Update on Empirically Validated Therapies, II

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This report provides the second update on our progress in developing a list of empirically supported psychological treatments for specific target populations. Incidental to a survey conducted by the Division 12 Task Force on Promotion and Dissemination of Psychological Procedures, we developed a rudimentary, preliminary list of examples of evidence-based treatments meeting criteria (see Table 1) created by the task force for evaluating the status of empirical support for psychological interventions. At Division 12's request, the Task Force on Psychological Interventions has engaged in an on-going endeavor to review the psychological treatment literature in the search for psychosocial interventions that meet these criteria. This task is far from complete, and we expect the task force to continue to issue annual reports for the foreseeable future. In the interest of space, we will not repeat here the rationale for this endeavor nor limitations we have previously discussed at length. We urge the interested reader to see our prior publications for such background (Chambless et al., 1996; Task Force, 1995).

The content of this list is restricted in at least two notable ways: First, our focus is on what is often termed *efficacy* rather than *effectiveness*. That is, we concentrate here on demonstrations that a treatment is beneficial for patients or clients in well-controlled treatment studies. Effectiveness studies are of importance as well; these include studies of how well an efficacious treatment can be transported from the research clinic to community and private practice settings. Once the task force has more comprehensively covered the efficacy literature, we expect to broach the subject of effectiveness. Second, our focus has primarily been on interventions with adults, and a separate report will be issued by the Division 12 Task Force on Effective Psychosocial Interventions: A Life Span Perspective. That task force, which has concentrated much of its efforts on treatment of children and prevention research, will publish a series of papers in a special issue of the *Journal of Child Clinical Psychology* as well as other outlets.

The task force has been asked for more information about its procedures for identifying treatments and determining whether they meet our criteria for efficacy, and we have seen evidence of considerable misunderstanding about how we operate (e.g., Silverman, 1996). Space does not permit more than a brief description here, and we refer the reader to Beutler (in press), Chambless et al. (1996), and Chambless and Hollon (in press) for more detail. Treatments have been identified as potential candidates for the list in a number of ways: (a) we have asked for nominations from the field via the APA *Monitor*, the Division 12 *Clinical Psychologist*, and Internet lists serving the Society for Psychotherapy Research and the Society for a Science of Clinical Psychology, and our own published reports, among other sources; (b) we scan the journals publishing psychotherapy research ourselves monthly; and (c) we have conducted literature reviews on specific topics using services such as *PsychLit* and *MedLine* and checking the reference sections of papers and reviews we have encountered in this process. For example, for the review of procedures for smoking cessation

and treatment of pain conducted for this report (by DAFH and DAW) over 1000 abstracts were reviewed to identify studies that appeared likely to meet our criteria.

Once a potential treatment is identified, a reviewer takes responsibility for evaluating the literature on its efficacy and often recruits colleagues to assist in the review and consults with other experts in that field. The reviewer then reports back to the group at large with a recommendation. Points of disagreement are debated and clarified until a consensus is reached or, more rarely, a vote is taken. Once we cite a treatment, we continue to review additional evidence we find in subsequent years and may decide to remove a treatment from the list or change its classification on the basis of new information, or upon the discovery that we have erred. It is impossible for us to cite all of the studies that we review in this publication format. Rather, we select representative studies to cite for efficacy evidence. When the evidence for a particular treatment is mixed, the reviewer is charged with determining whether the clear preponderance of the evidence is positive. If not, we choose to err on the side of caution by not listing the treatment. In reaching this decision, the reviewer typically seeks input from other members of the group and weighs the quality of the methodology in determining which studies' data have more credence. Elsewhere Chambless and Hollon (in press) have detailed the guidelines we follow in deciding on the strength of an efficacy study's methodology. In sum, we review many more treatments than we list. Additional information on some of the points that figured in our decisions about individual treatments may be found in the upcoming special section on empirically supported therapies in the *Journal of Consulting and Clinical Psychology.*

Foci for this Update

Since our last update (Chambless et al., 1996) we have continued to refine our list of interventions for the anxiety disorders, depression, and other problems already covered in the past. However, the greatest changes in this edition come from major efforts to review the literatures on couples and family therapies for psychological disorders (DHB, AD, KTM, VS, TS), treatment of the severely mentally ill (KTM), and delimited areas of health psychology interventions including smoking cessation programs (DAFH) and treatment of pain patients (DAW).

Couples Treatments for Psychological Disorders

We have previously reviewed the literature for treatment of marital distress. The focus here is on couples interventions for psychological disorders experienced by an individual. Typically these treatment programs involve the spouse as part of a broader program designed to alleviate symptoms. Couples therapy is rarely the sole intervention. Probably efficacious treatments were located for alcohol dependence, agoraphobia, and female sexual dysfunctions. We were surprised to find how few studies in the sex therapy literature provided supportive evidence meeting our particular criteria. In some cases this was because

the early, classic studies in the field do not meet our present-day criteria for methodological rigor. The dearth of evidence-based treatments for men is particularly striking.

Interventions for Severely Mentally Ill Patients

Family intervention programs for schizophrenia. Unlike many of the treatments that we list, intervention programs for families of schizophrenic patients are far from stand-alone treatments. Rather, the question is whether family programs add to standard approaches including medication monitoring, case management, and other treatment programs for the individual patient. The various efficacious behavioral/psychoeducational family intervention programs share many common components with small differences. Data from at least 9 controlled trials demonstrate the solid finding that, during a 2-year period of monitoring, patients are less likely to relapse if their families participate in such behavioral and psychoeducationally oriented programs than if they do not (30% vs 65%, on average). Null results are rare, but it is perhaps noteworthy that, in one such case (Telles et al., 1995), the investigators had a unique sample of low income Latino immigrants to the US. These findings require replication but suggest that a different treatment approach may need to be designed for Latino families. However, they should not be taken to mean that, generally speaking, the results of family intervention programs are limited to one ethnic group or another. Positive results come from studies in the US (where a large proportion of patients were African American), Great Britain, and China. For simplicity, in Table 2 we cite two studies relying on the same treatment manual. Note that other investigators have obtained comparable effects with different manuals that share the above-mentioned features.

Other interventions. Two other probably efficacious interventions have been identified for severely mentally ill patients. In each case, the intervention targets not the positive symptoms of schizophrenia, but the patient's life functioning -- employment or social adjustment. See Table 2. A particular comment on supported employment (SE) for severe mental illness is warranted. We had some internal debate about classifying SE as a psychological intervention rather than an alternative method of configuring rehabilitation services. We concluded that SE principles specify individualized treatment programming that differs fundamentally from traditional rehabilitation approaches. Further, SE programs are typically integrated with clinical services and run by members of the clinical treatment team, and interventions include provision of support such as problem solving about how to handle conflict with a co-worker.

Health Psychology Interventions

Interventions for chronic pain conditions. The evaluation of psychological interventions for chronic pain conditions is made especially complex by its integration into medical health care settings where it is typically part of, rather than the whole, treatment approach. Hence, in many cases the question examined is whether the psychological procedure adds to the efficacy of standard medical care, and our listings should not be taken to imply that the psychological intervention would be efficacious as a stand-alone treatment. We focused on treatments designed to be delivered as individual or group psychotherapy or psychoeducational programs by a professional in face-to-face contact with the patient.

Given the enormity of the pain literature, we have not yet reviewed it all. Notable omissions are tension headache, interventions for acute pain whether postoperative or attendant to medical procedures, and pain associated with cancer. For this review, we concentrated on identifying treatments with demonstrated efficacy in one or more of the following: reducing reported pain, increasing physical functioning, and improving cognitive-affective components of pain. A number of probably efficacious treatments and one new well-established treatment were identified. See Table 2.

Smoking cessation programs. There is a broad array of psychological interventions designed to promote smoking cessation. Our review focuses solely on those programs in which the intervention was conducted in individual or group psychotherapy sessions. Two additional noteworthy delimiters are: (a) we concentrated on complete abstinence from smoking 1 year after treatment as the outcome variable of interest, and (b) we required that abstinence be corroborated by biochemical tests. One side effect of these decision rules was that some treatments extensively researched in the 1960s-1980s, before biochemical verification was common, are not included in our review. In some cases, such treatments appear to be efficacious if one relies upon self-report data (e.g., rapid-paced aversive smoking, see review by Law & Tang, 1995). In addition, the major emphases in the smoking cessation field are no longer interventions fit for individual or group psychotherapy, but self-help, mass media and community campaigns, primary prevention, and nicotine replacement (Lichtenstein & Glasgow, 1992). Nonetheless, because smoking is such an important health problem, and because our focus is largely on interventions the individual practitioner can provide, we believe it is important to list efficacious treatments meeting our criteria. See Table 2.

Conclusion

One of the greatest challenges in preparing this report is maintaining a consistent approach to our decisions about a broad range of problems and treatments. The criteria presented in Table 1 fit some areas (e.g., the standard individual outpatient psychotherapy trial) more comfortably than others (e.g., complex and flexible interventions with populations requiring multiple interventions, typical in health psychology or work with the severely mentally ill). At times this leads to internal disagreement about the terms and criteria we have used since the inception of the EVT list. Although we have chosen to maintain the decision rules we established in our 1995 report, some of the difficulties this decision raises are worth mention.

To be classified as *well-established* according to our criteria, a treatment must have demonstrated that its benefits exceed those of some alternative treatment or placebo condition controlling for attention and expectancy (or that they equal the benefits from another well-established treatment), that is, that the effects of the treatment be *specific* (see Chambless & Hollon, in press). Additionally, we require that this efficacy have been demonstrated by at least two independent research teams. This last point has caused no dissent. However, our

group members do hold different views about whether specificity should be necessary for us to consider a treatment well-established. Some consider the question of the mechanism by which treatment works to be separate from efficacy considerations, whereas others believe it is essential for psychological interventions meeting or exceeding the standards for pharmacological interventions to be identified and highlighted. That is, comparisons to a waiting list control for the passage of time and the effects of assessment, but they do not control for so-called nonspecific factors like expectancy of change and contact with a supportive professional. We have considered adopting the three-part scheme suggested by Chambless and Hollon (in press), in which treatments are categorized as possibly efficacious (not replicated yet), efficacious (better than no treatment in at least two independent studies), and efficacious and specific (better than an alternative treatment or placebo). For now, we have delayed making this decision so that we might move forward on a broader EVT list, rather than revisiting the work we have already done.

These decision rules have more impact on the classification of some treatments than others. For example, as noted earlier, in treatment of schizophrenia there are nine studies by a number of different research teams showing that behavioral/psychoeducational family interventions are beneficial in reducing relapse. Yet we list these interventions as probably efficacious instead of well-established because investigators have rarely included a control treatment for the family intervention. Rather, family intervention plus standard treatment is compared to standard treatment alone. This same design is common in health psychology research where a psychological intervention may be added to medical procedures, and the question tested is whether the psychological treatment adds to the efficacy of treatment as usual. Thus, we encourage readers to keep the operational definitions of our categories of probable and well-established efficacy in mind when putting this EVT list to use. Otherwise, they may give short shrift to interventions with a solid base of comparisons to no treatment or as an addition to treatment as usual.

Also omitted from our list are multi-component treatments which are formed by adding a new component to another treatment already well-established in efficacy when the combined treatment does not exceed the original treatment in efficacy. Examples include cognitive-behavioral marital therapy (e.g., Baucom et al., 1990), in which a cognitive component has been added to behavioral marital therapy with no incremental benefit, and spouse-assisted exposure for obsessive-compulsive disorder in which the introduction of the spouse as a partner and coach in treatment sessions did not increase the benefits derived from exposure alone (e.g., Emmelkamp et al., 1990). Some of us argued that these treatments should be listed as efficacious because the compound treatment is as efficacious, even though not more efficacious, than the established treatment. The majority of us, however, concluded that such listings would not be parsimonious and could be misleading. An example drawn from the literature on combined psychological and pharmacological interventions may clarify our reasoning. When given in low doses, the tranquilizer diazepam does not interfere with the outcome of exposure treatment for agoraphobia (Wardle et al., 1994), nor does it increase

exposure's efficacy. Should we then say that diazepam plus exposure is an efficacious treatment for agoraphobia? We think not.

The Task Force on Psychological Interventions undertakes construction of this list in the belief that clinical psychologists and clinical psychology training programs may be assisted thereby in identifying treatments they wish to learn more about to enhance their skills or training program. We welcome feedback about this work and suggestions (preferably with reprints or citations) of treatments that might qualify for the EVT list.

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Author Notes

Although this paper originated as an effort of the Division 12 Task Force on Psychological Interventions, we are publishing it as individuals rather than representatives of the Division. This is to make clear that this report does not constitute nor is it intended to be viewed as a clinical guideline, standard, or official policy statement of either the Division of Clinical Psychology or of the American Psychological Association. We have listed the task force chair as the first author; otherwise authors are listed alphabetically. Members of the Task Force on Psychological Interventions are Larry E. Beutler, Karen S. Calhoun, Dianne L. Chambless (Chair), Suzanne Bennett Johnson, Susan McCurry, Kim T. Mueser, Nathan Perry (ex officio), Kenneth S. Pope, William C. Sanderson, Varda Shoham, and Sheila R. Woody. Special advisory members are Paul Crits-Christoph and David A. Williams.

The authors thank all those who wrote us to suggest treatments for the list and who sent constructive feedback on our work. Suggestions for the future work of the task force should be sent to the incoming chair, Paul Pilkonis, WPIC, 3811 O'Hara Street, Pittsburgh, PA 15213, or (Internet) pilkonispa@msx.upmc.edu. Correspondence concerning the present paper should be sent to the outgoing task force chair, Dianne Chambless, Dept. of Psychology, UNC-CH, Chapel Hill, NC 27599-3270, or (Internet) chambles@email.unc.edu.

Table 1

Criteria for Empirically-Validated Treatments

Well-Established Treatments

I. At least two good between group design experiments demonstrating efficacy in one or more of the following ways:

   A. Superior (statistically significantly so) to pill or psychological placebo or to another treatment.

   B. Equivalent to an already established treatment in experiments with adequate sample sizes.

OR

II. A large series of single case design experiments ($n \geq 9$) demonstrating efficacy. These experiments must have:

   A. Used good experimental designs and

   B. Compared the intervention to another treatment as in IA

FURTHER CRITERIA FOR BOTH I AND II:

III. Experiments must be conducted with treatment manuals.

IV. Characteristics of the client samples must be clearly specified.

V. Effects must have been demonstrated by at least two different investigators or investigating teams.

Probably Efficacious Treatments

I. Two experiments showing the treatment is superior (statistically significantly so) to a waiting-list control group.

OR

II. One or more experiments meeting the Well-Established Treatment Criteria IA or IB, III, and IV, but not V.

OR

III. A small series of single case design experiments ($n \geq 3$) otherwise meeting Well-Established Treatment Criteria II, III, and IV.

Table 2

Examples of Empirically Validated Treatments

Well-Established Treatments	Citation for Efficacy Evidence
ANXIETY AND STRESS:	
Cognitive behavior therapy for panic disorder with and without agoraphobia	Barlow et al. (1989) Clark et al. (1994)
Cognitive behavior therapy for generalized anxiety disorder	Butler et al. (1991) Borkovec et al. (1987)
Exposure treatment for agoraphobia	Trull et al. (1988)
*Exposure/guided mastery for specific phobia	Bandura et al. (1969) Öst et al. (1991)
Exposure and response prevention for obsessive-compulsive disorder	van Balkom et al. (1994)
Stress Inoculation Training for Coping with Stressors	Saunders et al. (1996)
DEPRESSION:	
*Behavior therapy for depression	Jacobson et al. (1996) McLean & Hakstian (1979)
Cognitive therapy for depression	Dobson (1989)
Interpersonal therapy for depression	DiMascio et al. (1979) Elkin et al. (1989)
HEALTH PROBLEMS:	
Behavior therapy for headache	Blanchard et al. (1980) Holroyd & Penzien (1990)
Cognitive-behavior therapy for bulimia	Agras et al. (1989) Thackwray et al. (1993)
*Multi-component cognitive-behavior therapy for pain associated with rheumatic disease	Keefe et al. (1990a,b) Parker et al. (1988)
*Multi-component cognitive-behavior therapy with relapse prevention for smoking cessation	Hill et al. (1993) Stevens & Hollis (1989)
PROBLEMS OF CHILDHOOD:	

Behavior modification for enuresis	Houts et al. (1994)
Parent training programs for children with oppositional behavior	Walter & Gilmore (1973) Wells & Egan (1988)
MARITAL DISCORD:	
Behavioral marital therapy	Azrin et al. (1980a) Jacobson & Follette (1985)

Probably Efficacious Treatments	Citation for Efficacy Evidence
ANXIETY:	
Applied relaxation for panic disorder	Öst (1988)
Applied relaxation for generalized anxiety disorder	Barlow et al., 1992 Borkovec & Costello, 1993
*Cognitive behavior therapy for social phobia	Heimberg et al. (1990) Feske & Chambless (1995)
*Cognitive therapy for OCD	van Oppen et al. (1995)
*Couples communication training adjunctive to exposure for agoraphobia	Arnow et al. (1985)
*EMDR for civilian PTSD	Rothbaum (in press) Wilson et al. (1995)
Exposure treatment for PTSD	Foa et al. (1991) Keane et al. (1989)
*Exposure treatment for social phobia	Feske & Chambless (1995)
Stress Inoculation Training for PTSD	Foa et al. (1991)
Relapse prevention program for obsessive-compulsive disorder	Hiss et al. (1994)
*Systematic desensitization for animal phobia	Kirsch et al. (1983) Öst (1978)
*Systematic desensitization for public speaking anxiety	Paul (1967) Woy & Efran (1972)
*Systematic desensitization for social anxiety	Paul & Shannon (1966)

CHEMICAL ABUSE AND DEPENDENCE:	
Behavior therapy for cocaine abuse	Higgins et al. (1993)
Brief dynamic therapy for opiate dependence	Woody et al. (1990)
*Cognitive-behavioral relapse prevention therapy for cocaine dependence	Carroll et al. (1994)
Cognitive therapy for opiate dependence	Woody et al. (1990)
Cognitive-behavior therapy for benzodiazepine withdrawal in panic disorder patients	Otto et al. (1993) Spiegel et al. (1994)
*Community Reinforcement Approach for alcohol dependence	Azrin (1976) Hunt & Azrin (1973)
*Cue exposure adjunctive to inpatient treatment for alcohol dependence	Drummond & Glautier (1994)
*Project CALM for mixed alcohol abuse and dependence (behavioral marital therapy plus disulfiram)	O'Farrell et al. (1985) O'Farrell et al. (1992)
*Social skills training adjunctive to inpatient treatment for alcohol dependence	Eriksen et al. (1986)
DEPRESSION:	
Brief dynamic therapy	Gallagher-Thompson & Steffen (1994)
Cognitive therapy for geriatric patients	Scogin & McElreath (1994)
Reminiscence therapy for geriatric patients	Arean et al. (1993) Scogin & McElreath (1994)
Self-control therapy	Fuchs & Rehm (1977) Rehm et al. (1979)
*Social problem-solving therapy	Nezu (1986) Nezu & Perri (1989)
HEALTH PROBLEMS:	
Behavior therapy for childhood obesity	Epstein et al. (1994) Wheeler & Hess (1976)
*Cognitive-behavior therapy for binge eating disorder	Telch et al. (1990) Wilfley et al. (1993)

*Cognitive-behavior therapy adjunctive to physical therapy for chronic pain	Nicholas et al. (1991)
*Cognitive-behavior therapy for chronic low back pain	Turner & Clancy (1988)
*EMG biofeedback for chronic pain	Flor & Birbaumer (1993) Newton-John et al. (1995)
*Hypnosis as an adjunct to cognitive-behavior therapy for obesity	Bolocofsky et al. (1985)
*Interpersonal therapy for binge-eating disorder	Wilfley et al. (1993)
*Interpersonal therapy for bulimia	Fairburn et al. (1993)
*Multi-component cognitive therapy for irritable bowel syndrome	Lynch & Zamble (1989) Payne & Blanchard (1995)
*Multi-component cognitive-behavior therapy for pain of sickle cell disease	Gil et al. (1996)
*Multi-component operant-behavioral therapy for chronic pain	Turner & Clancy (1988) Turner et al. (1990)
*Scheduled, reduced smoking adjunctive to multi-component behavior therapy for smoking cessation	Cinciripini et al. (1994) Cinciripini et al. (1995)
*Thermal biofeedback for Raynaud's syndrome	Freedman et al. (1983)
*Thermal biofeedback plus autogenic relaxation training for migraine	Blanchard et al. (1978) Sargent et al. (1986)
MARITAL DISCORD:	
*Emotionally focused couples therapy for moderately distressed couples	James (1991) Johnson & Greenberg (1985)
Insight-oriented marital therapy	Snyder et al. (1989, 1991)
PROBLEMS OF CHILDHOOD:	
Behavior modification of encopresis	O'Brien et al. (1986)
*Cognitive-behavior therapy for anxious children (overanxious, separation anxiety, and avoidant disorders)	Kendall (1994) Kendall et al. (1997)
*Exposure for simple phobia	Menzies & Clarke (1993)
Family anxiety management training	Barrett et al. (1996)

for anxiety disorders	
SEXUAL DYSFUNCTION	
*Hurlbert's combined treatment approach for female hypoactive sexual desire	Hurlbert et al. (1993)
*Masters & Johnson's sex therapy for female orgasmic dysfunction	Everaerd & Dekker (1981)
*Zimmer's combined sex and marital therapy for female hypoactive sexual desire	Zimmer (1987)
OTHER:	
Behavior modification for sex offenders	Marshall et al. (1991)
Dialectical behavior therapy for borderline personality disorder	Linehan et al. (1991)
*Family intervention for schizophrenia	Falloon et al. (1985) Randolph et al. (1994)
Habit reversal and control techniques	Azrin et al. (1980b) Azrin et al. (1980c)
*Social skills training for improving social adjustment of schizophrenic patients	Marder et al. (1996)
*Supported employment for severely mentally ill clients	Drake et al. (1996)

Note: Studies cited for efficacy evidence are linked to specific treatment manuals or to procedures well described in the study's report. The operational definition of the treatment is to be found in those manuals; the labels used here do not suffice to identify the particular treatment judged to be efficacious.

* Indicates a treatment added or a recommendation altered since the publication of Chambless et al. (1996). Two treatments have been deleted, not because of negative evidence, but because, unlike the other treatments, we do not have specific target problems identified yet for these approaches: token economy (target problem not specified) and behavior modification for people with developmental disabilities (target unspecified).