
</tr>
<tr>
<td>Self-Esteem</td>
<td>216</td>
<td>66.30 (4.47)</td>
<td>61.03 (8.46)</td>
<td>10.56*</td>
<td>-0.63</td>
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<td>Interpersonal Problems</td>
<td>128</td>
<td>66.17 (4.69)</td>
<td>60.02 (8.66)</td>
<td>8.65*</td>
<td>-0.65</td>
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<tr>
<td>Family Problems</td>
<td>111</td>
<td>65.04 (4.17)</td>
<td>60.26 (7.36)</td>
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<td>-0.57</td>
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<td>Academic Problems</td>
<td>98</td>
<td>66.66 (5.01)</td>
<td>60.23 (9.52)</td>
<td>7.27*</td>
<td>-0.57</td>
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<tr>
<td>Career Problems</td>
<td>68</td>
<td>65.84 (4.96)</td>
<td>57.57 (9.69)</td>
<td>8.45*</td>
<td>-0.80</td>
</tr>
</tbody>
</table>

NOTE: * p < .001