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CLINICAL RESEARCH: TREATMENT OUTCOME
AND ANALOGUE INVESTIGATIONS

By

Gregory L. Wilson

B.A., San Diego State University, 1980

Presented in partial fulfillment of the requirements


for the degree of


Masters of Arts

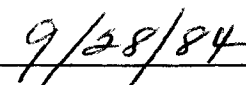
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Wilson, Gregory L., M.A., Fall, 1984 Clinical Psychology

Clinical Research: Treatment Outcome and Analogue Investigations
(168 pp.)

Director: John R. Means, Ph.D. *LM*

Chapter I presents a theoretical review of paradoxical procedures and argues for the integration of such approaches with single-case methodology. A review of existing literature highlights the utility of employing single-case designs in paradoxical research. Five major design strategies (i.e., reversal, time-series, multiple-baseline, simultaneous treatment, and changing criterion) are discussed and examples are provided within each area.

Chapters II-IV demonstrate the functional utility of employing single-subject research designs to evaluate behavioral treatments for childhood encopresis and relationship distress among married and cohabitating couples. Chapter II describes an empirical study employing a variable ratio schedule of reinforcement (the "Bathroom Game") in the treatment of a 10-year-old encopretic boy. An ABAB design was used and results revealed a clear functional control and clinically significant treatment effect during both experimental periods. Chapter III reports an attempt to validate a self-help marital bibliotherapy program. Five clinically distressed couples were evaluated via a multiple-baseline analysis and showed variable improvement on a series of dependent measures. Chapter IV also investigates the effectiveness of behavioral treatments as applied to three clinically-referred cohabitating couples. Results showed some treatment success with considerable between-subject variability.

The two final chapters (and Appendix) are analogue studies and examine: Cognitive versus imaginal treatment techniques and treatment acceptability of marital therapies. Chapter V describes a study designed to examine the differential efficacy of brief cognitive and imaginal approaches in the alleviation of experientially induced moods of anger and sadness. Both treatments proved to be effective, although a significant order by repeated measures interaction was found. Chapter VI (and the Appendix) present an attempt to evaluate the acceptability of different forms of marital therapy. College students rated four marital treatment descriptions as they were applied to one of two case histories. Behavioral and systems approaches were rated superior to dynamic and eclectic strategies.

PREFACE

Had I known in advance the demands that this option of thesis would place on me, I would have had second thoughts. Without a doubt, my dissertation will be a single study. Still, this option did enable me to pursue a variety of research interests as well as provide me with considerable skills in research methodology and report writing. My current research efforts have certainly improved as a result of this project.

In addition to those acknowledgements associated with each separate study, I want to thank those individuals who have contributed to the success of this project:

First, John Means, chairman, has been a continuing source of support, guidance, and friendship throughout my graduate career. Our unique collaboration style has proven to be effective and enjoyable. He has worked in countless ways to ensure this project's success.

Phil Bornstein is in many respects the founder of this project. His initial encouragement and guidance permitted this project to "get off the ground". Moreover, his continued support has followed me through to completion. Of the six studies presented in this thesis, five are directly attributable to Phil's unending source of motivation. I have clearly benefitted from his expertise

in empirical research.

Jim Walsh gave tremendously of both his time and expertise throughout the project. For example, as the "imagery study" became "more and more complicated", I turned to Jim "more and more often" for guidance. I have appreciated his patience and understanding throughout all my encounters with him.

This study has certainly benefitted from Larry Berger's contributions in ways he probably does not realize. I can still remember his comment at the prospectus meeting, "I'll wait for your defense, before letting you have it." I am sure that my research and writing have improved considerably, and, in retrospect, I can see how he has motivated me to work harder. He has also encouraged me to finish, as I have, "before another year passes."

I also want to thank Bill Doctor for his assistance as a "Pinch Hitter." Because Paul Sullivan retired from teaching at the University of Montana, Bill replaced him on the Thesis Committee. I appreciate his interest and time-commitment to the project.

Finally, I want to thank and acknowledge my co-authors on these projects. We spent a considerable amount of time together on these research studies and I am indebted to them. (Listed next are the author references for each article.)

Chapter I: Paradoxical procedures and single-case methodology: Review and recommendations.

Wilson, G. L., & Bornstein, P. H.

Chapter II: "The bathroom game": A systematic program for the elimination of encopretic behavior.

Bornstein, P. H., Balleweg, B. J., McLellarn, R. W.,
Wilson, G. L., Sturm, C. A., Andre, J. C., &
Van den Pol, R. A.

Chapter III: Behavioral marital bibliotherapy: An initial investigation of therapeutic efficacy.

Bornstein, P. H., Wilson, G. L., Balleweg, B. J.,
Weiser, C. E., Bornstein, M. T., Andre, J. C., Woody,
D. J., Smith, M. M., Laughna, S. M., McLellarn, R. W.,
Kirby, K. L., & Hocker, J.

Chapter IV: Behavioral cohabitation: Increasing satisfaction among non-married dyads?

Bornstein, P. H., Wilson, G. L., Bornstein, M. T.,
Balleweg, B. J., Weisser, C. E., Andre, J. C., Smith,
M. M., Woody, D. J., Laughna, S. M., McLellarn, R. W.,
Kirby, K. L., & Hocker, J.

Chapter V: Self-initiated imaginal and cognitive components: Evaluation of differential effectiveness in altering unpleasant moods.

Wilson, G. L., Means, J. R., & Guthrie, L. J.

Chapter VI: Treatment acceptability of alternative

marital therapies: A comparative analysis.

Bornstein, P. H., Fos, S. G., Sturm, C. A., Balleweg,
B. J., Kirby, K. L., Wilson, G. L., Weisser, C. E.,
Andre, J. C., & McLellarn, R. W.

Appendix: Treatment acceptability of alternative
marital therapies: A comparative analysis (brief report).

Bornstein, P. H., Fox, S. G., Sturm, C. A., Balleweg,
B. J., Kirby, K. L., Wilson, G. L., Weisser, C. E.,
Andre, J. C., & McLellarn, R. W.

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Chapter I

Paradoxical Procedures and Single-Case Methodology: Review and Recommendations

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Paper presented at the annual convention of the Rocky Mountain Psychological Association, Las Vegas, Nevada, April, 1984.

Abstract

Recently, paradoxical techniques have been increasingly employed by behavior therapists. The present paper: (a) summarizes case study paradoxical investigations, (b) reviews paradoxical procedures evaluated via intrasubject replication designs, and (c) offers suggestions for continued use of single-case methodology in paradoxical research. Five major design strategies (reversal, time-series, multiple-baseline, simultaneous treatment, and changing criterion) are discussed and examples provided within each area. Specific recommendations are made for a further merging of single-case experimental designs and paradoxical therapies.

Paradoxical Procedures and Single-Case Methodology:
Review and Recommendations

Over the last decade, paradoxical techniques have received increasing attention from behavior therapists (Ascher, 1980). Specifically, these procedures have been employed as a means of altering response frequency through the use of strategies in apparent opposition to treatment goals. Interestingly, most reports in the literature have relied upon case study or nonexperimental research. Recently, however, investigators (Ascher & Efran, 1978; Ascher & Turner, 1980; Bornstein, Sturm, Retzlaff, Kirby, & Chong, 1981; Wolpe & Ascher, 1976) have begun to empirically demonstrate the efficacy of paradoxical interventions across a wide range of problem behaviors. While conventional between- and within-subject designs have been utilized, the purpose of the present paper is to: (a) summarize case study/ nonexperimental research, (b) briefly review paradoxical procedures evaluated via intrasubject-replication designs, and (c) offer suggestions for the continued utilization of single-case methodology in paradoxical research.

Case Study/Nonexperimental Research

A case study is typically based upon uncontrolled, nonsystematic observations of a client. These observations are usually subjective in nature and do not include objective indices or experimental controls (Kazdin, 1980). Because of the above, results must be interpreted with considerable caution as rival interpretations may serve as equally viable competing hypotheses.

In most fields of inquiry, case studies have represented initial attempts in understanding human behavior. New techniques have been developed and demonstrated via descriptive case reports. Essentially, the case study can provide considerable information about the specific client and therapeutic approach, although it lacks adequate methodological controls from which to base causal relationships. That is, case reports are plagued by flaws which prevent the drawing of valid conclusions (Kazdin, 1980). Moreover, a variety of threats to internal validity (e.g., history, selection, testing) cannot be ruled out in case study research (Campbell & Stanley, 1963; Kazdin, 1981). The emphasis on postdictive, anecdotal, and retrospective accounts of therapy filtered by the clinician limit the generality and interpretability of case studies. Therapist bias and the exclusion of experimental controls prevent careful investigation of research hypotheses.

"Data" based upon client report may also be distorted and unreliable (Kazdin, 1980). In fact, the very nature of the case study limits the usefulness of the results.

Paradoxical Investigations

Paradoxical procedures were first reported by Dunlap (1928). Since his initial work, such techniques have been incorporated into a variety of treatment packages and therapeutic strategies (Coleman & Nelson, 1957; Frankl, 1960, 1975; Haley, 1963, 1973; Lazarus, 1971; Mowrer, 1960). Unfortunately, until recently, there have been few empirical studies that have evaluated the effectiveness of paradoxical approaches. Studies employing randomized between-groups designs (e.g., Ascher & Turner, 1980; Turner & Ascher, 1979) are particularly sparse. However, literally hundreds of case studies employing paradoxical techniques have been published. Although some investigations have not produced positive results (e.g., Turner & Ascher, 1983), a review of the literature demonstrates that paradoxical procedures have been applied to a wide variety of problem behaviors including: anger (Jessee, Jurkovic, Wilkie, & Chiglinsky, 1982), anxiety (Ascher, 1980), chronic stealing (Cottone, 1981), flatulence ruminations (Milan & Kolko, 1982), temper tantrums (Zarske, 1982), isolation (Jessee et al., 1982), obsessive thoughts (Mandel & Cooper, 1980), suicide (Braverman, 1980), and urinary retention (Ascher,

1979). In addition, marital, family, and group psychotherapists have widely incorporated paradoxical techniques in their treatment programs (Antebi, 1981; Fisher, Anderson, & Jones, 1981; Hare-Mustin, 1976; Held & Keller, 1982; Protinsky, Quinn, & Elliot, 1982; Weeks & L'Abate, 1982).

Fay (1976) presents a series of five "clinical notes" which are typical of case studies employing paradoxical methods. In each example, client and presenting problems are described (e.g., paranoid schizophrenia, paranoid psychosis, jealousy, poor study habits). A paradoxical recommendation is then offered which eventually leads to successful symptomatic relief. While it is possible that each client improved through the use of paradox, alternative explanations and rival interpretations prevent the drawing of unambiguous conclusions. Thus, reported success was not evaluated experimentally and no objective assessments were employed.

Vandereycken (1982) also reported individual cases in which "paradoxical intervention became the turning point of the treatment" (p. 106). In the first of two case examples, Vandereycken described a client suffering from sexual impotence and obsessive self-observation. During sexual treatment, he became more tense and his wife feared that he may have another nervous breakdown. Therefore, the

client was prescribed a low-dose tranquilizer and an antidepressant, and advised that the drug would cause sexual impotence (paradoxical message). However, as the therapist predicted, the client reported improved sexual functioning, even after a subsequent increase in dosage.

In the second case study, Vandereycken reported that sex therapy was "unblocked" by the use of paradoxical intervention. Here, a sabotaged marital treatment program was counteracted by changing each partner's behavior and stereotyped interpretation of the spouse's behavior. The husband accused his wife of being "sexually inhibited;" she, in turn, accused her husband of being "sexually obsessed." The therapist suggested that both husband and wife may have legitimate grounds and recommended an experiment to determine who was correct. A "test day" procedure was initiated in which the husband randomly chose a day to remain passive in sensate focus homework. Since the wife was unaware of the actual "test day," she felt obliged to be active in sensate focus everyday. Vandereycken concluded that both the relationship and sexual interaction became more satisfying through use of paradoxical procedures. Unfortunately, these claims must be deemed scientifically unsubstantiated.

Thus, problems which plague case studies in general clearly also apply to uncontrolled paradoxical investigations. That is, causal factors involved in treatment success can not be identified. Furthermore, as Kazdin (1980) states,

the mere fact that a large number of cases is studied does not necessarily lead to findings with wide generality. The findings themselves must be established in an unambiguous fashion so that they can be regarded as valid to begin with. Only after the validity of the findings is assured can the question of generality be raised. The case study as usually reported fails on both counts, namely establishing relationships between variables and the generality of these relationships beyond the individual (p. 29).

Paradoxical Procedures Evaluated Via Intra-Subject Replication Designs

Experimental designs permit evaluation and testing of research hypotheses and therapeutic techniques. By systematically manipulating variables, researchers may carefully evaluate treatment and reduce threats to internal validity. Further, empirical evaluation of treatment is important for a variety of reasons. First, third-party agencies and behavioral clinicians demand clear evidence of

treatment efficacy. Second, Hayes (1981) suggests that as clinicians evaluate treatment, they become more involved in the therapy process and thereby gain information and provide greater feedback to clients. Finally, evaluation of specific approaches with particular types of clients enables therapists to implement subsequent treatments with a higher likelihood of success.

The need for experimental scrutiny of paradoxical procedures has been noted by numerous researchers and therapists (e.g., Ascher, 1980; Bornstein et al., 1982; Milan & Kolko, 1982; Weeks & L'Abate, 1982). In addition, possible explanations for the current lack of experimental investigations have been offered. For example, Weeks and L'Abate (1982) indicate that few therapists have been trained in paradoxical therapy. They suggest that most clinicians who routinely use paradox are not employed in academic settings and are unfamiliar with controlled research designs. Ascher (1980) notes that paradoxical interventions are often administered in a spontaneous, unpredictable manner, limiting their evaluation via formal experimental study. Rohrbaugh, Tennen, Press, and White (1981) have explained that paradoxical case histories have acquired rather "magical" qualities. As a consequence, they recommend a demystification of the procedure. Lastly, it is interesting to note that the various theoretical

explanations of paradoxical strategies (e.g., behavioral systems, logotherapy) have been independently developed and are rarely cross-referenced (Omer, 1981). Recently, however, Omer (1981) has proposed a unifying paradoxical theory in an attempt to better explain the phenomenon under study.

Intrasubject-Replication Designs

Intrasubject-replication designs (Kazdin, 1980) or single-case methodologies (Hayes, 1981) refer to a special class of experimental research. These designs have been frequently applied by behavior therapists in the evaluation of a wide variety of clinical populations and therapeutic regimes. As noted by Hayes (1981), intrasubject-replication designs can be easily implemented in clinical work as a means of evaluating: (a) entire treatment packages, (b) specific facets of treatment, (c) differential effects of treatment, or (d) client preference between treatments.

These within-subject designs may be most appropriate for the evaluation of paradoxical procedures for a number of reasons. First, as indicated by Weeks and L'Abate (1982), "some of the techniques are designed to change a very specific behavior" (p.227). Second, paradoxical procedures tend to produce extremely rapid improvement (Ascher, 1980). Third, the flexibility inherent in paradoxical procedures

enables the therapist to implement or withdraw treatment as necessary. This is highly congruent with a number of intrasubject-replication designs. Fourth, paradoxical procedures are frequently used in clinical settings where homogeneous subject populations are simply not available. Lastly, within-subject designs allow for the demonstration of functional relationships. With regard to the acceptance of paradoxical procedures, this may be precisely what is needed at this point in time.

Due to space limitations, we will discuss only five major intrasubject-replication designs: ABAB reversal designs, time-series designs, multiple-baseline designs, simultaneous treatment designs, and the changing criterion design. The interested reader, however, is referred to other excellent sources for further information (Hersen & Barlow, 1976; Kazdin, 1982; Kratochwill, 1978).

Reversal designs. The ABAB reversal design involves repeated implementation, withdrawal, and assessment of some therapeutic intervention. Functional control of behavior is demonstrated through corresponding changes in treatment phases (i.e., baseline-treatment-reversal-treatment). That is, as the therapeutic strategy is implemented, behavior should once again revert to baseline levels. Thus, linear behavioral changes are based upon the implementation and withdrawal of treatment.

Very few studies have employed this design to evaluate the effectiveness of paradoxical interventions. In fact, some researchers (Weeks & L'Abate, 1982) have suggested that ABAB reversal designs are inappropriate for studying paradox and may fail to detect changes in client behavior. However, Bornstein and his colleagues (1981) have demonstrated the utility of this method in the paradoxical treatment of encopresis and chronic constipation. The client, a 9-year-old-boy, was referred for treatment by his parents after suffering with fecal incontinence since age 5 years. Over this period, the boy was seen by numerous physicians and treated with a variety of interventions (e.g., laxatives, enemas, hypnosis, etc.). Unfortunately, all treatments had proven ineffective. Behavioral assessment and analysis was conducted during the first three sessions (Phase A: Baseline). Paradoxical treatment was then implemented for three consecutive weeks. The therapist prescribed that: (1) the client go to the bathroom every hour, (2) pull down his trousers, (3) sit on the toilet for five minutes, and (4) behave as if he had to make a bowel movement, but prevent that from occurring (Phase B: Treatment). The mean number of weekly soiling incidents declined dramatically (Baseline = 6.7, Treatment = 0) and the mean number of appropriate bowel movements increased significantly (Baseline = 0.7, Treatment = 4.3). Following treatment, the family was informed that the program was no

longer needed because the problem had been reduced (Phase A: Reversal). However, the reversal phase only lasted two weeks because a return of pre-treatment problems was evinced. Therefore, family members were told that it would be necessary to re-implement the paradoxical procedures (Phase B: Treatment). In addition, a gradual "fading" program was initiated during this phase such that the client decreased the frequency of visits to the bathroom. The mean number of weekly soiling incidents (Reversal = 5.0, Treatment = 0) and appropriate bowel movements (Reversal = 0.5, Treatment = 4.8) demonstrated the therapeutic efficacy of paradoxical procedures in this intrasubject-replication design. Moreover, a week-long follow-up probe assessment was conducted one year posttreatment revealing maintenance of behavioral improvements over time (soiling = 0, bowel movements = 4).

Ascher and Efran (1978) employed an ABAB reversal design in the paradoxical treatment of sleep onset insomnia. Following a two-week baseline period, five clients were administered a conventional behavioral program consisting of deep muscle relaxation, desensitization, and covert conditioning. Unfortunately, self-report estimations of sleep onset latency failed to show any improvement. Thus, paradoxical intention was introduced wherein appropriate rationales were provided and clients were instructed to try

to remain awake as long as possible. Average estimations of sleep onset latency immediately decreased (baseline, conventional behavior therapy, paradoxical intention, respectively; Client A: 38, 30, 12; Client B: 28.5, 28.3, 14.5; Client C: 90, 69.7, 5.5; Client D: 29, 28.5, 13; and Client E: 57.5, 40.3, 6). Following the two-week paradoxical phase, four of the clients were administered no further treatment. However, the fifth client was instructed to return to the conventional behavioral program for an additional three weeks. Following a corresponding increase in sleep onset latency, the client was again instructed to try to remain awake as long as possible. Results indicated a similar marked reduction in latency estimations (re-administration of behavioral program = 28.33 mins.,; re-administration of paradoxical program = 7.5 mins.). Furthermore, informal one-year follow-up assessments revealed that each client reported continued satisfaction with their sleep behavior.

While researchers and clinicians must be attentive to a variety of considerations when employing reversal designs (see Kazdin, 1982), there is one issue in particular worthy of current discussion. That is, for purposes of establishing causal relations, behavior must revert to baseline levels upon the withdrawal of the therapeutic intervention. Given the apparent strength of some

paradoxical therapies, obtaining a "reversal" can be particularly problematic. Thus, it is recommended that the first treatment phase (i.e., B1) remain in effect for a rather brief period of time. In so doing, initial changes in behavior can be demonstrated without developing an adaptive response highly resistant to reversal effects. Later, during a final withdrawal condition, therapeutic benefits may be maintained via gradual elimination or fading of paradoxical procedures.

Time-series designs. Time-series refers to a statistical method of analysis rather than a separate design type. That method of analysis allows comparison of data over time for individuals or groups of subjects. Thus, time-series analysis is well suited to our discussion of paradoxical procedures and single-case methodology.

Relinger, Bornstein, and Mungas (1978) have reported the only single-case investigation using time-series procedures. They treated a 31-year old housewife for severe sleep-onset insomnia. Data was recorded by the client on daily sleep charts across a three-week baseline, one-week treatment, and 12-month follow-up period. During paradoxical instruction, the client was informed that she was to stay awake as long as possible so as to become aware of her disturbing thoughts and feelings. A time series analysis was then performed on the data to test for the

effects of treatment. Results indicated significant improvement on five of eight variables without reversal to pretreatment levels during follow-up periods. While the results were quite impressive, of greater significance was the successful application of time series methods as a means of reliably assessing the efficacy of paradoxical intention techniques.

Multiple-baseline designs. Kazdin (1980) has suggested that ethical (e.g., treatment cessation) and practical problems (e.g., difficult to verify if treatment has actually stopped) may limit the utility of ABAB reversal designs in clinical situations. On the other hand, the multiple-baseline design replicates the AB phase of the reversal design but alters the length of baseline for each replication (Hayes, 1981). However, a multiple-baseline design can be applied across clients, behaviors, or situations. Causal relationships are demonstrated by behavior changes linked temporally with treatment. Data are collected continuously and baseline lengths are varied in order to determine if behavior changes occur only when interventions are introduced. In addition, multiple-baseline designs are easily employed by behavior therapists who routinely conduct thorough assessments prior to treatment.

There have been few empirical investigations of paradoxical procedures employing multiple-baseline designs. Of those, all have employed the multiple-baseline design across subjects strategy. Ascher (1981) has demonstrated the effectiveness of paradoxical intention in treatment of agoraphobia, Relinger and Bornstein (1979) have similarly done so with insomniacs, and Kolko and Milan (1983) have recently found paradoxical procedures to be effective with delinquent youths. Ascher (1981) worked with two groups, each composed of five agoraphobic clients. Following baseline, Group A received a standard six-week in vivo exposure program prior to the paradoxical intervention. Clients in Group B received the paradoxical therapy immediately following baseline. The multiple baseline was accomplished by staggering the introduction of treatment within each therapeutic condition. A behavioral approach test, indicating proximity to two difficult target locations, was administered weekly and served as the primary dependent measure. The actual paradoxical instruction advised clients to proceed in their behavioral approach to the point of peak anxiety. Subjects were then to focus on the most prominent aspect of their physiological experience and attempt to increase the symptom. Results indicated that gradual exposure failed to produce a significant effect while paradoxical treatment was eminently successful. Ascher then explained these results by a hypothesized

process of anticipated catastrophic consequences and performance anxiety cycles.

Interestingly, Relinger and Bornstein (1979) reached similar conclusions in their multiple baseline analysis of insomnia. In that study, four adult outpatients suffering from severe, chronic sleep-onset insomnia participated in a five-session paradoxical instruction therapy program (identical to that reported by Relinger, Bornstein, & Mungas, 1978). The major dependent measure consisted of behaviorally-detailed sleep charts completed upon awakening each morning. A methodological refinement, however, involved the use of counterdemand instructions so as to evaluate and control for change attributable to expectancy and therapeutic demand. Results were analyzed for each element of the daily sleep chart using the Revusky Rn statistic. These data revealed significant effects from baseline to treatment for: (a) latency of sleep onset, (b) number of awakenings, (c) difficulty falling back to sleep, (d) difficulty falling to sleep, and (e) restfulness upon awakening. Three-month follow-up indicated maintenance of therapeutic gain over time. As in the Ascher (1981) investigation, Relinger and Bornstein posited "exacerbation cycle" phenomenon as the major causative element in the chain of behaviors resulting in insomnia. The results of their multiple-baseline study clearly suggested that

paradoxical instructions may, in fact, interrupt this cycle and thereby relieve such sleep difficulties.

Recently, Kolko and Milan (1983) employed a multiple-baseline design to experimentally evaluate the clinical utility of paradoxical intervention with three delinquent youths. Class attendance and academic grades were chosen as dependent measures. The paradoxical instruction was administered at weeks 2, 5, and 8, respectively, and directed each client to continue being tardy and truant at school. The therapists provided appropriate rationales in order to change the meaning associated with each client's particular situation (i.e., reframing). In addition, contingency contracts were negotiated, such that weekly allowances and weekend privileges were re-instituted based on improved school-related behavior. Prior to initiating paradoxical treatment, a variety of traditional behavioral interventions had failed, and each client's class attendance and academic performance was poor. During treatment, however, dramatic improvements were noted across both dependent measures. Paradoxical procedures were gradually eliminated and a six-month follow-up assessment revealed maintenance of behavioral improvement over time.

Simultaneous treatment design. The simultaneous treatment design provides for the concurrent use of two or more treatments with a single individual. The design begins with a baseline phase. Following baseline, interventions are administered and evaluated concurrently. Each intervention must be implemented on a regular basis and counterbalanced across stimulus conditions (i.e., time of day, settings, agents). The design limits many threats to internal validity (e.g., history, maturation, repeated observation) and allows for implementation of the more effective treatment during the final stages of therapy (Kazdin, 1980).

Although there have been no paradoxical studies using this design, a variety of clients and interventions can be empirically investigated via its application. For example, anxiety could be studied by providing for alternating treatments to be implemented at different periods of the day. By so doing, a paradoxical procedure in which the client is asked to heighten his/her anxiety could be compared with a standard relaxation-based program. By counterbalancing time periods, differential effectiveness would be determined among alternative treatments for a single subject. Certainly then, in a concluding phase, the most effective treatment could singularly be implemented. In any case, using the simultaneous treatment design does

allow for the assessment of relative effectiveness of differing treatments independent of varying stimulus conditions.

Changing criterion designs. In the changing criterion design, functional control is demonstrated as behavior changes in accord with varying performance criteria. However, unlike the designs previously described, the changing criterion design does not withdraw or withhold any portion of the treatment package. Rather, subunits of the intervention are systematically applied as standards of achievement. As with the simultaneous treatment design, the changing criterion design has not yet been formally used in the evaluation of paradoxical therapies. Albeit, the design certainly has features to warrant its consideration in experimental and/or clinical research.

For example, examine the case of an anxiety-based study disorder. That is, a student who does not study and then becomes anxious over his/her lack of study behavior. This, in turn, then promotes continued nonstudying and further worry. Using paradoxical procedures evaluated via a changing criterion design, one might initially suggest that the student attempt to reduce his/her study time by x amount or percent. The key empirical question then becomes "does this result in X amount of increase in study behavior?" Over time, as criteria are shifted, one could continue to

evaluate for systematic changes in performance. If the paradoxical intervention was responsible for change, one would expect performance shifts to be inversely congruent with criterion shifts. Thus, if performance relationally corresponded to changes in the criterion, there would be a strong suggestion that the paradoxical intervention did, in fact, exert control over behavior.

Problems and Prospects

Single-case experimental designs are not problem-free. In fact, a number of general issues that affect all single-subject designs are worthy of further consideration. First, unlike traditional between-groups designs, within-subject designs call for rather spontaneous decision-making on the part of the investigator. That is, certain aspects of the research cannot be preplanned. Instead, methodological decisions must be made as the data is collected. Examples would include when to change experimental phases, length of such phases, and means of counteracting instability/variability. There are no simple rules of solution applicable to the above problems. Rather, the investigator must decide which solution best facilitates the clarity of his/her experimental demonstration. Second, as indicated by Kazdin (1982), single-subject research addresses a limited range of outcome questions. Specifically, it is best suited for the evaluation of

treatment packages (i.e., "Does this treatment, with all its component parts, produce therapeutic change?") and extremely ill-suited for the analysis of treatment X subject interactions (i.e., differential effectiveness as a function of subject characteristics). Thirdly, within-subject designs are limited in the assessment of generality. While the dramatic changes produced may actually increase the likelihood of generalizable findings, the methodology employed does not allow for analysis of effects across subject variables. Within the single experiment, one simply cannot compare differing treatments for clients who vary on particular dimensions of interest. Lastly, and related to the above, systematic replication does provide for evaluation of generality. However, when inconsistent findings are obtained, it is often difficult to identify factors responsible for mixed results. Clearly, between-groups factorial designs may be more useful under these circumstances.

As indicated earlier in this paper, intrasubject-replication designs do offer considerable advantages in clinical research and may provide important information about treatment efficacy that would otherwise be unavailable. In addition to allowing for controlled experimentation in applied settings, within-subject designs provide a means of evaluation for the individual client.

They are powerful, sophisticated methods that permit examination of clinically-relevant problems and concerns. As such, they are not to be ignored. Their strengths and limitations, however, do suggest ways in which they might best be employed.

Behavior therapists have prided themselves on applying experimentally verified principles of behavior in their modification efforts. At this point in time, there exists a paucity of empirical evidence in support of paradoxical procedures. However, through the use of intrasubject replication designs, evidence is now accumulating. Paradoxical procedures can, and have been, easily integrated into behavioral programs. The future success of such theoretic blends will depend upon research validation. That trend appears to have begun. The present paper has attempted to highlight areas where initial evidence now exists and further promote continued experimental analysis of the paradoxical therapies. Moreover, we have outlined a number of viable research designs to be employed in this endeavor. Indeed, the time appears ripe for merging of paths: single-subject research and paradoxically-based treatment.

Chapter II

"The Bathroom Game": A Systematic Program for the Elimination of Encopretic Behavior

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"The Bathroom Game": A Systematic Program for the
Elimination of Encopretic Behavior

Operant theory has given rise to the development of a wide variety of behavioral treatments for encopresis (Doleys, 1978). These strategies can roughly be divided into four groups according to the manner in which reinforcement and/or punishment contingencies are presented during treatment (Doleys, 1981). The first group included investigations utilizing the simultaneous reinforcement of appropriate bowel movements and ignoring of soiling behavior (Back and Moylan, 1975; Neale, 1963; Young and Goldsmith, 1972). Secondly, reinforcement has been delivered for nonsoiling alone (Ayllon, Simon, and Wildman, 1975; Pedrini and Pedrini, 1971) or nonsoiling in conjunction with appropriate bowel movements (Blechman, 1979). The final two groups of procedures have relied almost exclusively upon punishment (Edelman, 1971; Firenden and Van Handel, 1970) or a combined reinforcement-punishment package (Ashkenazi, 1975; Doleys et al ., 1977; Gelber and Meyers, 1965; Wright, 1975; Wright and Walker, 1978).

The procedures employed in the present investigation paralleled those studies which have eliminated inappropriate toileting by reinforcing both nonsoiling behavior and occurrences of appropriate bowel movements. Moreover, a

unique aspect of the current study allowed for reinforcement delivery according to a variable ratio rather than continuous schedule of reinforcement. The potential utility of incorporating variable ratio schedules into effective treatments for encopresis is supported by a large body of experimentally-based laboratory research. These human and animal investigations have clearly demonstrated the superiority of variable ratio schedules in generating extremely high rates of appropriate responding (Ferster and Skinner, 1957). In addition, several recent investigators have advocated the use of intermittent reinforcement schedules with clinical populations as a means of facilitating the maintenance of treatment effects once reinforcement contingencies are withdrawn (Kazdin, 1977; Kazdin and Polster, 1973; Koegel and Rincover, 1977; Stokes and Baer, 1977).

The present investigation also differed from previous studies in that reinforcement was delivered within the context of a "game-like" procedure played between the child and the therapist. The positive nature of this game facilitated a working relationship while enabling the therapist to establish reinforcement schedules that could be systematically leaned-out over time.

Method

Subject

Josh R., a 10-year-old Caucasian male, was referred for treatment by a local physician for encopresis and chronic constipation. Josh had been successfully toilet trained at approximately 30 months of age in a manner which appeared quite unremarkable. However, just prior to his fifth birthday and coincidental with the birth of his sister, Josh's toileting behavior became highly irregular. Initially, he would demonstrate extended periods of retentiveness lasting upwards of one week. As is to be expected under such conditions (Doleys, 1981), megacolon and fecal impactions occurred. Consequently, Josh was hospitalized on two separate occasions for the removal of these fecal masses. Following this period of retentiveness, Josh remained constipated and began to exhibit a low frequency (approximately once per week) of toileting accidents. However, this frequency progressively increased and by age eight, Josh was soiling at an estimated rate of four to five times per week. At this time, appropriate toileting behavior was occurring approximately once per week.

Behavioral assessment revealed that thorough medical evaluations had been conducted. Obstructive rectal examinations, barium enemas, and dietary intake analyses all had proved negative. As a result, over the course of the five-year period, a variety of treatments had been attempted. These included use of stool softeners and laxatives, environmental manipulations (e.g., placing toys in the bathroom), and a myriad of consultations with local medical specialists. Josh's parents appeared generally quite capable. They had experienced no other serious problems with either child and clinical interview revealed they manifested considerable competencies regarding the application of parental consequences to child behavior.

Given the above information, an intervention plan was formulated and shared with Mr. and Mrs. R. just prior to the initiation of treatment. It was explained that the soiling may have first developed in response to the birth of Josh's sister. However, it now appeared as though a new set of circumstances had come to maintain the inappropriate behavior. That is, parental and family concern was obvious. Consequently, the "bathroom game" was explained as a means by which therapy would attempt to reverse these contingencies and thereby begin to reinforce appropriate toileting behaviors.

Experimental Design and Dependent Measures

An ABAB reversal design was utilized to evaluate the efficacy of the therapeutic intervention (Bornstein et al ., 1981). During the initial interview, parents were provided with recording sheets and asked to note all confirmed incidents of (a) soiling and (b) appropriate bowel movements. Incidents of soiling were broadly defined so as to include both small fecal stains and full bowel movements. Appropriate toileting was only recorded when bowel movements occurred as Josh was sitting on the commode. Rather than relying solely upon Josh's report, parents were asked to confirm the occurrence of all appropriate bowel movements. This was accomplished throughout the course of treatment and recorded by parents on the monitoring sheets which had been provided. Records were collected on a weekly basis and served as the sole source of data presentation.

Procedure

Baseline 1. This condition was in effect for three weeks during which time no experimental operations were implemented. Parents were instructed to continue treating Josh in their routine manner. This included that toileting was to be self-initiated, without prompt, and continued use of a one tablespoon daily dosage of mineral oil.

"Bathroom Game 1." This experimental condition utilized the cards displayed in Figure 1. It was explained to Josh that to help him gain control over his toileting behavior, he and the therapist would be playing a game.

Insert Figure 1 about here

This game consisted of two identical cards which allowed for the recording of soiling and appropriate toileting incidents. Josh was to have his mother/father complete the card on a daily basis. If an occurrence of soiling took place, a "yes" was to be written on that day in the "soiling" column. Similarly, if a confirmed instance of an appropriate bowel movement in the home were to occur, then a "yes" was to be scribed in the "B. M." column. It was further explained that the therapist's card would have a series of stars placed upon it. On those days where the therapist's stars appeared, Josh would have the opportunity to earn financial rewards. Specifically, Josh would earn 50 cents for every starred "no" in the "soiling" column and 25 cents for every starred "yes" in the "B. M." column. In addition, Josh was heavily praised by the therapist for all non-instances of soiling and occurrences of appropriate bowel movements. Starred days were randomly determined by

the therapist. During this phase, stars appeared on a variable ratio schedule of one star every two days for both "soiling" and "B. M." columns. The "bathroom game 1" condition remained in effect for three weeks.

Baseline 2. Following the above phase, the family was informed that since the problem had responded so well to treatment, the "game" could now be terminated and Josh could be expected to maintain the progress achieved. This condition remained in effect for two weeks.

"Bathroom Game 2." Family members were informed that since withdrawal of the treatment program indicated a reversal of therapeutic effects, it would be necessary to re-implement the "game" procedures. However, beginning with week 11 a programmatic fading scheme was initiated. This was accomplished by progressively leaning-out the variable ratio schedule of reinforcement (and the mineral oil supplement) over the course of the next six weeks (weeks 11-16). Thus, by week 16, only one star appeared on the entire "bathroom card." Beginning with week 17, the "bathroom cards" were no longer utilized and instead Josh was simply provided with the therapist's social praise, contingent upon continued successful performance. Finally, beginning with week 19, the number of scheduled sessions was decreased such that only three further sessions were conducted prior to termination at week 28. During this

fading of sessions, weekly data was continuously collected by telephone contact with parents.

Follow-up. One-year post-treatment Mr. and Mrs. R. were recontacted regarding Josh's soiling and appropriate toileting behavior.

Results

Figure 2 displays the number of soilings and appropriate bowel movements

Insert Figure 2 about here

occurring across all experimental periods. The mean number of weekly soiling incidents across conditions was: Baseline 1 = 4.7, "Bathroom Game 1" = .7, Baseline 2 = 3.0, "Bathroom Game 2" = .1. Correspondingly, the mean number of appropriate bowel movements per week was: Baseline 1 = .3, "Bathroom Game 1" = 3.0, Baseline 2 = .5, "Bathroom Game 2" = 4.4. In addition, during follow-up, Mrs. R. reported zero incidents of soiling and an average of five appropriate bowel movements per week.

It may also be of interest to note that during the two experimental conditions ("Bathroom Game 1 and 2"), a total of \$14.75 was provided in financial rewards.

Discussion

The results of the present investigation clearly reveal the effectiveness of the "bathroom game" in the elimination of psychogenic encopresis. Functional control over the frequency of both soiling and appropriate bowel movements was convincingly demonstrated via utilization of a variable ratio schedule of reinforcement in an ABAB reversal design. The reader may note, however, that the final Baseline 1 and Bathroom Game 1 data points indicate a decrease and increase (of one unit) in the occurrence of soiling, respectively. These minor fluctuations would not appear to constitute a "trend" in the data (Hersen & Barlow, 1976), nor do they detract from the rather stable baseline and treatment effects attained. Further, positive results were maintained at a one-year follow-up.

While a variety of behavioral programs have been reported as effective treatments for encopresis (Doleys, 1978), the use of the current procedures appears to offer several additional advantages. Doleys (1978) has suggested that treatments employing purgatives, laxatives, and suppositories seem "doomed to fail because they provide no mechanism for the development and maintenance of appropriate toileting skills" (p. 115). Other treatments for encopresis have often used techniques such as prolonged hospitalization, overcorrection, and electric shock--all of

which seem as aversive as the disorder itself (Blechman, 1979). The current procedures relied instead upon a "game-like" structure and a reinforcement-based system of intervention. Recent work by Kazdin (1980a, 1980b, 1981), which suggests that less aversive treatment procedures tend to be more acceptable, supports the use of these positive procedures. Further, the employment of a variable ratio schedule of reinforcement allows for the simple and systematic leaning-out of rewards, thereby facilitating maintenance of treatment effects in the absence of programmed contingencies.

Although results of the current study are promising, further support must await additional experimental investigations. Systematic replication via single-subject research and comparative between-group designs would both appear to be of substantial import. The exact nature of such investigations will, of course, depend upon the characteristics of the subjects under study.

Figure Captions

Figure 1. Child and therapist cards used in the
"Bathroom Game."

Figure 2. Number of soilings and appropriate bowel
movements across experimental conditions.

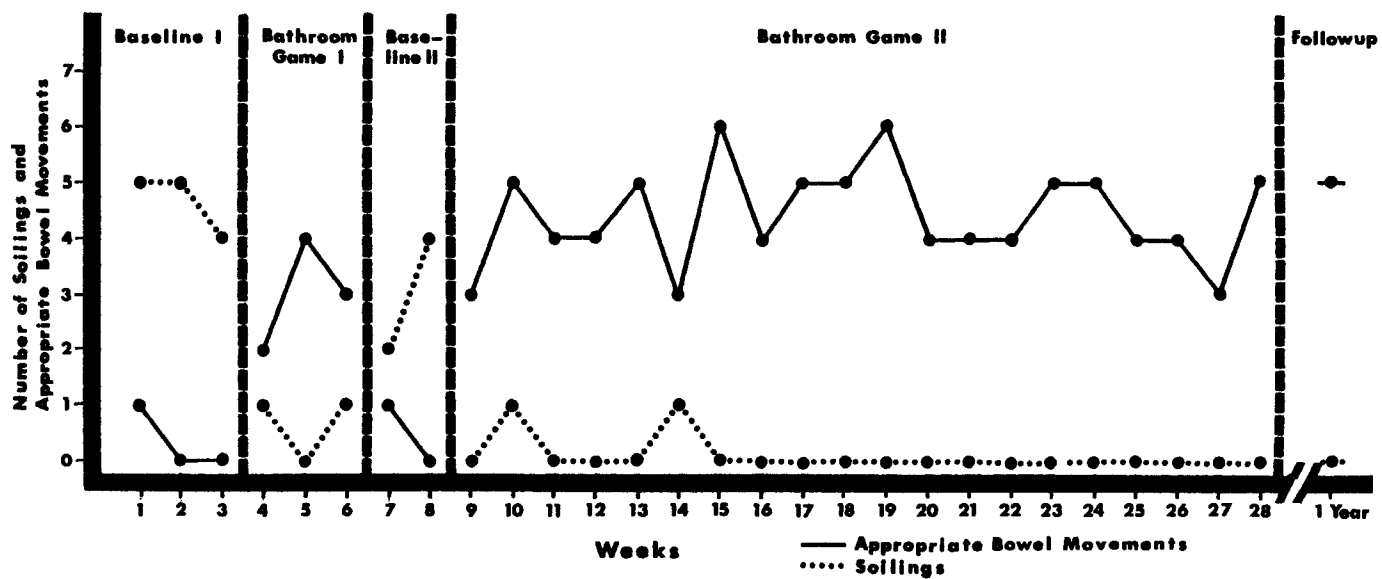
Child's Card

Day	Soiling	B.M.
Mon.		
Tues.		.
Wed.		
Thurs.		
Fri.		
Sat.		
Sun.		

Therapist's Card

Day	Soiling	B.M.
Mon.		*
Tues.	*	*
Wed.		
Thurs.	*	*
Fri.	*	
Sat.		*
Sun.		

Figure 1. Child and therapist cards used in the "Bathroom Game".



Chapter III

Behavioral Marital Bibliotherapy: An Initial Investigation of Therapeutic Efficacy

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21-28.

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Experimental Analysis of Behaviour, Liege (Belgium), July,
1983.

Abstract

The present study reports an attempt to validate a self-help behavioral marital bibliotherapy program. Five clinically distressed couples were evaluated via a multiple baseline analysis. Dependent measures included both pre-post and continuous forms of assessment. Treatment involved the weekly introduction of both reading and exercise material. Topics included communications, problem-solving, sexual dysfunction, maintaining relationship gains, etc. With the exception of a decrease in laboratory-assessed negative behaviors, results were highly variable and generally reflective of minimal change. These findings were discussed with regard to measurement failure, manipulation of the independent variable, and continued examination of marital self-help materials.

Behavioral Marital Bibliotherapy: An Initial
Investigation of Therapeutic Efficacy

The past decade has witnessed a proliferation of self-help or bibliotherapeutic treatment manuals (Rosen, 1976). Proponents contend that such programs are more cost-effective than traditional therapist-administered psychological treatments and are capable of reaching greater numbers of people. Unfortunately, the ardor with which self-help manuals have been published and promoted has typically exceeded efforts to empirically demonstrate their efficacy. As a result, data from research designed to systematically validate most bibliotherapeutic programs is extremely limited and variable (Glasgow & Rosen, 1978).

The paucity of research in this field is particularly evident in the treatment of marital dysfunction (Glasgow & Rosen, 1979). Although several behaviorally oriented self-help manuals focused upon communications and problem-solving skills among partners have been published (e.g., Gottman, Notarius, Gonso, & Markman, 1976; Strayhorn, 1977), no research validating their utility has been reported. Moreover, studies designed to evaluate treatment manuals for sexual dysfunction, a common marital problem, have generally failed to support the use of totally self-administered programs. Zeiss (1978) did find that a minimal-contact bibliotherapeutic treatment for premature

ejaculation was as effective as a therapist-directed condition. However, due to extremely poor subject compliance, a totally self-administered program was markedly less effective than either of the above interventions.

Findings such as these highlight the need for additional research before bibliotherapy for distressed couples can be seen as a viable alternative to more traditional treatment programs. Thus, the purpose of the current investigation was to systematically evaluate a recently developed self-administered treatment manual for marital discord (Bornstein, 1983). That program, entitled Loving: A Self-Help Guide to Relationship Satisfaction, contains a package of treatment strategies commonly employed in behavioral marital therapy (e.g., communications training, problem-solving skills, contracting, increasing the exchange of mutually pleasing behaviors, etc.). Behavioral marital therapy has been amply demonstrated to be an effective approach toward the remediation of marital distress across numerous controlled outcome investigations (Bornstein, Bach, Heider, & Ernst, 1981; Jacobson, 1977, 1978, 1979). Consequently, initial validation criteria for this self-help program (see Glasgow & Rosen, 1979) has been previously established. However, so as to systematically evaluate the efficacy of the manual itself, further investigation was required. Thus, an attempt was made to

experimentally examine its usefulness with clinically-referred couples under minimal-contact conditions.

Method

Subjects

Participants were recruited via newspaper advertisements and public service announcements offering a free "relationship improvement program" for maritally distressed couples.

Couple 1 (Mrs. A, age 22 yrs.; Mr. A, age 23 yrs.) had been married for 7 months at the time of referral. Mr. A was college educated and employed as a geologist; Mrs. A had completed 2 years of college and was a homemaker. The couple had no children. Major areas of conflict included frequency of sexual contact, expression of emotions, and communication problems.

Couple 2 (Mr. and Mrs. B, age 29 yrs.) had been married for 4 years at the inception of the program. Mrs. B was a college graduate and employed as an accounting technician. Mr. B was in his third year of undergraduate studies. Mr. and Mrs. B had no children, and their major areas of conflict involved communication and problems of inhibited sexual desire.

Couple 3 (Mrs. C, age 33 yrs.; Mr. C, age 35 yrs.) had been married for 11 years at the time of referral. Mr. C was a college graduate employed as a resource developer. Mrs. C was a homemaker currently enrolled in her final year of undergraduate studies. Mr. and Mrs. C were separated and had one child with shared visitation between parents. Reported areas of conflict within their relationship included sexual difficulties, expression of emotion, and management of personal/couples' time.

Couple 4 (Mrs. D, age 33 yrs.; Mr. D, age 35 years.) had been married for 13 years upon referral. Mr. D had previously been employed as a teacher before contracting terminal lymphoma. Upon entering treatment, Mr. D was expected to live 2-5 years. Mrs. D was a high school graduate presently working as a homemaker. The couple had two children, and major areas of conflict included communications, child discipline, and differences of opinion regarding type of sexual contact.

Couple 5 (Mrs. E, age 27 yrs.; Mr. E, age 29 yrs.) had been married for 8 years at the time of program initiation. Mr. E was a college graduate presently employed as a teacher. Mrs. E had completed 3 years of university coursework and was employed as a secretary. The couple had no children. Mr. and Mrs. E were presently separated and reported their major areas of conflict as

frequency of sexual interaction, expression of emotion, and social/leisure time activities.

Dependent Measures

In accord with Jacobson and Margolin's (1979) multidimensional assessment recommendations, the present investigation utilized a variety of self-, spouse-, and external-observers reports of couples' interactions. These measures can be broadly classified in two separate categories: (a) pre-post-followup, and (b) continuous monitoring.

Pre-post-followup. Two self-report forms of marital interaction were employed as outcome measures.

Dyadic Adjustment Scale (DAS, Spanier, 1976). This is a 24-item inventory designed to assess respondent's perception of the relationship. Spanier (1976) reports an internal consistency of $r = .96$ and substantial criterion-related validity. In addition, the scale correlates well with the frequently used Locke-Wallace Marital Adjustment Test (Locke & Wallace, 1959).

Primary Communication Inventory (PCI; Navran, 1967). This is a 25-item self-report questionnaire which focuses specifically upon

couples' communication. Items include talking about pleasant/unpleasant events, sulking, voice tone, facial expressions, etc. The PCI correlates significantly with marital satisfaction (Navran, 1967) and has demonstrated significant test-retest reliability (Ely, Guerney, & Stover, 1973).

Continuous monitoring. As typically occurs in within-subject designs, a variety of continuous measures were employed. Throughout the investigation, subjects repeatedly completed each of the following measures.

Relationship Happiness Scale (RHS). This was a modified version of the scale used by Azrin, Naster, and Jones (1973). In the current research, individuals rated happiness with regard to their spouse's behavior across 11 areas of common marital concern (e.g., household responsibility, affection, sex, etc.). Partner's area scores ranged from 1-10, with higher scores indicative of greater happiness. Area scores were summed and an arithmetic mean then calculated.

Relationship Satisfaction Time Lines (RSTL). This was modified from the original work of Williams (1979). Using the RSTL, subjects were requested to provide only information relevant to a quality

of time rating (range = 1-10). Prior research (Williams, 1979) has shown that the RSTL can differentiate distressed from nondistressed couples on the basis of marital interaction quantity, quality ratings of interaction intervals, ratio of positive to negative time, and amount of spousal agreement regarding quality of time.

Marital Observation Checklist (MOC). This is a 179-item revision (Christensen & Nies, 1980) of the Spouse Observation Checklist (SOC; Patterson, 1976). The instrument uses 25 SOC "we" items, 77 SOC "spouse" items, and 77 specially-created reciprocal "I" items (i.e., reciprocal of "spouse complimented me on my appearance" would be "I complimented spouse on his/her appearance"). Prior research (Christensen, Sullaway, & King, 1983) has indicated that couples do manifest modest agreement on the occurrence of specific events in their recent past. In addition, happy couples manifest greater agreement on the MOC than do unhappy couples.

Laboratory assessment. The laboratory measures of couples' interactional behaviors were based upon Resick's revision (Resick, Welsh-Osga, Zitomer, Spiegel, Meidlinger, & Long, 1980; Welsh-Osga, Resick, & Zitomer, 1981) of the Marital Interactional Coding System (MICS; Hops, Wills, Patterson, & Weiss, 1972). Using the 10 codes that were found to account for the greatest amount of variance, trained judges rated couples' interactions as they participated in laboratory-based problem-solving sessions. The reader is referred to Margolin and Jacobson (1981) for a review of the substantial literature attesting to the psychometric properties of the MICS and its later revisions.

Design and Procedure

A multiple baseline design across couples was employed as a means of evaluating treatment effectiveness (Bornstein et al., 1981).

Pretreatment. At an individually arranged pre-treatment meeting, subjects first completed the DAS, a relationship history form, and a short intake interview. Qualifying subjects (i.e., both members of the couple scoring < 100 on the DAS) were then provided with a brief

explanation of the program. Those couples interested in participating were then further requested to complete the Areas of Change Questionnaire (AOC; Weiss & Perry, 1979), the PCI, and university research/agreement forms. At the conclusion of this pretreatment meeting, couples were scheduled for baseline appointments, and the formal process of data collection was begun.

Baseline. Due to the type of intrasubject replication design utilized, each couple received either three, four, or five baseline sessions. In all instances, however, subjects reported to the University of Montana Clinical Psychology Center for regularly scheduled half-hour appointments. Upon arrival for each session, individuals returned the RSTL (which had been completed at home on a daily basis), and immediately filled out the RHS and MOC with regard to couples' behaviors that had transpired since their last scheduled appointment. Subjects were then taken to a video room for their laboratory assessment.

Discussion topics for video assessments were generated using the AOC. These topics were selected by totaling "major items" in the relationship and those items reflective of partners' desire for change. These topics were then randomized, and one topic per session was presented to couples for purposes of discussion. Couples were informed that they would be videotaped throughout their 10 min.

discussion and that effort should be directed at resolving any conflicts that might arise. At the conclusion of the video assessment, subjects were given their RSTL forms for the upcoming period, and their next video appointment was scheduled.

Treatment. The treatment phase was identical to the baseline condition noted above with one major modification. From week-to-week, upon completing all continuous-monitoring dependent measures, subjects received relevant sections of the book Loving: A Self-Help Guide to Relationship Satisfaction (Bornstein, 1983). The book was divided into eight separate section, and assignments were given from session-to-session in a predetermined manner. Reading material included such topics as: (a) specifying the "nonspecifics" of couples' communication, (b) basic communication skills, (c) systematic problem-solving in couples, (d) couples' guide to satisfying sexuality, and (e) maintaining relationship gains. In addition, couples were assigned exercises that corresponded with the relevant reading material. Thus, in addition to having been didactically exposed to a particular topic, couples were asked to behaviorally perform a series of related exercises (e.g., a role-reversal exercise was prescribed to foster the nonspecific communications skill of "understanding").

The intent of the present investigation was to examine the utility of a minimal-contact bibliotherapeutic program for couples. As a consequence, weekly sessions were extremely limited in nature. Therapeutic interaction was therefore minimized and any questions which arose during sessions were handled in a brief, reflective, and succinct manner. In so doing, the investigators were able to obtain a purer evaluation of the couples' self-help manual, per se. At the conclusion of the final video session, the PCI and DAS were re-administered. Couples were thanked for their participation and informed that they would be contacted for a future follow-up assessment.

Followup. Following the termination of treatment, subjects were mailed the Client Satisfaction Questionnaire (CSQ; Larsen, Attkisson, Hargreaves, & Nguyen, 1979). This was to be anonymously completed and returned to the investigators. In addition, 9 months post-treatment, all couples returned for a complete follow-up assessment. At this time, all pre-post and continuous monitoring measures were re-administered.

Results

All laboratory-based measures of couples' interaction (i.e., MICS data) were rated by trained undergraduates using a 10-category coding system. These assistants required a total of 20 hours training prior to attaining acceptable

levels of interrater agreement across each of the target behaviors ($r > 75\%$). Raters recorded the occurrence of each of the codes in consecutive 30-second intervals. Baseline and treatment tapes were scrambled so as to keep raters blind as to the assessment period. In all, 20% of baseline and treatment videotaped discussion conversations were rated by the above judges for reliability purposes. Reliability for each behavioral code was calculated by using the following formula: $\text{agreements} / (\text{agreements} + \text{disagreements}) \times 100$. Agreement was determined for each code separately across all baseline and treatment phases, with reliability quotients ranging from 73% to 99% (mean = 90%).

Both the DAS and PCI were administered at pre-, post-, and followup. Results from the DAS revealed the following scores: Couple 1: 81.5, 101.5, 99; Couple 2: 78.5, 102.5, 71.5; Couple 3: 93, 76.5, 54; Couple 4: 86, 86.5, 89.5; Couple 5: 82.5, 94, 86.5. With the exception of Couple 3, dyadic adjustment improved from pre- to post-treatment. However, there was considerable variability between couples and improvement trends were not maintained through followup. On the PCI, scores were as follows: Couple 1: 76, 85, 87.5; Couple 2: 80.5, 92, 77; Couple 3: 89, 85.5, 74; Couple 4: 97, 86, 89.5; Couple 5: 78, 84.5, 85. Again, it appears that the effect of treatment on communication patterns was highly variable with no

consistent trends appearing across all couples.

RHS data generally indicate slight deterioration from baseline through followup (mean baseline = 6.5; mean treatment = 6.1; mean followup = 5.0). RSTL scores were remarkably similar to the above (mean baseline = 6.7; mean treatment = 6.3; mean followup = 5.8). However, MOC pleasing-to-displeasing ratios remained highly comparable across baseline, treatment, and followup periods (mean baseline = 16.6; mean treatment = 14.5; mean followup = 15.4). Laboratory assessment scores were computed across three categories: positive behaviors, negative behaviors, and "talk." Aside from a decrease in negative behaviors, these results were rather unremarkable with the following scores obtained across baseline, treatment, and followup, respectively: positive mean = 1.9, 2.0, 1.8; negative mean = 2.0, 1.8, 1.2; "talk" mean = 8.3, 9.2, 8.1. Finally, individuals were administered the CSQ at followup. Results indicated a mean score of 20.9, reflective of moderate satisfaction with the program as offered.

Discussion

The results of the present investigation do not consistently support the utility of a self-applied program for marital dysfunction. Pre-post measures were highly variable across couples, with some deterioration even occurring at followup. Results on the continuous measures

were similarly unremarkable. No significant treatment effects were found on any of the measures, with the exception of a decrease in laboratory-assessed negative behaviors.

One possible explanation for this lack of improvement may be that the dependent measures employed failed to adequately reflect changes in subject behavior. As Jacobson, Follette, and Ellwood (in press) indicate, all commonly used measures of marital satisfaction are, in some way, flawed. However, the lack of findings across multiple sources is more apt to be the result of treatment rather than measurement failure. An additional possibility is that subjects simply failed to apply the treatment program as prescribed. While such alternatives always exist within the realm of self-management programs, the evidence does not speak in its favor. Specifically, couples appeared interested, attentive, and knowledgeable about the contents of their bibliotherapy package. A more likely explanation of results is that therapist contact is an integral component of behavioral marital therapy. That conclusion is consistent with Glasgow and Rosen's (1979) proposition that marital problems are more refractory to bibliotherapeutic interventions due to the interpersonal nature of the distress. Specifically, marital difficulties may be inherently more resistant to change than problems that are

more intrapersonal in nature due to the fact that successful outcomes are dependent upon the efforts of more than one person. Thus, it may simply be unrealistic to expect that couples in conflicted relationships will have the motivation, cooperation, and interpersonal skills required for effective implementation of a bibliotherapeutic regimen.

The above conclusion casts doubt on the utility of marital therapy self-help programs administered under minimal or no-contact conditions. Future research might, therefore, be more profitably directed toward validating alternative means of using self-administered couples' manuals. Specifically, bibliotherapeutic programs might prove useful when implemented under therapist-directed conditions or when incorporated as adjuncts to contemporary marital interventions. Under a professionally-administered format, self-help programs may provide clients with regular therapist contact directed toward clarifying and implementing those strategies presented in the manuals. These procedures might thereby generate increased compliance and success while continuing to be more cost-effective than traditional treatments requiring greater therapist contact. In addition, self-help manuals can offer important supplemental didactic information to clients. Consequently, they may be used to assist in the identification of target problems, in the elicitation of topics for potential

enhancement, as exercises/assignments for use between sessions, or as written records useful for follow-through and maintenance.

Clearly, the utility of bibliotherapeutic programs for marital distress when delivered under therapist supervision or as adjunctive to other marital treatments must be established through well-designed empirical research. As that research is conducted, it is paramount that subject predictors of treatment outcome be assessed to allow for the optimal matching of self-help formats with client characteristics. Thus, while the present investigation did not consistently support the use of self-help marital treatment manuals, further research remains to be conducted.

Chapter IV

Behavioral Cohabitation: Increasing Satisfaction Among Non-Married Dyads?

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Washington D. C., December, 1983.

Abstract

The present study reports upon a standard behavior therapy treatment package applied to three clinically-referred cohabitating couples. Multidimensional assessment measures included self-, partner-, and external-observers reports of couples' interactions. Moreover, a multiple-baseline design across couples was employed as a means of evaluating treatment efficacy. Therapy involved the weekly administration of bibliotherapeutic reading and exercise material with therapist contact purposely minimized. An analysis of results indicated modest treatment success with considerable between-subject variability. These findings were discussed with regard to gender differences, ceiling effects, and utilization of standardized therapy packages. Recommendations were made for future behavioral cohabitation research.

Behavioral Cohabitation: Increasing Satisfaction
Among Non-Married Dyads?

Behavioral researchers have become increasingly aware of the social phenomenon labeled "cohabitation," "trial marriage," or "living together." Although "live-in" situations between unmarried men and women have been recognized to exist for centuries, it is only during the last two decades that a dramatic rise in frequency has occurred (Glick, 1976). Some of this increase is, undoubtedly, attributable to participants' greater willingness to identify themselves as "living together." However, it has been shown that the number of persons who are actually cohabitating has almost doubled between 1970 and 1977 (Glick & Norton, 1977). Yllo (1978) recently conducted a national survey of 2,143 men and women and concluded that between 1,750,000 and 2,000,000 people were unmarried and living together in the United States. Moreover, 79% of the individuals questioned by Arafat and Yorbury (1973) reported a willingness to live with a member of the opposite sex if the opportunity were to present itself. In addition, Henze and Hudson (1974) found 71% of their males and 43% of their females openly expressed a desire to cohabit. In fact, it appears that not only has the trend toward cohabitation been on the rise during the past 20 years, but that it is likely to continue as well.

Interestingly, while cohabitation has emerged as a significant force in the current evolution of male/female relationships, cohabitation research has been fairly limited (Macklin, 1978). Most of the studies which have been done in this area can be characterized as descriptive, demographic, or speculative with regard to later marital satisfaction (Stafford, Backman, & DiBona, 1977). That research which has been conducted on the nature of relationships within cohabitating couples has focused on such areas as level of loyalty and long-term commitment (Johnson, 1968; Lewis, 1975; Lyness, Lipetz, & Davis, 1972), role expectations (Clayton & Voss, 1977; Olday, 1977; Segrest & Weeks, 1976), and the relationship of cohabitation to marital satisfaction (Markowski & Johnson, 1980; Olday, 1977; Polansky, McDonald, & Martin, 1978). However, no research to date has explicitly attempted to "enhance" the cohabitating relationship.

Behavioral marital therapy has been amply demonstrated to be an effective approach in the remediation of marital distress (Bornstein, Bach, Heider, & Ernst, 1981). Given the large numbers of people who have chosen to live together outside the bonds of marriage, it is interesting to note the sheer paucity of published behavioral cohabitating investigations. Thus, the purpose of the present research was to apply a standard behavior therapy treatment package

to clinically-referred cohabitating couples. Extensive within-subject analyses were conducted as a means of evaluating the efficacy of treatment.

Method

Subjects

Participants were recruited via newspaper advertisements and public service announcements offering a free "relationship improvement program" for cohabitating couples.

Couple 1 (Ms. A, age 30 yrs.; Mr. A, age 32 yrs.) had been living together for 19 months at the time of referral. Mr. A was employed as a general contractor. Ms. A was a part-time secretary and full-time university student. Both Mr. and Ms. A had been previously married and divorced one time. Major areas of conflict within their present relationship included management of finances, communication difficulties, expression of affection, and sexual relations.

Couple 2 (Ms. B, age 21 yrs.; Mr. B, age 31 yrs.) had been living together for 1 year at the time of program initiation. Mr. B was college educated and employed as a musician, while Ms. B was presently completing an undergraduate degree. Mr. B had previously been married. Mr. and Ms. B reported a number of conflict areas. These

included sexual relations, communications, and expression of feeling.

Couple 3 (Ms. C, age 31 yrs.; Mr. C, age 21 yrs.) had been living together for 4 months at the time of referral. Ms. C had been in one previous marriage which lasted 7 years. Presently, Mr. C was employed as a hairdresser, and Ms. C was working as a secretary. Current difficulties within the relationship focused upon work hours, jealousy, and joint career decision-making.

Dependent Measures

In accord with Jacobson and Margolin's (1979) multidimensional assessment recommendations, the present investigation utilized a variety of self-, partner-, and external-observers reports of couples' interactions. These measures can be broadly classified in two separate categories: (a) pre-post-followup, and (b) continuous monitoring.

pre-post-followup. Two self-report forms of marital interaction were employed as outcome measures.

Dyadic Adjustment Scale (DAS, Spanier, 1976).

This is a 24-item inventory designed to assess respondent's perception of the relationship. Spanier (1976) reports an internal consistency of $r = .96$ and substantial criterion-related

validity. In addition, the scale correlates well with the frequently used Locke-Wallace Marital Adjustment Test (Locke & Wallace, 1959).

Primary Communication Inventory (PCI; Navran, 1967). This is a 25-item self-report questionnaire which focuses specifically upon couples' communication. Items include talking about pleasant/unpleasant events, sulking, voice tone, facial expressions, etc. The PCI correlates significantly with marital satisfaction (Navran, 1967) and has demonstrated significant test-retest reliability (Ely, Guerney, & Stover, 1973).

Continuous monitoring. As typically occurs in within-subject designs, a variety of continuous measures were employed. Throughout the investigation, subjects repeatedly completed each of the following measures.

Relationship Happiness Scale (RHS). This was a modified version of the scale used by Azrin, Naster, and Jones (1973). In the current research, individuals rated happiness with regard to their spouse's behavior across 11 areas of common marital concern (e.g., household responsibility, affection, sex, etc.). Partner's area scores ranged from 1-10, with higher scores

indicative of greater happiness. Area scores were summed and an arithmetic mean then calculated.

Relationship Satisfaction Time Lines (RSTL). This was modified from the original work of Williams (1979). Using the RSTL, subjects were requested to provide only information relevant to a quality of time rating (range = 1-10). Prior research (Williams, 1979) has shown that the RSTL can differentiate distressed from nondistressed couples on the basis of marital interaction quantity, quality ratings of interaction intervals, ratio of positive to negative time, and amount of spousal agreement regarding quality of time.

Marital Observation Checklist (MOC). This is a 179-item revision (Christensen & Nies, 1980) of the Spouse Observation Checklist (SOC; Patterson, 1976). The instrument uses 25 SOC "we" items, 77 SOC "spouse" items, and 77 specially-created reciprocal "I" items (i.e., reciprocal of "spouse complimented me on my appearance" would be "I complimented spouse on his/her appearance"). Prior research (Christensen, Sullaway, & King, 1983) has indicated that couples do manifest modest agreement on the occurrence of specific

events in their recent past. In addition, happy couples manifest greater agreement on the MOC than do unhappy couples.

Laboratory assessment. The laboratory measures of couples' interactional behaviors were based upon Resick's revision (Resick, Welsh-Osga, Zitomer, Spiegel, Meidlinger, & Long, 1980; Welsh-Osga, Resick, & Zitomer, 1981) of the Marital Interactional Coding System (MICS; Hops, Wills, Patterson, & Weiss, 1972). Using the 10 codes that were found to account for the greatest amount of variance, trained judges rated couples' interactions as they participated in laboratory-based problem-solving sessions. The reader is referred to Margolin and Jacobson (1981) for a review of the substantial literature attesting to the psychometric properties of the MICS and its later revisions.

Design and Procedure

A multiple baseline design across couples was employed as a means of evaluating treatment effectiveness (Bornstein et al., 1981).

Pretreatment. At an individually arranged pre-treatment meeting, subjects first completed the DAS, a relationship history form, and a short intake interview. Subjects were then provided with a brief explanation of the program. Those couples interested in participating were then further requested to complete the Areas of Change Questionnaire (AOC; Weiss & Perry, 1979), the PCI, and university research/agreement forms. At the conclusion of this pretreatment meeting, couples were scheduled for baseline appointments, and the formal process of data collection was begun.

Baseline. Due to the type of intrasubject replication design utilized, each couple received either three, four, or five baseline sessions. In all instances, however, subjects reported to the University of Montana Clinical Psychology Center for regularly scheduled half-hour appointments. Upon arrival for each session, individuals returned the RSTL (which had been completed at home on a daily basis), and immediately filled out the RHS and MOC with regard to couples' behaviors that had transpired since their last scheduled appointment. Subjects were then taken to a video room for their laboratory assessment.

Discussion topics for video assessments were generated using the AOC. These topics were selected by totaling "major items" in the relationship and those items reflective of partners' desire for change. These topics were then randomized, and one topic per session was presented to couples for purposes of discussion. Couples were informed that they would be videotaped throughout their 10 min. discussion and that effort should be directed at resolving any conflicts that might arise. At the conclusion of the video assessment, subjects were given their RSTL forms for the upcoming period, and their next video appointment was scheduled.

Treatment. The treatment phase was identical to the Baseline condition noted above with one major modification. From week-to-week, upon completing all continuous-monitoring dependent measures, subjects received relevant sections of the book Loving: A Self-Help Guide to Relationship Satisfaction (Bornstein, 1983). The book was divided into eight separate section, and assignments were given from session-to-session in a predetermined manner. Reading material included such topics as: (a) specifying the "nonspecifics" of couples' communication, (b) basic communication skills, (c) systematic problem-solving in couples, (d) couples' guide to satisfying sexuality, and (e) maintaining relationship gains. In addition, couples were

assigned exercises that corresponded with the relevant reading material. Thus, in addition to having been didactically exposed to a particular topic, couples were asked to behaviorally perform a series of related exercises (e.g., to foster the nonspecific communications skill of "understanding", a role-reversal exercise was prescribed).

As a means of maintaining minimal therapist contact, any questions which arose during sessions were handled in a reflective and succinct manner. In so doing, the investigators were able to obtain a purer evaluation of the couples' self-help manual, per se. At the conclusion of the final video session, the PCI and DAS were re-administered. Couples were thanked for their participation and informed that they would be contacted for a future follow-up assessment.

Followup. Following the termination of treatment, subjects were mailed the Client Satisfaction Questionnaire (CSQ; Larsen, Attkisson, Hargreaves, & Nguyen, 1979). This was to be anonymously completed and returned to the investigators. In addition, 9 months post-treatment, all couples returned for a complete follow-up assessment. At this time, all pre-post and continuous monitoring measures were re-administered.

Results

All laboratory-based measures of couples' interaction (i.e., MICS data) were rated by trained undergraduates using a 10-category coding system. These assistants required a total of 20 hours training prior to attaining acceptable levels of interrater agreement across each of the target behaviors ($r > 75\%$). Raters recorded the occurrence of each of the codes in consecutive 30-second intervals. Baseline and treatment tapes were scrambled so as to keep raters blind as to the assessment period. In all, 20% of baseline and treatment videotaped discussion conversations were rated by the above judges for reliability purposes. Reliability for each behavioral code was calculated by using the following formula: $\text{agreements} / (\text{agreements} + \text{disagreements}) \times 100$. Agreement was determined for each code separately across all baseline and treatment phases, with reliability quotients ranging from 70% to 100% (mean = 93%).

Both the DAS and PCI were administered at pre-, post-, and followup. Results from the DAS revealed the following scores pretreatment, posttreatment, and followup, respectively. Couple 1 male: 113, 118, 115; Couple 1 female: 116, 122, 132; Couple 2 male: 96, 106, 106; Couple 2 female: 70, 107, 103; Couple 3 male: 116, 119, 112; Couple 3 female: 125, 126, 126. On the PCI, scores were as follows: Couple 1 male: 87, 89, 84; Couple 1

female: 77, 93, 85; Couple 2 male: 97, 102, 96; Couple 2 female: 92, 110, 109; Couple 3 male: 98, 96, 99; Couple 3 female: 100, 106, 114. Thus, while considerable satisfaction was reported, outcome as a result of treatment appeared to be both modest and somewhat greater for women.

RHS data are presented in Table 1. Scores obtained for male partners failed to change substantially from baseline through followup (mean baseline = 7.9; mean treatment = 8.4; mean followup = 7.7).

 Insert Table 1 about here

However, female partners showed improvement on RHS scores over time (mean baseline = 6.7; mean treatment = 8.3; mean followup = 7.8). RSTL quality of time rating was quite unremarkable indicating no significant treatment effects (mean baseline = 7.7; mean treatment = 8.1; mean followup = 7.2). MOC pleasing-to-displeasing ratios, however, showed some initial improvement as a result of treatment with deterioration to baseline levels by followup (mean baseline = 28.2; mean treatment = 34.2; mean followup = 27.4). In addition, MICS negative behaviors, expressed in rate per minute, showed consistent reductions from baseline through followup (mean baseline = 1.22; mean treatment = 1.10; mean followup = .90). Unfortunately, a comparable increase

in positive behaviors was not evident. Finally, CSQ results revealed a mean satisfaction score of 26.25, indicative of considerable satisfaction with the program.

Discussion

To our knowledge, this is the first investigation explicitly designed to "enhance" the "living together" relationship. Toward this end, a standard behavioral marital bibliotherapy package was applied to three cohabitating couples. While the methods employed (e.g., multidimensional assessment) and experimental design utilized (i.e., multiple-baseline) were rather elaborate, only modest results were obtained. Specifically, couples showed improvement on both continuous and pre-post measures but changes were clearly less than dramatic. Further, for some couples, only the women improved substantially as a result of treatment. In other instances, progress was not maintained over the 9 month followup period. All in all, however, the data do evince moderate treatment success and considerable participant satisfaction with the program.

In light of past behavioral marital therapy achievements (e.g., Bornstein et al., 1981; Jacobson, 1977, 1978, 1979), one must question the current lack of overall resounding effects. A number of possibilities are immediately apparent. First, the subject population employed was not imminently distressed. Consequently,

ceiling effects may have limited a more dramatic response to treatment. Second, therapy involved the administration of a standardized therapy package. As recently noted by Jacobson, Follette, and Elwood (in press), this lack of clinical flexibility must undoubtedly compromise the needs of some presenting couples. Third, while bibliotherapeutic programs may certainly have their "cost" advantages, only limited experimental work exists in support of their usefulness (Bornstein et al., 1983). Any or all of the above may have contributed to the less-than-persuasive findings of the present investigation. In any case, further research ought to attempt to examine these questions by more parametric and systematic means.

The above limited findings notwithstanding, it is still noteworthy to comment upon the area of cohabitation research. Quite simply, experimental investigations have been extremely limited to date. In fact, most studies have been non-experimental in nature. Furthermore, the application of marital therapy change strategies to cohabitating relationships is a virtual unknown. Thus, the present study serves as an initial impetus to both experimentally and therapeutically work within this "scientific virgin" territory. Hopefully, further behavioral research will follow.

Table 1

RHS Data Across Baseline, Treatment and Follow-up Sessions

Couple		X Baseline	X Treatment	X Follow-Up
1	Male	7.7	7.8	6.4
	Female	7.3	7.8	7.9
2	Male	7.4	7.7	8.1
	Female	5.4	8.1	7.3
3	Male	8.5	8.8	7.7
	Female	7.5	8.9	8.2

Chapter V

Self-Initiated Imaginal and Cognitive Components: Evaluation of Differential Effectiveness in Altering Unpleasant Moods

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Abstract

The purpose of the present study was to investigate the differential effectiveness of brief cognitive and imaginal techniques in the alleviation of anger and sadness. Thirty-two male and female undergraduates recruited from an introductory psychology course were randomly assigned to one of two mood groups (i.e., anger or sadness) and either of two treatment orders (i.e., cognitive-imagery; imagery-cognitive). Subjects were induced into negative moods via an experientially induced mood (EIM) procedure. Likert-type scales were used to assess mood level at pre- and post-treatments. Results indicate that self-initiated statements and self-generated images were both effective in altering unpleasant moods. Moreover, it appears that images facilitate the relative effectiveness of cognitions whereas cognitive strategies may inhibit the relative effectiveness of imaginal techniques. The significant order by repeated measures interaction suggests that treatment effectiveness is enhanced when personal images precede personal cognitions. Moreover, subjects employed a wide variety of imaginal and cognitive themes. These findings are discussed with regard to methodological, theoretical, and clinical implications.

Self-Initiated Imaginal and Cognitive Components:
Evaluation of Differential Effectiveness in
Altering Unpleasant moods

In psychotherapy, one common goal is to help clients change their moods (e.g., anger, depression). The cognitive therapeutic approach is based on the assumption that maladaptive cognitive schemas influence affective responses. The therapist focuses on self-statements, assumptions, or beliefs, and tests the validity of these thoughts by applying reason and logic (e.g., Beck, 1976; Ellis, 1974; Meichenbaum, 1977). This approach can be theoretically contrasted with the use of imagery in psychotherapy, which underscores the relationship between images and affective response. Imagery-based theorists emphasize the power of imagination as being the major key to feeling transformations. Clients are seen as individuals who not only behave, feel, and think, but also imagine (Singer & Pope, 1978).

Currently, psychologists are engaged in a debate concerning the relationship between mental processes and emotion. Some theorists (e.g., Reyher, 1978) have suggested that images involve direct sensory information as opposed to the symbolic representation involved in language or cognition. That is, imaginal processes occur independently of cognition and require less conscious effort (Paivio,

1978; Reyher, 1978). Horowitz (1978) and Ahsen (1982) have concluded that images are precognitive, and translated into cognitive/verbal forms following somatic experience. Hart and Means (in press) further suggest that emotion and images are closely interrelated, whereas affect and cognition are more distantly related.

In 1980, Zajonc challenged the contemporary view that emotion is post-cognitive and cited experimental evidence indicating that affective reactions are primary. For example, he concludes that affective discriminations often precede cognitive judgements, are difficult to verbalize, and can occur in the absence of recognition memory. Zajonc (1980) states:

It sometimes happens that we are reminded of a movie or of a book whose contents we are unable to recall. Yet the affect present when leaving the movie or our general impression of the book are readily accessible (p. 159).

Thus, affectual responses (e.g., preferences, attitudes) may be independent of perceptual appraisal and cognitive encoding.

Lazarus (1982, 1984) opposes the stance taken by Zajonc and argues that thought is a necessary condition of emotion. Lazarus suggests that cognitive appraisal is always involved in emotion and may actually precede affective reactions. In other words, affect is by definition "value-laden" and requires appraisal. Thus, cognitive appraisals shape our emotional reactions. Humans are viewed as "meaning-oriented, meaning-creating creatures" who constantly evaluate events ego-centrally. Clearly, the emotion-cognition debate remains largely polarized. The present research compared imagery-based and cognitive techniques in an effort to unravel relationships among images, affect, and cognition.

Cognitive Treatment

The focus of cognitive therapies is problem solving. As compared to imagery, cognitive therapy consists of specific treatment approaches which focus on particular cognitive elements of the identified problem(s). Specifically, Rush and Giles (1982) list several problem-solving characteristics common in cognitive therapies:

- a) define and detect cognitions or automatic thoughts;
- b) examine and test these cognitions;
- c) develop alternative constructions of day-to-day

events; d) record dysfunctional thoughts; e) develop alternative, more flexible schemas; and f) rehearse both cognitive and behavioral responses based on these new assumptions (p. 164).

Additional elaborations of the theory and practice of cognitive therapy may be found elsewhere (e.g., Beck, 1967, 1976; Beck, Rush, Shaw & Emery, 1979).

Considerable research has documented the effectiveness of cognitive interventions. In the treatment of depression, cognitive therapy has been shown to be more effective than pharmacotherapy (Rush, Beck, Kovacs & Hollon, 1977), behavioral therapy (Shaw, 1977), relaxation training (McLean & Hakstian, 1979) and waiting list controls (Taylor & Marshall, 1977). In addition, cognitive interventions (e.g., cognitive restructuring, stress inoculation) have proven successful in anger control programs (Novaco, 1976; Meichenbaum & Novaco, 1978). In fact, Novaco (1977) concludes that the restructuring of cognitions is essential to anger management.

Imagery Treatment

Surprisingly, research on the uses of imagery is relatively new. Although imagery-based techniques have been used as tools for inducing therapeutic change by many schools of psychotherapy (Singer & Pope, 1978), relatively few empirical studies have been conducted.

Behavior therapy has made extensive use of mental imagery to mediate therapeutic effects. Such techniques as covert rehearsal, covert sensitization, and systematic desensitization are regularly employed by behavior therapists. In fact, Davison and Wilson (1973) argue that Wolpe's real contribution lies not in the application of learning principles to the handling of clinical problems, but in drawing attention to the therapeutic properties of images and introspection.

Classical and neo-Freudian psychoanalysis have also made diverse use of imagery. Freud often used imagery as represented in dreams or transference fantasies to gain insight into unconscious processes. Freud's use of an imagery-association method was later followed by Ferenczi's and Reich's focus on the translation of motor activity into imagery. Finally, Gestalt and client-centered approaches, as well as Kelly's personal construct therapy (1955) and Bandura's symbolic mediation therapy (1977), employ imagery

to promote symptom relief, self-regulation, and improved self-understanding.

In the treatment of mood disorders, several studies support the utility of imagery-based techniques. Jarvinen and Gold (1981) found that imagery was effective in reducing depression with undergraduate females. Subjects were instructed to imagine positive, neutral, or self-generated positive scenes at home for three weeks. Results demonstrated improved depression levels across each treatment condition as compared with a minimal-contact control group. A replication study (Gold, Jarvinen, & Teague, 1982) supported the earlier findings and further indicated that imagery "vividness" is correlated with depression reduction.

Schultz (1978) compared the efficacy of four types of imagery (i.e., positive, socially gratifying, aggressive, and unfocused) in alleviating depression among male veterans. Results indicated that directed imagery was more effective in reducing levels of depression than unfocused imagery. Interestingly, Schultz (1978) noted reduced anger, distress, and contempt among those veterans employing positive imagery.

Comparative Investigations

Although imagery-based and cognitive interventions have demonstrated utility, comparative evaluations of the two approaches are scarce. To date, only three studies have compared therapeutic techniques from each orientation (Guthrie, 1984; Hart & Means, in press; Tucker & Newman, 1981). Tucker and Newman presented emotional material on slides to undergraduate students and found that subjects were better able to decrease sympathetic arousal through the use of a verbal/analytic strategy than through the use of an imaginal/global one. However, their study focused on anxious affect and presented slides of disfigured bodies and starving children. Because the present study emphasizes dysphoric and angry moods, and does not employ visual representations (i.e., slides), the Tucker and Newman study is not directly relevant.

Guthrie (1984) demonstrated significant reductions in dysphoric mood among college students following cognitive and imaginal instructions. Subjects were randomly assigned to two groups and received instructions to either give themselves positive self-statements or to use imagery. Dysphoric moods were induced through the use of hypnosis and the reminiscence of unhappy events in the subjects' lives. The "treatment phase" lasted one and a half minutes and was followed by a mood measure. Results indicated improvement

for subjects in both conditions, although a statistically significant mean difference in favor of the imaginal instructions was found (Guthrie, 1984).

Hart and Means (in press) also employed hypnosis in a comparison of cognitive and imaginal treatments for dysphoria. Fifty-six undergraduates were assigned to one of four mood induction/treatment combinations: imaginal induction/imaginal treatment, imaginal induction/cognitive treatment, cognitive induction/imaginal treatment, and cognitive induction/cognitive treatment. Subjects were hypnotized and induced into dysphoric moods via cognitive or imagery approaches. "Treatment" lasted 15 seconds and emphasized either cognitive instructions (i.e., cognitive determinants of sadness and "cognitive appraisals" or solutions) or imaginal instructions (i.e., in imagination, facing problematic events and "going forward" in a helpful direction). Results revealed that imaginal treatments were effective in reducing both imaginably induced dysphoria and cognitively induced dysphoria, while cognitive treatment was only effective in reducing cognitively induced dysphoria.

The current study is an extension of the Guthrie (1984) and Hart and Means (in press) studies, as well as an introduction of a within-subject component (i.e., all subjects received all treatments) in the evaluation of imagery approaches. It is proposed that subjects may

typically "intermix" both cognitive and imagery-based techniques in the reduction of unpleasant moods. Therefore, each subject was administered each instructional set (i.e., cognitive and imaginal) during separate "treatment phases."

As compared to the methodology employed in Hart and Means (in press), mood inductions (i.e., anger and sadness) included both imaginal suggestions and cognitive directions. Because unpleasant mood states probably reflect both cognitive and imaginal components, it is argued that artificial separations (as in Hart & Means) may bias results and be less representative of actual client casework.

The present study also avoided hypnosis and hypnotic screenings as used in Guthrie (1984) and Hart and Means (in press). Specifically, the previous hypnotic screenings produced a "select sample," which excluded over 50 percent of the potential subjects (Guthrie, 1984; Hart & Means, in press). More importantly, hypnosis was intended to "intensify affect" as well as "intensify the remedial effect of the treatments" (Hart & Means, in press). Thus, the treatment phases of the two previous studies combined hypnosis with cognitive and imagery-based interventions, and tested cognitive vs. imaginal approaches under a potentially confounding methodology (i.e., hypnosis may interact with imaginal techniques). Finally, the vast majority of clients in therapy rarely are exposed to

hypnosis.

The purpose of the present investigation was to rectify some of the limitations of previous research as well as examine the short-term effects of brief cognitive and imagery-based techniques on negative affect. The study compared self-initiated statements with those procedures employing self-generated images as to their relative effectiveness in altering experientially induced moods of anger and dysphoria. Therefore, the present study was specifically designed to broaden the empirical base of previous comparative evaluations (Guthrie, 1984; Hart & Means, in press). Furthermore, an attempt was made to examine and categorize the images and self-statements used by subjects.

Method

Subjects

Forty male and female undergraduates were recruited from an introductory psychology course where credit was given for participation. Subjects were randomly assigned to one of two mood groups (i.e., anger or sadness) and either of two treatment orders (i.e., cognitive-imagery; imagery-cognitive). Counterbalancing was employed to permit the analysis of interaction effects. Two subjects dropped out of the study because the intensity of mood became

distinctly aversive for them and they were referred for individual psychotherapy. In order to keep sample sized equal, two subjects from each of the other experimental conditions were randomly eliminated. Data from a total of 32 subjects were considered.

Experientially Induced Moods (EIM)

The unpleasant moods were induced by asking subjects to recall a situation in the past when they felt particularly sad or angry. Research (e.g., Reyher, 1978) provides evidence to suggest that the reliving of an experience in imagination can elicit emotional responses that are very similar to the original emotional reaction.

The EIM procedure included references to person, place, and time as well as instructions to help subjects re-experience physiological reactions. The mood inductions also consisted of cognitive components (e.g., "Those thoughts going through your mind, bring them all back now" and "As you're hearing the words and thinking those thoughts....") and visual images (e.g., "Begin to visualize your scene" and "look closely at the scene and take in all the details").

Procedure

After each subject indicated that a recent situation associated with target mood had been remembered, the EIM procedure was presented and levels of discomfort were assessed. A 20-point Likert-type scale was used. The first of two treatment phases was then administered. Subjects were directed to "change their mood" within a 15-second time period by using: (1) self-initiated statements or (2) self-generated images. Following treatment, level of discomfort was re-assessed and subjects were instructed to list those specific self-statements or images which helped alter the induced mood. A similar EIM procedure/assessment phase was then presented prior to the final treatment/re-assessment phase. In summary, a total of four ratings were completed: pre-treatment I, post-treatment I, pre-treatment II, post-treatment II.

Administration of Treatment

Two treatment sets designed to reduce unpleasant moods were presented to each subject. The following scripts provided a sample of content:

- 1) Imaginal set. "You are going to imagine in your mind pictures and images that will help to change your mood so that you will feel less (angry, sad). Take some time to do that."

2) Cognitive set. "Think about the kinds of ideas that you might tell yourself, the kinds of words that you would say to yourself that will change your mood and make you feel less (angry, sad). Take some time to do that."

Return to Pleasant Mood

In order to ensure improved mood levels, subjects were administered an elation procedure following the final treatment/re-assessment phase. The elation procedure incorporated positive imagery and the recall of pleasant events in the subjects' lives. The experimenters insured that each subject was feeling positive prior to leaving the experimental room.

Results

The data were analyzed in a 2 X 2 X 4 analysis of variance (ANOVA) with repeated measures on the third factor. Significant differences were obtained across the repeated measures, $F(3, 84) = 30.84, p < .00001$, and order of treatment phases, $F(1, 28) = 6.18, p < .02$. There was also a significant order by repeated measures interaction, $F(3, 84) = 2.74, p < .05$. Subsequent Newman-Keuls multiple comparison analyses indicated that both self-initiated statements and self-generated images significantly reduced the mood levels reported by subjects in both mood conditions

(see Figure 1). Subjects' level of discomfort was high at both pre-treatment assessments, but decreased significantly at each post-treatment assessment.

Insert Figure 1 about here

Results further indicate that a wide range of content categories were employed by subjects. In general, categorical analyses revealed that subjects who showed the greatest improvement in mood level employed different self-statements and images than those subjects who demonstrated the least improvement. (Results are presented in Table 1.) Subjects' data were first grouped into

Insert Table 1 about here

56 content-areas by an undergraduate rater who was unfamiliar with the design of the study. A graduate student in clinical psychology re-grouped those 56 content-areas into 10 categories (listed in Table 1). Finally, two advanced clinical graduate students who were also blind to the experimental conditions categorized each image and self-statement listed by subjects into one of those 10

categories. Percentage agreement (agreements/ agreements + disagreements) between the two raters was 70 percent. One set of ratings (Rater A) was randomly chosen for the final categorical analyses.

Rankings of category effectiveness were computed by averaging subjects' difference scores between pre- and post-treatment. Thus, the categories used by subjects who showed the greatest positive mood change include: sensual experiences, enactive imagery, and family themes. On the other hand, the following categories were associated with subjects who showed the least improvement: isolation, self-commands, and situational evaluations/judgments. Item frequencies per category indicate that situational evaluations/judgments were most frequently employed by subjects, followed by social themes and denial of feelings.

Discussion

Results of the present investigation indicate: (1) self-initiated statements and self-generated images were effective in altering experientially induced moods of sadness and anger, (2) when subjects attempted self-generated images prior to self-initiated statements, both treatments were equally effective in altering moods, and (3) when subjects attempted self-initiated statements prior to self-generated images, the latter treatment was more effective in altering moods, although both treatments

were significantly less effective overall. Thus, it appears that images facilitate the relative effectiveness of cognitions whereas cognitive strategies may inhibit the relative effectiveness of imaginal techniques. The possible implication for psychotherapy based on this interaction is that treatment effectiveness is enhanced when self-generated images precede self-initiated cognitions.

Such results offer some support for the "primacy of affect" position taken by Zajonc (1980, 1984), Horowitz (1978), Reyher (1978), and Ahsen (1982); images are more effective in producing emotional change because affect and images are pre-cognitively connected. However, the ongoing theoretical debate between Zajonc and Lazarus (1982, 1984) regarding affect and cognition is not likely to be resolved by a single study. In fact, some subjects in the present study found self-statements (i.e., cognitions) to be more effective in altering moods than images. Future research may benefit by examining image accessibility with subjects who are differentially effective with cognitive strategies. At any rate, the overall results do offer more support for the "primacy of affect" theorists than the more ubiquitous theoretical treatment of "cognition as decision" by Lazarus (1982, 1984).

From such a broad perspective, one could logically argue that the term "cognition" includes any mental event involving the selection of information. Moreover, "selection" implies judgement which is a cognitive process. Conversely, cognition could be considered secondary and dependent on the processing of multisensory image events (Ahsen, 1982); the categorizing of such sensory events would proceed according to perceptual gestalt principles which are either pre-cognitive or primitive cognitions awaiting (conscious) cognitive labels (Means, 1983; Klatzky & Martin, 1983). Thus, it seems difficult to find agreement on the definition of "what is an image" and "what is a cognition" among different authors.

Others (e.g., Tucker, Stenslie, Roth, & Shearer, 1981), suggest that images and cognitions serve independent functions based on hemispheric specialization (i.e., right brain for imagery, left brain for language). A phylogenic and ontogenetic argument supports this notion of "independence of function" as well as the primacy of affect, because image-affect connections developed prior to the evolution of the neocortex (Jaynes, 1977; Mahoney, 1980; Means, 1983). Still, the above discussion illustrates some of the problems in imagery investigations and points to the need for clearer elaboration of terminology and methodologies in empirical research.

Meanwhile, the results did not reveal any significant differences among the two mood (sadness, anger) conditions. In fact, both mood groups responded equally well to cognitive and imagery-based interventions. These results suggest that quickly generated unpleasant angry and sad moods can be quickly reduced by both approaches. However, unpleasant moods that are long standing and/or pathological in intensity may or may not respond similarly. Therefore, future research employing such treatments should be directed at clinical populations in order to further extend and clarify the generality of the present findings.

The brief treatment (15 seconds) was designed to test and enhance the differences between each approach under pressure for a "rapid" change of mood. Longer intervals may have allowed subjects to "fuse" images with cognitions. In fact, Guthrie (1984) used a 90-second treatment phase and suggests that subjects may have combined interventions during the mood reduction period. Still, future investigations could reveal whether longer treatment phases yield different results by incorporating several "training sessions" prior to testing. In addition, it is possible that certain presenting problems are more quickly resolved by the dominance of one system over the other.

Categorical analyses revealed that some images and self-statements were more effective in altering mood. Sensual experiences and enactive imagery were most effective and seem to focus attention on imagined somatic responses. Meanwhile, family themes may have benefitted subjects by emphasizing support and security. In contrast, isolation was less effective and may have prevented perceptions of support and security. Also, self-commands and situational evaluations/judgements are authoritarian and may help to avoid sensing affect by focusing on cognition. It is also interesting to note that those categories with highest frequency ratings (i.e., social themes, denial of feelings, and situational evaluations/judgments) were associated with subjects who showed the least improvement. This finding suggests that clients may typically self-employ less effective techniques than are available (e.g., therapist-generated approaches). Since sample sizes were quite small in some categories, additional comparisons between the anger and sad mood groups were ambiguous. Yet, additional research may discover differences between those techniques which proved to be most effective as applied to different presenting problems.

In general, the within-subject component of the present investigation proved to be an efficient methodology. All subjects were able to evaluate both approaches and document

the differential effectiveness of each treatment. Moreover, previous studies (Guthrie, 1984; Tucker & Newman, 1981) were unable to test for order effects or related interactions.

As stated earlier, this project also avoided hypnosis to intensify affect and relied solely on the experientially induced mood procedure. Based on subjects' self-report as well as nonverbal behavior (e.g., facial expressions, tears), the mood inductions were potent. In fact, two subjects dropped out of the study because their levels of discomfort became aversive. It is, therefore, suggested that other researchers continue employing nonhypnotic mood inductions in order to avoid the practical limitations associated with hypnotic procedures (e.g., highly selective samples, possible confounds between hypnotic suggestion and other treatment techniques). Moreover, experimenters should use caution with subjects who may react negatively to such procedures. The following recommendations are offered: (1) avoid using subjects who are currently (or have been recently) in psychological treatment, (2) include an elation procedure prior to ending the experimental session in order to ensure improved mood levels, (3) provide clinically trained personnel to administer individual de-briefing sessions to subjects who appear to be experiencing highly unpleasant moods, and (4) if necessary, make appropriate

referrals for subjects who do react negatively.

In summary, the present study has begun to evaluate the relative efficacy of personal cognitive strategies versus personal imagery-based techniques in the alleviation of anger and sadness. Overall, results suggest that self-initiated cognitive treatment interventions may be more effective when they follow the administration of self-generated psycho-imaginational techniques. Additional research also appears warranted to highlight the differential role of specific imaginal and cognitive components in the treatment of negative moods.

Table 1

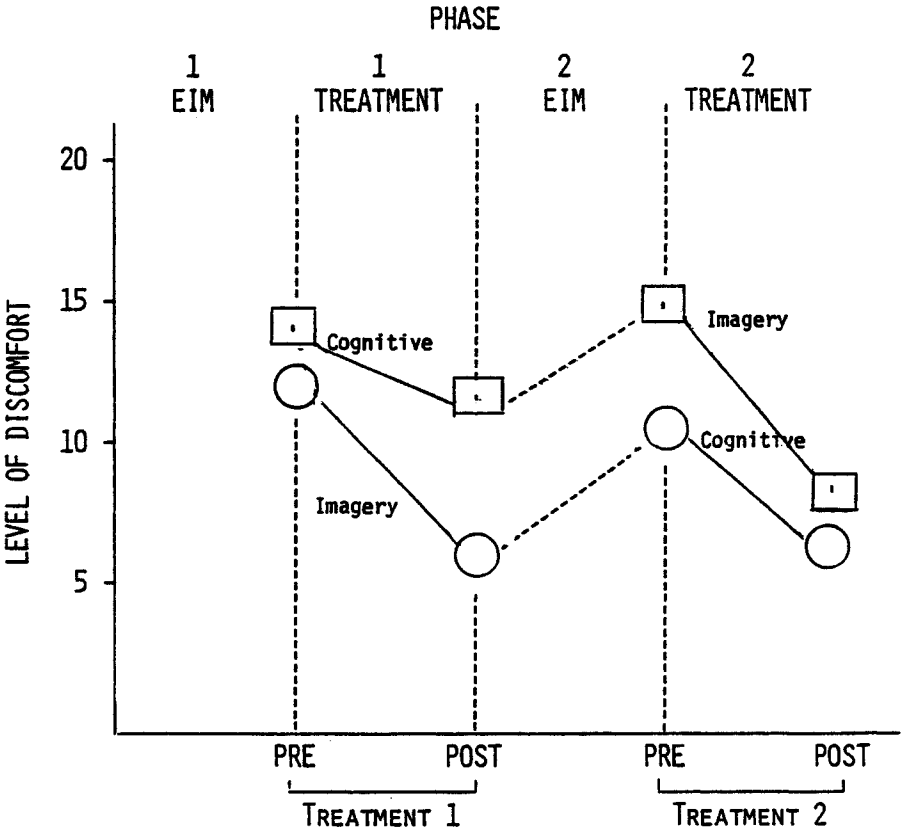
Results of Categorical Analyses as a Function of Ranking, Frequency, and Average Difference Score

RANKING OF OVERALL EFFECTIVENESS	CATEGORY TITLE	SAMPLE ITEMS FROM EACH CATEGORY	FREQUENCY OF SIMILAR ITEMS	AVERAGE PRE-, POST-TREATMENT DIFFERENCE SCORES
First	Sensual Themes	"Kissing my girlfriend" "The smell of fish cooking in salt pork"	24	7.95
Second	Enactive Imagery	"Sailing in my sailboat" "Playing racquetball"	25	7.48
Third	Family Themes	"How close our family really was" "The face of my mother"	18	7.11
Fourth	Animal Themes	"A big ol' dog" "My dog is healthy and happy"	6	5.83
Fifth	Social Themes	"Being close to my friends" "Me and her together again"	45	5.80
Sixth	Denial of Feelings	"It's no big deal" "As long as it's in the past, it's over with me"	40	5.60
Seventh	Religion	"God wanted him in his arms" "Looking at the way Jesus Christ would have handled the problem"	4	5.00
Eighth	Situational Evaluations/ Judgments	"I do have a choice" "She isn't your property"	51	4.24
Ninth	Self-Commands	"Calm yourself" "Relax" "Forget about it"	18	4.11
Tenth	Isolation	"I was by myself" "Being alone ..."	2	2.0

Total: 233 Responses

Figure Caption

Figure 1. Graph showing level of discomfort
across experimental phases.



- = COGNITIVE-IMAGERY TREATMENT (ORDER 1)
- = IMAGERY-COGNITIVE TREATMENT (ORDER 2)

Chapter VI

Treatment Acceptability of Alternative Marital Therapies: A Comparative Analysis

Brief version of this investigation is published in Journal of Marriage and Family Therapy, 1983, 9, 205-208.

Paper presented at the annual convention of the Association for the Advancement of Behavior Therapy, Los Angeles, California, November, 1982.

Abstract

Eighty-eight students recruited from an introductory psychology course rated four different marital treatment descriptions (analytic, behavioral, systems, and eclectic) as they were applied to one of two marital case histories. After each treatment description, subjects completed questionnaires (i.e., treatment evaluation inventory, semantic differential, credibility rating scale) designed to evaluate acceptability of treatment procedures. Case histories were representative of actual clients and problems typically seen in outpatient settings. Prior to the conduct of investigation, treatment descriptions were rated and found to accurately reflect their respective orientations. Overall results of the study revealed significant differences in acceptability with behavioral and systems approaches consistently rated superior to alternative therapies. Case history effects were also obtained indicating that acceptability varies as a function of idiosyncratic features of the couple. These findings were further discussed with regard to the acceptability of differing marital therapies and their relationship with measures of treatment outcome.

Treatment Acceptability of Alternative Marital
Therapies: A Comparative Analysis

Client acceptability of treatment procedures has recently become a significant concern in the assessment of psychotherapeutic effectiveness (Kazdin, 1980a; Kazdin, 1980b; Kazdin, 1981; Kazdin, French, & Sherick, 1981; Wolf, 1978). This trend toward greater consumer involvement in treatment evaluation appears to result from an effort to broaden the range of criteria used in evaluating the psychotherapies (Garfield, 1978; Kazdin & Wilson, 1978; Strupp & Hadley, 1977; Wolf, 1978). While traditional measures of treatment efficacy have always included the assessment of client change, more recent attention has also been directed toward issues of cost-effectiveness, side effects, and discomfort incurred as a result of the therapeutic intervention (Kazdin, 1980a).

Treatment acceptability refers to the fairness, appropriateness, and intrusiveness of the treatment procedure as judged by clients, lay persons, and nonprofessionals (Kazdin, 1980a). Recent investigations have demonstrated that the overall acceptability of different treatment techniques can be easily differentiated by student populations (Kazdin, 1980a; Kazdin, 1980b), inpatient children, parents, and hospital staff (Kazdin,

French, & Sherick, 1981). Ratings of acceptability are also influenced by a description of adverse side effects associated with treatment (Kazdin, 1981). However, all of the research cited above has examined specific behavior therapy techniques used solely in the treatment of deviant children. The present study, in an effort to examine and extend our knowledge in the area of treatment acceptability, applies a similar methodology across a variety of treatment "schools." Furthermore, focus is placed upon adult populations; namely, the treatment of marital discord.

Acceptability of treatment procedures clearly appears to be an important criteria in the evaluation of differing marital therapy procedures. First, as with other types of clinical problems, there is a wide variety of effective techniques used in the treatment of marital dysfunction (Gurman & Kniskern, 1978). Thus, one means by which we can differentiate among equally viable therapeutic programs may be related to the level of acceptability they generate among potential client populations. Second, couples' compliance with treatment recommendations may be greatly influenced by opinions/attitudes/impressions held regarding the acceptability of the proposed techniques and/or therapeutic orientations. Third, highly acceptable treatments may be more frequently solicited and adhered to by couples than treatment procedures considered less acceptable (Kazdin,

1980a; Kazdin, 1981; Rosenberg & Raynes, 1976). Fourth, therapeutic enhancement effects may be maximized under conditions of increased client acceptability. Numerous nonspecific treatment influences (e.g., credibility, expectancy, etc.) and their effects have been discussed in the psychotherapy literature (Frank, 1973; Strupp, 1978). Within this conceptualization, couples who envisage their treatment as highly acceptable are apt to demonstrate greater responsiveness to therapeutic regime.

Thus, the purpose of the present investigation was to examine the acceptability of four differing therapeutic models used in the treatment of marital discord. Consequently, psychoanalytic, behavioral, systems, and eclectic approaches were selected because of their widely acknowledged contributions and often opposing perspectives in the treatment of marital distress.

Overview

Undergraduate students rated marital treatment descriptions as they were applied to one of two marital case histories. After each treatment description, subjects completed questionnaires designed to evaluate treatment characteristics. Four different treatments (analytic, behavioral, systems, and eclectic) were presented in a 4 X 4 replicated Latin Square design such that each subject rated

all of the treatments in one of four sequences.

Method

Participants

Participants consisted of 88 male and female undergraduates recruited from an introductory psychology course in which credit was given for participation. Subjects were randomly assigned to one of eight conditions (2 marital cases X 4 sequences) with equal cell frequencies ($n = 11/\text{cell}$).

Assessment

Treatment Evaluation Inventory (TEI; Kazdin, 1980a, 1980b)

The TEI was modified so as to conform with an evaluation of marital therapies. The measure consisted of 15 items in a Likert-type format using a 1 to 7 scale. Subjects were asked to rate treatment acceptability, suitability of procedures for the couple, likely effectiveness, etc. Items were selected based upon previous factor analytic research from four separate samples and experimental work demonstrating that the measure could discriminate alternative treatments (Kazdin, 1980a, 1980b).

Semantic Differential (SD; Osgood, Suci, & Tannenbaum, 1957)

The SD was included to provide an overall evaluation of treatment and an examination of other relevant dimensions

(e.g., treatment strength). Fifteen bipolar adjectives, rated on a 1-scale, were selected to represent the Evaluative, Potency, and Activity dimensions (5 adjectives/dimensions). Characteristic items included good-bad, valuable-worthless (Evaluative), strong-weak, hard-soft (Potency), and sharp-dull, fast-slow (Activity).

Credibility Rating Scale (CRS; Fox & Wollersheim, 1982). This Scale consisted of 17 items rated on a 7-point Scale from strongly agree (+3) to strongly disagree (-3). Items in the scale were previously adapted from research concerned with subject perception of treatment credibility (Borkovec & Nau, 1972; Wollersheim, Bordewick, Knapp, McLellarn, & Paul, in press; Wollersheim & Bugge, 1982; Wollersheim, McFall, Hamilton, Hickey, & Bordewick, 1980; Hickey, Note 2). Results indicated that the CRS was a highly homogeneous (item-total correlations, ranging from .42 to .87) and reliable (split-half reliability = .943, coefficient alpha = .917) psychometric instrument. Characteristic items of the CRS included the statements, "The therapist understood the causes leading to the couple's difficulties", "I would recommend this therapy to a couple who had decided to obtain therapy for a similar problem and asked my advice", and "The approach described is not appropriate for the couple."

Procedures

Subjects arrived for the experiment and were given instructions conveying the purpose of the study (i.e., to evaluate different clinical treatments for marital problems). Each subject received a packet containing a case description, descriptions of the four treatments, and a set of questionnaires following each treatment description. The four sets of questionnaires consisted of the three dependent measures mentioned earlier. At the end of each set of questionnaires was a blank sheet with instructions to stop before proceeding further in the packet. Subjects were instructed not to look ahead nor attempt to inspect previous responses when completing the questionnaires. Compliance with these instructions was monitored by one of the experimenters who was in the room with the subjects during the course of the investigation.

After the initial instructions were presented, the experimenter asked the subjects to read along with the experimental materials while the case description was played via a cassette recording. Subsequent to this, subjects read and heard the first treatment description. When dependent measures for the first treatment were completed, the experimenter advanced the tape to the next description, repeating the above instructions. This procedure was followed until all four treatment conditions had been

presented.

Case Descriptions

The purpose of this study was to evaluate four different treatments commonly employed as marital therapy interventions. This was accomplished by first developing case descriptions of varying marital dysfunction and then applying the various marital treatments to each of the case histories. Case histories were modified from material presented by Nadelson (1978), representative of actual clients and problems typically seen in outpatient clinical settings.

The first description was that of Mr. and Mrs. A, requesting therapy because of communication and sexual difficulties. The couple had two children (a five-year-old boy and a two-year-old girl) and had been married for ten years. Mr. and Mrs. A were described as being quite satisfied with their relationship until approximately one year ago. Mrs. A then began suspecting that her husband was becoming increasingly attentive to other women. Mr. A, on the other hand, felt that his wife no longer seemed interested in sex. Mrs. A was said to agree that there were sexual difficulties, but further explained that Mr. A did not understand her and was constantly critical toward her. During their initial marital therapy evaluation

session, Mr. A was presented as paying little attention to Mrs. A's statements and speaking to her in a paternalistic manner. Mrs. A appeared self-depreciating, cried often, and was described as precipitating numerous arguments with her spouse during the hour. While responsive to the interviewer's questions, both Mr. and Mrs. A appeared to be unaware of the effects their behavior had upon their partner.

The second case description was that of Mr. and Mrs. B, requesting therapy because of frequent arguments and a growing dissatisfaction with their two-year marriage. After the birth of their child, Mrs. B was forced to stay home and take care of her son while Mr. B increased his work commitment to earn more money in support of the family. During the initial therapy session, it was reported that Mrs. B accused Mr. B of no longer "caring" for her. Mr. B denied this, but did acknowledge that his wife was not as spontaneous and interesting as she had been during their courtship. In addition, Mr. B complained that Mrs. B constantly berated, ordered him about the house, and did not appreciate his work efforts. It was further described that on late nights when the couple would try to talk to each other, invariably their discussions would deteriorate into "shouts and accusations." Oftentimes, one of them would leave the room and the couple would not speak to each other

for days. At the time of their request for therapy, Mr. and Mrs. B were seriously considering separation and possible divorce.

Treatment Conditions

After listening and reading one of the above case descriptions, subjects were then presented with each of the four treatments applied to their respective case history. In each instance, the treatment described was tailored to the case which had just been presented. Prior to the actual conduct of the investigation, 17 advanced graduate students in clinical psychology had rated each of the therapy descriptions along psychoanalytic, behavioral, systems and eclectic dimensions. A 4 X 4 X 2 repeated measures ANOVA (Treatment X Dimension X Case History) revealed highly significant Treatment X Dimension interaction effects ($p < .00001$), with each treatment receiving substantially higher ratings than all other treatments on the dimension of relevance.

Psychoanalytic. The psychoanalytic description of treatment was based primarily upon the work of Meissner (1978) and Nadelson (1978). The couple was described as first being seen for one individual session before beginning conjoint treatment. Emphasis was placed on ego strengths/weaknesses as well as how each partner managed

feelings of anger and frustration. The therapist was reported to be interested in the expression of intimacy/trust between partners and the manner in which similar feelings were expressed toward the therapist. During treatment sessions, the therapist analyzed unconscious processes and defensive patterns by attending to the couples' interactions in the therapy room. Based upon this and historical information, appropriate case conceptualizations were formulated. Treatment techniques included clarification, interpretation, and dream analysis as a means of increasing insight into and awareness of relationship patterns. Because of the therapist's knowledge of both transference and resistance, termination was handled with considerable reassurance and continued examination of intrapsychic dynamic matters.

Behavioral. The behavioral treatment was drawn from Jacobson and Margolin (1979) and Bornstein, Back, Heider, and Ernst (1981). Accordingly, a thorough assessment was conducted prior to the initiation of treatment and discord was conceptualized as a direct result of aversive control strategies. More specifically, the therapist attempted to increase the exchange of pleasing behaviors and decrease the reciprocal occurrence of displeasing behaviors. In addition, maladaptive communication patterns were identified and replaced via role-plays, modeling, and reinforcement.

Further techniques included objectification, contracting, and the use of therapeutic homework assignments. A final procedure involved training couples in the development of effective problem-solving skills. With this technique, the couple was taught to resolve disagreements by utilization of a systematic conflict-resolution program. It was the therapists' belief that the above treatment package would produce both an increase in current marital satisfaction and serve a preventative function regarding future sources of relationship distress.

Systems. This therapeutic approach was modeled after the work of Steinglass (1978) and Sluzki (1978). The systems therapist tended to conceive of the couples' problems as due to dysfunctional patterns of communication. Basic relationship history information was first gathered and the couples were asked to bring their children with them to the therapy sessions. During the course of treatment, the therapist was described as attempting to change the destructive, self-perpetuating cycles of behavior which had been established within the entire family system. Thus, emphasis was placed on the fact that neither partner was singly responsible for the problem. Rather, the therapist indicated that marital distress was the result of the couples' relationship rather than personal difficulties. Communication tactics employed included paradoxical

procedures and training couples in the "checking-out" of assumptions as well as usage of "direct language." Attempts by individual partners to ally themselves with the therapist were closely monitored. Most importantly, however, the therapist felt confident that, as communication patterns were modified, distress would be relieved.

Eclectic. This approach was constructed using the most salient aspects of the above three therapeutic schools. Accordingly, the eclectic therapist believed that the couples' conflict was the result of: (a) unconscious processes and motivations on the part of each spouse (analytic), (b) excessive use of displeasing/limited use of pleasing behaviors (behavioral), and (c) problems in communication (systems). Mutual responsibility in the occurrence and solution of conflict was emphasized and alliances with the therapist were interpreted when they occurred. The therapist was described as using a wide variety of therapeutic tactics including dream analysis, role-plays, "direct language," contracting, and interpretation of unconscious conflict. The therapist believed that as the couples took more responsibility for their problems and employed that which they had learned as a result of therapy, the relationship would become more satisfying.

As described earlier, the four treatments were presented in different orders so as to conform with the 4 X 4 Latin Square design. Moreover, treatment was applied to two separate cases to ensure that effects were not restricted to idiosyncratic characteristics of the case presentations (Maher, 1978).

Results

A series of 4 X 2 X 4 (Order X Case History X Treatment) split plot ANOVAs with repeated measures on the treatment factor were performed on all dependent measures. On the CRS, significant differences in mean ratings were obtained across the four treatments (systems = 20.5, behavioral = 19.8, eclectic = 14.8, and analytic = 11.5), $F(3, 240) = 3.71$, $p = .012$. A subsequent Neuman-Keuls analysis indicated that the behavioral and systems treatments were rated as equally desirable and superior to the analytic approach. A significant Case History effect was also obtained with Case History B receiving a higher rating than Case History A, $F(1,80) = 6.48$, $p = .012$. The analyses further yielded a significant Case History X Treatment interaction, $F(3,240) = 3.44$, $p = .017$. A subsequent Neuman-Keuls analysis of this interaction data indicated the effect was principally due to systems treatment ratings which were significantly greater for Case History B than Case History A.

On the TEI, marginally significant treatment effects were obtained on the omnibus F test, $F(3,240) = 2.57$, $p = .053$, but multiple comparison analysis yielded no significant treatment differences. As with the CRS, however, Case History B was rated significantly higher than Case History A, $F(1,80) = 7.81$, $p = .007$. A significant Case History X Order interaction was also obtained in which one order of treatment presentation (eclectic, systems, behavioral, analytic) was given significantly higher ratings for Case History B than Case History A, $F(3,80) = 4.03$, $p = .01$.

While no differences were found for potency and activity ratings on the SD, Case Histories did receive significantly different ratings on the evaluative factor, $F(1,80) = 4.88$, $p = .03$. As before, Case History B yielded higher treatment credibility ratings. In addition, subjects' ratings of each treatment on the CRS, the TEI, and the evaluative factor of the SD were highly related. Pearson product-moment correlation coefficients among these dependent measures ranged from .79 to .89 ($df = 86$, $p < .001$).

Discussion

The major findings of the present investigation clearly reveal that: (a) alternative treatments applied to case descriptions of marital dysfunction are differentially acceptable, (b) among varying treatments, behavioral and systems approaches are rated as more acceptable than analytic therapies, and (c) acceptability of treatments varies consistently as a function of case study.

The alternative interventions evaluated in the current research represent four common treatment approaches frequently employed by marital therapists (Paolino & McCrady, 1978). As potential consumers of marital therapy programs, subjects in the present investigation must be considered viable raters within the paradigm employed. Moreover, they are directly comparable to the population of subjects used in past "acceptability" research (Kazdin, 1980a, 1980b, 1981). However, it must be noted that the present investigation represents only an initial attempt to evaluate acceptability of marital treatments and does not, for example, address broader questions of treatment efficacy. Therefore, these findings should not be interpreted to imply that analytic or eclectic treatments are to be discarded. While subjects found behavioral and systems approaches more acceptable, clearly further research is needed to determine the extent to which increased

acceptability affects marital therapy outcome measures.

In contrast to previous findings (Kazdin, 1980a, 1980b, 1981), Case History and Order effects were found in this study. As a consequence, investigators will need to carefully attend to problem type and order of presentation in future research. While the two marital case histories used in the current experiment were similar in many respects (e.g., format, length, problems in communication, etc.), it may well be that the nature of the presenting complaint (viz., sexual versus affectional dysfunctions) accounts for considerable variance between acceptability ratings. An additional finding worthy of comment was the Case History X Treatment interaction. Specific tailoring of treatments to problems, as well as the differential response to case histories, may have interacted to produce this effect. In any case, it appears as though treatments may have differential acceptability depending upon the specific problem to which they are applied.

As Kazdin has noted, "Acceptability of treatment ... may determine whether a treatment, once shown to be effective, will be utilized by the public" (1980a, p. 271). The current investigation allowed subjects to contrast the acceptability of four different marital therapy strategies and clearly demonstrated that they could, in fact, be distinguished. Although the influence of treatment

components within each therapeutic approach was not evaluated, these results suggest that some treatment "packages" may have greater acceptability for certain kinds of problems. Additional research thus appears warranted to evaluate not only those specific factors which clients identify as enhancing/decreasing acceptability, but also to isolate what clients with what problems respond best to what types of treatment. Ultimately, however, the most important question must focus on the relationship between acceptability ratings and therapy outcome.

Appendix

Treatment Acceptability of Alternative Marital Therapies: A Comparative Analysis

Treatment Acceptability of Alternative Marital
Therapies: A Comparative Analysis

Client acceptability of treatment procedures has recently become a significant concern in the assessment of psychotherapeutic effectiveness (Kazdin, French & Sherick, 1981; Wolf, 1978). Formally, acceptability refers to the fairness, appropriateness, and intrusiveness of the treatment procedure as judged by clients, lay persons and nonprofessionals (Kazdin, 1980a). Unfortunately, marital and family therapists have yet to utilize this criterion in an evaluation of their psychotherapeutic interventions. Consequently, the purpose of the present investigation was to examine the acceptability of four differing therapeutic models (psychoanalytic, behavioral, systems, and eclectic) used in the treatment of marital discord.

Method

Participants, Procedures and Dependent Measures

Participants consisted of 88 male and female undergraduates recruited from an introductory psychology course in which credit was given for participation. Subjects arrived for the experiment and were given instructions conveying the purpose of the study (i.e., to evaluate different clinical treatments for marital problems). Using a 4x4 replicated Latin Square design, four

differing sequences of treatment descriptions were rated by each subject as they applied to one of two marital case histories. Subsequent to the presentation of initial instructions, the experimenter asked subjects to read along with written materials while the case description was played via a cassette recording. After subjects completed dependent measures for the first treatment, the experimenter advanced the tape to the next description, repeating the above instructions. This procedure was followed until all four treatment conditions had been presented.

Dependent measures completed by subjects included a modified form of the Treatment Evaluation Inventory (TEI; Kazdin, 1980a, 1980b), potency-activity-evaluative Semantic Differential scales (SD; Osgood, Suci & Tannenbaum, 1957), and the Credibility Rating Scale (CRS; Fox & Wollersheim, 1982).

Case Histories and Treatment Descriptions

Treatment descriptions of psychoanalytic, behavioral, systems, and eclectic approaches were first developed and then applied to one of two marital case histories. In each instance, the treatment described was tailored to the history previously presented to subjects. Case histories were modified from material originally prepared by Nadelson (1978), representative of actual clients and problems

typically seen in outpatient clinical settings.

The first case history was that of a Mr. and Mrs. A, requesting therapy because of communication and sexual difficulties. The couple had two children and had been married for ten years. Mr. and Mrs. A were described as being quite satisfied with their relationship until approximately one year ago. Mrs. A then began suspecting that her was becoming increasingly attentive to other women. Mr. A, on the other hand, felt that his wife no longer seemed interested in sex. Mrs. A was said to agree that there were sexual difficulties, but further explained that Mr. A did not understand her and was constantly critical toward her. During their initial marital therapy evaluation session, Mr. A was presented as paying little attention to Mrs. A's statements and speaking to her in a paternalistic manner. Mrs. A appeared self-depreciating, cried often and was described as precipitating numerous arguments with her spouse during the hour. While responsive to the interviewer's questions, both Mr. and Mrs. A appeared to be unaware of the effects their behavior had upon their partner.

The second case description was that of Mr. and Mrs. B, requesting therapy because of frequent arguments and a growing dissatisfaction with their two-year marriage. After the birth of their child, Mrs. B was forced to stay home

and take care of her son while Mr. B increased his work commitment to earn more money in support of the family. During the initial therapy session, it was reported that Mrs. B accused Mr. B of no longer "caring" for her. Mr. B denied this, but did acknowledge that his wife was not as spontaneous and interesting as she had been during their courtship. In addition, Mr. B complained that Mrs. B constantly ordered him about the house and did not appreciate his work efforts. It was further described that when the couple would try to resolve disagreements, invariably their discussions would deteriorate into "shouts and accusations." Oftentimes, one of them would leave the room and the couple would not speak to each other for days. At the time of their request for therapy, Mr. and Mrs. B were seriously considering separation and possible divorce.

Prior to the actual conduct of the investigation, 17 advanced graduate students in clinical psychology had rated each of the therapy descriptions along psychoanalytic, behavioral, systems, and eclectic dimensions. A 4 x 4 x 2 repeated measures ANOVA (Treatment x Dimension x Case History) revealed highly significant Treatment x Dimension interaction effects ($p < .00001$), with each treatment receiving substantially higher ratings than all other treatments on the dimension of relevance. Thus, the analysis attests to the integrity of the treatment

descriptions.

Results

A series of 4 x 2 x 4 (Order x Case History x Treatment) split plot ANOVAs with repeated measures on the treatment factor were performed on all dependent measures. On the CRS, significant differences in mean ratings were obtained across the four treatments (systems = 20.5, behavioral = 19.8, eclectic = 14.8, and analytic = 11.5), $F(3,240) = 3.71$, $p = .012$. A subsequent Neuman-Keuls analysis indicated that the behavioral and systems treatments were rated as equally desirable and superior to the analytic approach. A significant Case History effect was also obtained with Case History B receiving a higher rating than Case History A, $F(1,80) = 6.48$, $p = .012$. The analyses further yielded a significant Case History x Treatment interaction, $F(3,240) = 3.44$, $p = .017$. A subsequent Neuman-Keuls analysis of this interaction data indicated the effect was principally due to systems treatment ratings which were significantly greater for Case History B than Case History A.

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While no differences were found for potency and activity ratings on the SD, Case Histories did receive significantly different ratings on the evaluative factor, $F(1,80) = 4.88, p = .03$. As before, Case History B yielded higher treatment credibility ratings. In addition, subjects' ratings of each treatment on the CRS, the TEI and the evaluative factor of the SD were highly related. Pearson product-moment correlation coefficients among these dependent measures ranged from .79 to .89 ($df = 86, p < .001$).

Discussion

The major findings of the present investigation reveal that: (a) alternative treatments applied to case descriptions of marital dysfunction are differentially acceptable; (b) among varying treatments, behavioral and systems approaches are rated as more acceptable than analytic therapies, and (c) acceptability of treatments varies consistently as a function of case history.

The alternative interventions evaluated in the current research represent four common treatment approaches frequently employed by marital therapists (Paolino & McCrady, 1978). While subjects in the present investigation are directly comparable to the research population used in past "acceptability" research (Kazdin, 1980a, 1980b, 1981), clearly, they have their limitations. Specifically, the external validity of undergraduate students subjects is less than optimal. Further, experts from various orientations could have served as treatment description raters rather than the graduate population employed. However, it must be noted that the present investigation represents an initial attempt to evaluate acceptability of marital treatments. Consequently, even limited efforts provide a step in the right direction. Obviously though, further research is needed to determine the extent to which increased acceptability, and other factors, affect the efficacy of differing marital therapy treatment programs.

Finally, as Kazdin has noted, "acceptability of treatment...may determine whether a treatment, once shown to be effective, will be utilized by the public" (1980a, p.271). The results of the current investigation suggest that some treatment "packages" may have greater acceptability for certain kinds of problems. While additional research may aid in isolating what clients with

what problems respond best to what types of treatment, ultimately, the most important question must focus on the relationship between acceptability ratings and therapy outcome measures.

Chapter I

Paradoxical Procedures and Single Case Methodology:
Review and Recommendations

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Footnotes

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Chapter II

"The Bathroom Game": A Systematic Program for the
Elimination of Encopretic Behavior

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Chapter III

Behavioral Marital Bibliotherapy: An Initial
Investigation of Therapeutic Efficacy

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Chapter IV

Behavioral Cohabitation:

Increasing Satisfaction Among Non-Married Dyads?

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Chapter V

Self-Initiated Imaginal and Cognitive Components:
Evaluation of Differential Effectiveness in
Altering Unpleasant Moods

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Footnotes

opies of the EIM procedure, imaginal and cognitive treatment sets, category lists, and the elation procedure are available upon request.

Address requests for reprints to J. R. Means, Department of Psychology, University of Montana, Missoula, MT 59812.

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Chapter VI

Treatment Acceptability of Alternative Marital
Therapies: A Comparative Analysis

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Footnote

Requests for reprints should be sent to Philip H. Bornstein, Department of Psychology, University of Montana, Missoula, MT, 59812. Copies of case histories and marital treatments are available from the authors upon request.

Appendix
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