# Effectiveness of Psychotherapy for Both Endogenous and Nonendogenous Depression in Older Adult Outpatients[1]

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This study explored the effectiveness of brief psychotherapies for treatment of elderly depressed outpatients. All were in a current episode of major depressive disorder, but half the sample ($n$ = 15) presented with endogenous symptomatology as well. Patients were assigned to either behavioral, cognitive, or insight-oriented psychotherapy for 16 sessions over a 12-week period. Evaluation occurred before and after therapy, and at four times during a 1-year follow-up interval. Nonendogenous patients responded more favorably to psychotherapy; this differential effect persisted throughout follow-up. Significant improvement, however, was made by some endogenous patients. One-third were not depressed by termination of therapy, and seven others were notably improved. Eight of 15 had not relapsed at 1-year follow-up.
Key Words: Elderly, Cognitive therapy, Behavioral therapy

$D$EPRESSION is viewed as the most common psychiatric problem among elderly adults (Butler & Lewis, 1982). Incidence of clinically diagnosable depression in elderly persons has been reported to range from 2 to 7% (Blazer & Williams, 1980; Gurland, 1976). Little controlled research, however, has been done to evaluate the effectiveness of various intervention strategies available for treatment of this disorder (Levy et al., 1980; Mintz et al., 1981), and there are no published studies on the responsiveness of elders whose depression is characterized by endogenous symptomatology.

Although it is generally accepted that medication has a primary place in the treatment of endogenous depression (Bielski & Friedel, 1976), there are older patients for whom use of traditional tricyclic antidepressants may be contraindicated (e.g., some patients with cardiovascular arrhythmias). It thus becomes relevant to determine if such patients would respond solely to psychotherapy for their depression and, if so, to determine how long they remain relatively asymptomatic after treatment is terminated. It was hypothesized that elderly depressives without significant endogenous symptomatology would respond more favorably to psychotherapy than those with endogenous symp-

toms and would have differentially lower relapse rates when evaluated 1 year after the termination of formal therapy.

## METHOD

### Participants

Thirty outpatients with a diagnosis of definite episode of major depressive disorder, who responded to a request for volunteers for a psychotherapy study, were assigned to one of three different therapy modalities for the treatment of depression. Classification of patients was completed using the Schedule for Affective Disorders and Schizophrenia (SADS; Endicott & Spitzer, 1978) in combination with the Research Diagnostic Criteria (RDC; Spitzer et al., 1978). Additional criteria for entry into the study included a) age greater than 55; b) scores greater than 17 on Beck Depression Inventory (BDI; Beck et al., 1961) and 17 on the Hamilton Rating Scale for Depression (HRSD; Hamilton, 1967); c) low suicidal risk; d) minimal evidence of other concurrent psychopathology (e.g. alchoholism, bipolar depression, psychotic episode); and e) a score greater than 25 on the Folstein Mini-Mental Exam (Folstein et al., 1975).

Patients were subtyped as endogenous major depressives if their responses to the SADS indicated presence of the RDC criteria (Spitzer et al., 1978, p. 19) outlined below. They must have reported

distress on six of the following 10 symptoms, with at least one symptom being from the first four listed: a) quality of depressed mood different than feeling in grief reaction; b) low reactivity to environmental changes; c) diurnal variation (worse in morning); e) pervasive loss of interest or pleasure; f) feelings of self-reproach or guilt; g) insomnia (middle or terminal); h) objective evidence of psychomotor retardation or agitation; i) poor appetite; j) weight loss; or k) loss of interest or pleasure (not necessarily pervasive). Fifteen patients met the criteria for definite endogenous subtype, and 15 were classified as nonendogenous.

Patients were assigned to either cognitive, behavioral, or brief relational/insight treatment in a random manner, with the constraint that age and severity of depression were comparable across conditions. Table 1 shows demographic characteristics and measures of severity of depression for participants in each of the three treatment groups. None of these measures were significantly different among the groups. Patients classified as endogenous subtype were also fairly evenly distributed across the three groups. Ten patients completed psychotherapy in each condition.

Table 1. Demographic Characteristics and Severity of Depression Indices by Treatment Condition

| | Type of psychotherapy[a] | | |
|---|---|---|---|
| Descriptive variables | Cognitive | Behavioral | Brief relational |
| Age | | | |
| M | 68.3 | 66.0 | 69.0 |
| SD | 7.7 | 5.7 | 4.8 |
| Folstein Mini-Mental Exam | | | |
| M | 28.3 | 27.3 | 27.6 |
| SD | 2.8 | 1.8 | 2.8 |
| Sex: M/F[b] | 4/6 | 1/9 | 2/8 |
| Ethnicity: W/B[b] | | | |
| Hispanic | 10/0/0 | 8/1/1 | 10/0/0 |
| Education[b] | | | |
| High school or less | 7 | 10 | 8 |
| More than high school | 3 | 0 | 1 |
| Income | | | |
| Less than $10,000 | 2 | 6 | 5 |
| More than $10,000 | 8 | 4 | 5 |
| Duration of depressive episode[b] | | | |
| Less than 1 year | 4 | 2 | 3 |
| More than 1 year | 6 | 8 | 7 |
| RDC endogenous | | | |
| Subtype[b] | 5 | 4 | 6 |
| Previous hospitalizations[c] | 3 | 3 | 3 |

[a]$n$ = 10 in each treatment condition.

[b]Expressed as $n$ per cell.

[c]Number of clients with previous psychiatric hospitalizations for depressive episodes.

Eight patients dropped out of treatment within the first 4 weeks and were replaced. Five dropped from behavioral therapy, two from brief relational/ insight therapy, and one from cognitive therapy. Stated reasons for dropping out ranged from practical problems (e.g., inadequate transportation) to a lack of desire to continue treatment or a feeling that the treatment modality to which they had been assigned was inappropriate. Dropouts were not significantly different from those who completed treatment in terms of sociodemographic variables (e.g., M age was 69.9) or in initial severity of depression (M BDI score was 29.5). Four were classified as endogenous, and four were not. The mean BDI score for their last therapy session attended was 28.5, suggesting that little progress was being reported by these patients. At the 1-year follow-up, seven agreed to be interviewed. Four patients (three endogenous and one nonendogenous) had participated in other treatment for depression, including individual therapy elsewhere, antidepressant medication, or psychiatric hospitalization.

## Treatments

All treatments comprised 16 sessions over 12 weeks. The same general format was followed in all three therapies. Sessions were 90 minutes in duration (rather than the typical 50-minute hour) because pilot work indicated that depressed elders generally responded to therapeutic interventions more slowly than other clients seen at this particular counseling center.

Sessions began with an assessment of the patient's mood during the past week, followed by review of any significant events that might have occurred. Then an agenda was set for the rest of the session. Homework was reviewed, if any had been assigned, and substantive content/materials planned for the session were introduced. A brief comment about the specific therapies is included here; a description of the therapy modalities is reported in detail elsewhere (Gallagher & Thompson, 1982).

*Cognitive therapy.*—This followed the approach of Beck et al. (1979), as modified by Emery (1981) for older adults. It emphasizes the importance of negative thoughts in the development of depression. Specific techniques for monitoring thoughts and experiencing the connection between them and mood shifts are introduced early in the therapy. Later, techniques for modifying distorted thoughts are presented, and attempts are made to identify

underlying themes, beliefs, and assumptions that are responsible for these thoughts.

*Behavioral therapy.*—Lewinsohn's approach (cf. Lewinsohn et al., 1976), modified for use with older adults (Gallagher et al., 1981), was employed in this study. It emphasizes that depression occurs when persons have far too few pleasant and/or too many unpleasant events in their life. Specific techniques are used to teach patients how to monitor their mood and daily activities and to see the connection between these. As therapy progresses patients are taught how to formulate self-change plans to optimize the extent of their pleasant activities.

*Brief relational/insight therapy.*—This approach was developed from the work of Bellak and Small (1965). The orientation is eclectic and dynamic, relies heavily on use of the therapeutic relationship to help patients gain insight into their problems and formulate plans for change, and is frequently applied within the confines of a time-limited approach to psychotherapy. There is minimal use of structured techniques to promote skill acquisition on the part of the patient, because the primary vehicle for change is presumed to be the therapeutic relationship itself.

## Measures

Observer ratings and self-report scales were used to evaluate improvement in depressive symptoms over time. The HRSD was administered by independent evaluators; patients completed the BDI and the Zung Self-Rating Depression Scale (SDS; Zung, 1965). These measures were obtained before and after therapy and again at four follow-up times of measurement: 6 weeks, 3 months, 6 months, and 1 year after treatment termination. In addition, the SADS-Change (SADS-C; Spitzer & Endicott, 1977) interview schedule was used at the 1-year follow-up appointment to determine current diagnosis.

Interrater reliability between two interviewers who administered the HRSD and SADS-C (calculated as Pearson product moment correlation coefficients) ranged from .81 to .88. On the assignment of SADS-C diagnoses, complete agreement was obtained on one-half of the sample that was rated by both persons.

## RESULTS

Table 2 reports means and standard deviations for the HRSD, BDI, and the SDS across six times of measurement for endogenous versus nonen-

Table 2. Means and Standard Deviations of Three Depression Measures before and After Psychotherapy, and at 6-Weeks, 3-Months, 6-Months, and 1-Year Follow-up for Clients Grouped According to RDC Major Depressive Disorder Subtypes

| Major depressive disorder subtype | Time of measurement | | | | | |
|---|---|---|---|---|---|---|
| | Pre[a] | Post[a] | 6[a] weeks | 3[a] months | 6[b] months | 1[c] year |
| *Hamilton Rating Scale for Depression* | | | | | | |
| Endogenous | | | | | | |
| M | 18.75 | 14.58 | 13.42 | 13.75 | 13.83 | 14.75 |
| SD | 2.14 | 5.93 | 5.89 | 5.80 | 6.22 | 4.81 |
| Nonendogenous | | | | | | |
| M | 18.10 | 5.50 | 7.83 | 4.82 | 7.34 | 6.72 |
| SD | 2.51 | 2.72 | 6.84 | 1.81 | 3.27 | 3.06 |
| *Beck Depression Inventory* | | | | | | |
| Endogenous | | | | | | |
| M | 26.13 | 16.73 | 18.08 | 18.29 | 15.13 | 20.73 |
| SD | 6.75 | 9.99 | 7.50 | 11.07 | 9.52 | 12.41 |
| Nonendogenous | | | | | | |
| M | 26.83 | 7.67 | 9.65 | 6.77 | 9.92 | 9.30 |
| SD | 5.74 | 7.31 | 9.04 | 5.67 | 8.69 | 8.47 |
| *Zung Self-rating Depression Scale* | | | | | | |
| Endogenous | | | | | | |
| M | 52.50 | 47.67 | 45.42 | 48.92 | 41.57 | 49.50 |
| SD | 6.83 | 9.17 | 7.80 | 10.29 | 9.64 | 9.38 |
| Nonendogenous | | | | | | |
| M | 45.11 | 36.67 | 35.78 | 34.89 | 34.56 | 30.44 |
| | 7.08 | 8.03 | 10.06 | 9.07 | 7.76 | 9.21 |

*Note.* Higher scores reflect greater distress.

[a]*n* = 15 per group

[b]*n* = 15 in endogenous and 14 in nonendogenous group

[c]*n* = 15 in endogenous and 12 in nonendogenous group

dogenous patients. Scores are collapsed across therapy conditions because of the small *n* per cell. Differential outcome, based upon comparisons among the three methods of therapy used, is reported elsewhere (Gallagher & Thompson, 1982). Briefly, no significant differences were found among therapies at the immediate conclusion of treatment; however, patients treated with either of the two structured approaches (cognitive or behavioral therapy) fared significantly better during the follow-up period ($p$'s < .05 on most repeated measures analyses of variance performed over time). Their depression scores were lower, and there were fewer relapses, compared with patients treated with brief relational/insight oriented therapy.

In the present study HRSD scores changed in the desired direction from pre- to posttreatment for both groups, and this improvement was maintained throughout the follow-up period. Repeated measures analysis of variance from pretest to the

3-month follow-up was significant, $F(3,69) = 33.94$, $p < .0001$, $\omega^2 = .497$. Change was also significant across all six evaluation points (from pre- to 1-year follow-up), $F(5,100) = 21.46$, $p < .0001$, $\omega^2 = .437$. The presence of a significant endogeneity-by-time interaction at the 3-month and 1-year follow-ups, $F(3,69) = 6.82$, $p < .0004$, $\omega^2 = .149$, and $F(5,100) = 4.70$, $p < .0007$, $\omega^2 = .123$, respectively, indicated a greater rate of improvement for individuals who did not report the endogenous symptom cluster at the start of therapy. Inspection of Table 2 also indicates that the mean HRSD was similar for both groups prior to treatment, $t(28) = .87$, $p > .05$, but the nonendogenous had significantly lower scores at posttreatment evaluation, $t(28) = 3.31$, $p < .005$, and this difference was maintained at the 3-month ($p < .005$), 6-month ($p < .05$), and 1-year follow-ups ($p < .001$). The mean score for the nonendogenous patient group was within the normal range from the postevaluation onward, whereas the mean for the endogenous group consistently remained in the moderate range of depression.

A decline in self-report of depressive symptoms on both the BDI and SDS scales was also observed at the 3-month follow-up, $F(3,69) = 34.70$, $p < .0001$, $\omega^2 = .503$, and $F(3,69) = 8.88$, $p < .0001$, $\omega^2 = .204$, respectively. A similar decline in the BDI and the SDS was seen at the 1-year follow-up, $F(5,100) = 19.73$, $p < .0001$, $\omega^2 = .415$, and $F(5,100) = 6.56$, $p < .0001$, $\omega^2 = .181$, respectively.

As with the HRSD, nonendogenous patients reported fewer symptoms throughout the 1-year follow-up than did the endogenous patients. Significant endogeneity-by-time interactions were found for the BDI at both the 3-month, $F(3,69) = 7.49$, $p < .0002$, $\omega^2 = .163$, and 1-year follow-ups, $F(5,100) = 4.30$, $p < .0014$, $\omega^2 = .111$. A comparison of mean differences at each time of measurement indicated that there was no significant difference between the two groups prior to therapy, $t(28) = .14$, $p < .887$, but nonendogenous patients had significantly lower BDI scores than the endogenous by the end of therapy, $t(28) = 2.84$, $p < .008$. This difference was still apparent at the 6-week ($p < .013$), 3-month ($p < .003$), and the 1-year follow-up ($p < .018$). Mean BDI scores were within normal limits for the nonendogenous group after therapy ended and remained so for the following year, but means for endogenous patients reflected a moderate degree of depression throughout this period.

A similar, but less significant picture was seen for the Zung SDS. The endogeneity-by-time interaction at the 1-year follow-up was significant, $F(5,95) = 2.51$, $p < .0354$, $\omega^2 = .056$, but not at the 3-month follow-up, $F < 1$. Thus, the change across time from the pretest to the 3-month follow-up was not different for the two groups. This may have been due in part to the fact that endogenous patients reported a significantly higher level of depression on the SDS at the outset than did the nonendogenous, $t(28) = 2.20$, $p < .036$. This difference was more pronounced at the postmeasurement, $t(25) = 3.01$, $p < .006$, and at the 3-month ($p < .006$) and 1-year follow-ups ($p < .002$) as well.

Differences between responsiveness of these two patient groups were further compared in the following two ways. First, patients were classified as "responders" if they scored less than or equal to 10 on the BDI at the various evaluation points. (This is a conventional cutoff score signifying the upper limit of the normal range on the BDI). Patients scoring 11 or more were classified as "nonresponders." By the end of therapy, five of the 15 endogenous patients (one-third) could be called responders; in contrast, 12 of the nonendogenous were in this category ($p = .012$ using Fisher's exact probability test). This trend was still significant at the 6-week follow-up ($p = .029$) and was apparent, though not significant, at 3-month follow-up ($p = .069$). At 6 months and 1 year, however, these distributions were again significantly different ($p = .048$ at both times of measurement).

Second, diagnostic categories determined by the SADS-C interview at 1 year were compared. Patients were classified as "relapsed" if they were in a new episode of major depressive disorder that arose since therapy was terminated. The label "improved" was given to those who either were diagnosed as not currently mentally ill or as in an episode of minor depression, again using the RDC. Of the 12 nonendogenous patients available for this interview, none had relapsed. Seven of them were diagnosed as not mentally ill, and five as minor depressive disorders. Two of the nonendogenous patients had died during the follow-up period, and one had moved out of the country. Of the 15 endogenous patients interviewed, seven were classified as still being in or having relapsed into an episode of major depressive disorder. Two patients met criteria for being classified as not mentally ill, whereas six evidenced symptoms of a minor depressive disorder. Thus, none of the nonen-

dogenous retained their original diagnosis, whereas seven of those with endogenous features were still classified as such.

DISCUSSION

This paper reports findings from a study designed to evaluate the responsiveness of clinically depressed older adult outpatients who volunteered to participate in a psychotherapy outcome study. Here we have focused on the influence of a significant individual difference variable (presence or absence of endogenous symptoms) to determine whether or not older depressives, grouped on this factor, would evidence positive benefit from the three modalities of psychotherapy employed in the research. We also evaluated their status 1 year after completion of therapy and examined differential relapse rates in these two groups of patients.

Overall, it was found that the nonendogenous patients in our study ($n = 15$) showed significant and durable improvement in reported symptomatic distress subsequent to brief individual psychotherapy. Eighty percent of these patients were within normal limits on the BDI by the end of therapy, and none had relapsed into another diagnosable episode of major depression within the 1-year follow-up period. Although the sample size was small, and patients were volunteers who met clinical criteria, these results support recent arguments that psychotherapy can be effective in treating older adults with psychological problems (cf. Levy et al., 1980; Mintz et al., 1981).

In general, endogenous patients ($n = 15$) responded less favorably to psychotherapy alone, compared with the nonendogenous patients treated in this study. It should not be overlooked, however, that one-third of them were noticeably improved by the time therapy concluded (i.e., had achieved BDI scores in the normal range). Also, eight of 15 endogenous patients who were reassessed 1 year later had not relapsed into a new major episode of clinical depression. Taken together, the response rates of these two groups compare favorably with several studies evaluating the efficacy of tricyclic antidepressants against placebo medication in the treatment of younger adult outpatients (Herceg-Baron et al., 1979; Rao & Coppen, 1979).

It is difficult to make comparisons between the present results and most other published studies evaluating the effectiveness of antidepressants in elderly depressed patients because of major differences in sample composition (inpatients vs. outpa-

tient volunteers), specific measurement instruments employed, and style of data presentation. Gross comparisons indicate that some drug studies report more favorable outcomes, whereas others suggest that drug treatment for depression in elderly adults may be no more, or even less, effective (cf. Jarvik & Milne, 1975; and Stotsky's 1975 review). Conclusions about the comparative effectiveness of pharmacotherapy and psychotherapy, however, are premature at this time and must await the development of substantially more knowledge about characteristics of patients who benefit from these contrasting approaches.

Results of the present study can be viewed as encouraging and suggestive of the positive role that psychotherapy may play with those patients who cannot or will not take psychotropic medication for their condition. One limitation to generalizability of these findings, however, pertains to how criteria were specified for classifying patients as endogenous. Some would argue that endogenous subtyping cannot appropriately occur in the absence of confirmatory laboratory data (cf. Carroll et al., 1976, on the specificity of the dexamethasone suppression test for this purpose). Others, such as Williams and Spitzer (1982), point out that current RDC criteria may be somewhat at variance with the classical concept of endogeneity. Specifically, RDC does not require the joint presence of two hallmark symptoms that are thought to characterize endogenous depression: pervasive loss of interest or pleasure and lack of reactivity to changes in the environment (see RDC criteria in method section). Williams and Spitzer (1982) suggest that greater diagnostic precision would obtain if DSM-III criteria were used uniformly; DSM-III does require the presence of these two features, accompanied by at least three of the other characteristic symptoms. They acknowledge, however, that each researcher must choose which system to use, depending on one's purpose, because there is no consensus at present regarding the best criteria.

In summary, although we recognize that these data are suggestive (requiring replication across a broader spectrum of older depressed individuals) and may be limited in their generalizability, they do emphasize the importance of identification and focus on individual difference variables in the treatment of major depression in elders. Considerably more information needs to be accumulated to determine if a pattern of psychotherapy-responsive endogenous patients can be described that would allow researchers and clinicians to identify such patients early in the diagnostic process.

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